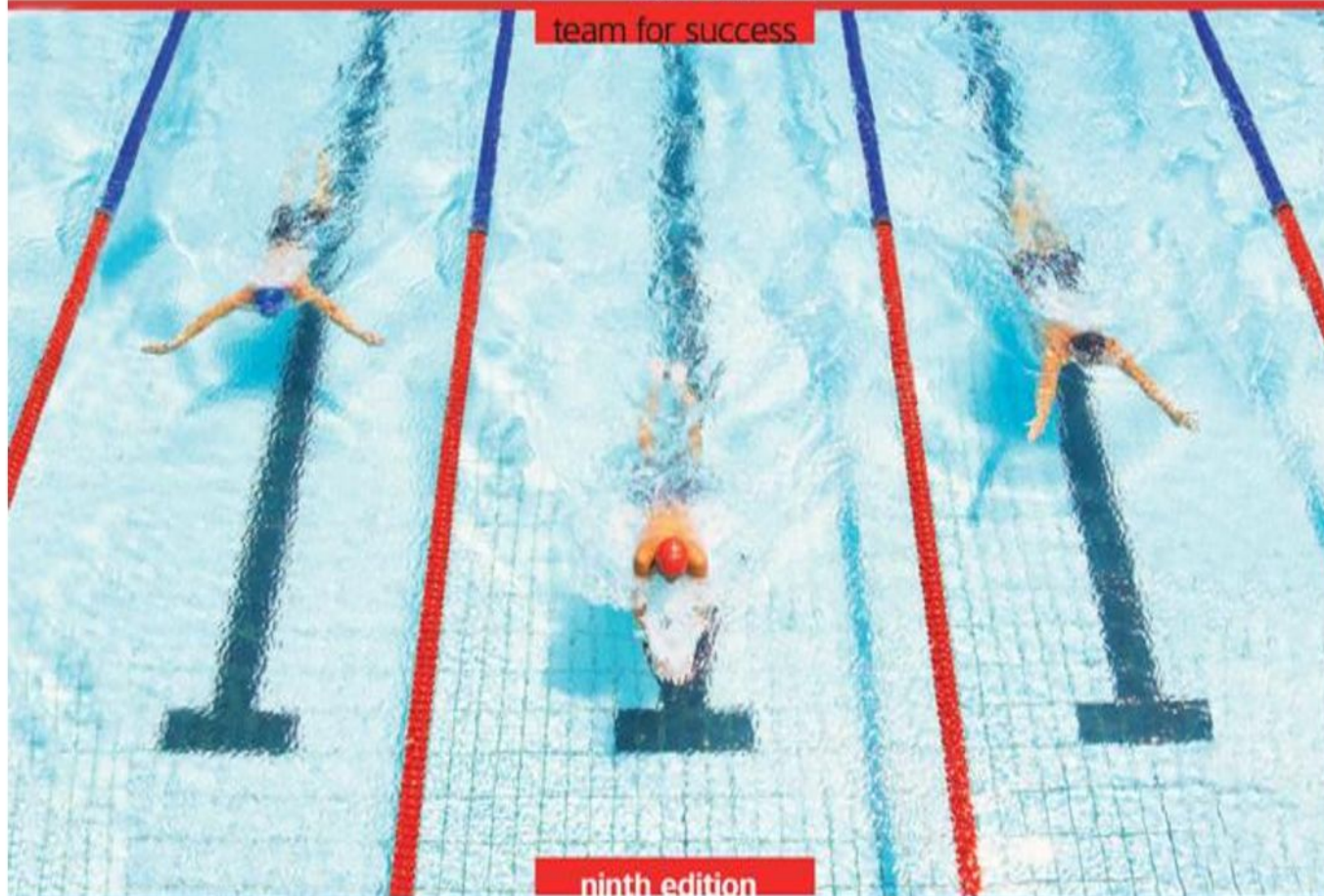


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ninth edition

ACCOUNTING PRINCIPLES

Chapter
4-1

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CHAPTER 1

Accounting in Action

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain what accounting is.	1, 2, 5		1, 2, 4	1		
2. Identify the users and uses of accounting.	3, 4		6	2		
3. Understand why ethics is a fundamental business concept.			7	3		
4. Explain generally accepted accounting principles and the cost principle.	6		8	4		
5. Explain the monetary unit assumption and the economic entity assumption.	7, 8, 9, 10			4		
6. State the accounting equation, and define its components.	11, 12, 13, 22	1, 2, 3, 4, 5		5, 6, 7, 11	1A, 2A 4A	1B, 2B 4B
7. Analyze the effects of business transactions on the accounting equation.	14, 15, 16, 18	6, 7, 8, 9		6, 7, 8, 10, 11	1A, 2A, 4A, 5A	1B, 2B, 4B, 5B
8. Understand the four financial statements and how they are prepared.	17, 19, 20, 21	10, 11		9, 12, 13, 14, 15, 16	2A, 3A, 4A, 5A	2B, 3B, 4B, 5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Analyze transactions and compute net income.	Moderate	40–50
2A	Analyze transactions and prepare income statement, owner's equity statement, and balance sheet.	Moderate	50–60
3A	Prepare income statement, owner's equity statement, and balance sheet.	Moderate	50–60
4A	Analyze transactions and prepare financial statements.	Moderate	40–50
5A	Determine financial statement amounts and prepare owner's equity statement.	Moderate	40–50
1B	Analyze transactions and compute net income.	Moderate	40–50
2B	Analyze transactions and prepare income statement, owner's equity statement, and balance sheet.	Moderate	50–60
3B	Prepare income statement, owner's equity statement, and balance sheet.	Moderate	50–60
4B	Analyze transactions and prepare financial statements.	Moderate	40–50
5B	Determine financial statement amounts and prepare owner's equity statement.	Moderate	40–50

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CHAPTER 1
ACCOUNTING IN ACTION

Number	SO	BT	Difficulty	Time (min.)
BE1	6	AP	Simple	2–4
BE2	6	AP	Simple	3–5
BE3	6	AP	Moderate	4–6
BE4	6	AP	Moderate	4–6
BE5	6	C	Simple	2–4
BE6	7	C	Simple	2–4
BE7	7	C	Simple	2–4
BE8	7	C	Simple	2–4
BE9	7	C	Simple	1–2
BE10	8	AP	Simple	3–5
BE11	8	C	Simple	2–4
DI1	1, 2, 4	K	Simple	2–4
DI2	6	K	Simple	2–4
DI3	7	AP	Simple	6–8
DI4	8	AP	Moderate	8–10
EX1	1	C	Moderate	5–7
EX2	2	C	Simple	6–8
EX3	3	C	Moderate	6–8
EX4	4, 5	C	Moderate	6–8
EX5	6	C	Simple	4–6
EX6	6, 7	C	Simple	6–8
EX7	6, 7	C	Simple	4–6
EX8	7	AP	Moderate	12–15
EX9	8	AP	Simple	12–15
EX10	7	AP	Moderate	8–10
EX11	6, 7	AP	Moderate	6–8
EX12	8	AP	Simple	8–10
EX13	8	AN	Simple	8–10
EX14	8	AP	Simple	10–12
EX15	8	AP	Simple	6–8
EX16	8	AP	Moderate	6–8

ACCOUNTING IN ACTION (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	6, 7	AP	Moderate	40–50
P2A	6–8	AP	Moderate	50–60
P3A	8	AP	Moderate	50–60
P4A	6–8	AP	Moderate	40–50
P5A	7, 8	AP	Moderate	40–50
P1B	6, 7	AP	Moderate	40–50
P2B	6–8	AP	Moderate	50–60
P3B	8	AP	Moderate	50–60
P4B	6–8	AP	Moderate	40–50
P5B	7, 8	AP	Moderate	40–50
BYP1	8	AN	Simple	10–15
BYP2	8	AN, E	Simple	10–15
BYP3	9	C, AN	Simple	15–20
BYP4	8	E	Moderate	15–20
BYP5	8	E	Simple	12–15
BYP6	3	E	Simple	10–12
BYP7	3	E	Moderate	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain what accounting is.	D11-1	Q1-1 Q1-2 E1-1				
2. Identify the users and uses of accounting.	D11-1	Q1-3 Q1-4 E1-2				
3. Understand why ethics is a fundamental business concept.		E1-3				
4. Explain generally accepted accounting principles and the cost principle.	D11-1	Q1-6 E1-4				
5. Explain the monetary unit assumption and the economic entity assumption.	Q1-8 Q1-9	Q1-7 Q1-10 E1-4				
6. State the accounting equation, and define its components.	Q1-11 Q1-12 Q1-22 D11-2	Q1-13 BE1-5 E1-5 E1-6 E1-7	BE1-1 P1-2A BE1-2 P1-4A BE1-3 P1-1B BE1-4 P1-2B E1-11 P1-4B P1-1A			
7. Analyze the effects of business transactions on the accounting equation.		Q1-14 Q1-15 Q1-16 Q1-18 BE1-6 E1-7	Q1-3 P1-4A D11-3 P1-5A BE1-8 E1-8 BE1-9 E1-10 E1-11 P1-2B P1-1A P1-4B P1-2A P1-5B			
8. Understand the four financial statements and how they are prepared.		Q1-17 Q1-19 BE1-11	Q1-20 P1-2A Q1-21 P1-3A BE1-10 P1-4A D11-4 P1-5A E1-9 P1-2B E1-12 P1-3B E1-14 P1-4B E1-15 P1-5B E1-16	E1-13		
Broadening Your Perspective		Exploring the Web		Financial Reporting Comparative Analysis Exploring the Web		All About You Comparative Analysis Decision Making Across the Organization Communication Activity Ethics Case

ANSWERS TO QUESTIONS

1. Yes, this is correct. Virtually every organization and person in our society uses accounting information. Businesses, investors, creditors, government agencies, and not-for-profit organizations must use accounting information to operate effectively.
2. Accounting is the process of identifying, recording, and communicating the economic events of an organization to interested users of the information. The first step of the accounting process is therefore to identify economic events that are relevant to a particular business. Once identified and measured, the events are recorded to provide a history of the financial activities of the organization. Recording consists of keeping a chronological diary of these measured events in an orderly and systematic manner. The information is communicated through the preparation and distribution of accounting reports, the most common of which are called financial statements. A vital element in the communication process is the accountant's ability and responsibility to analyze and interpret the reported information.
3.
 - (a) Internal users are those who plan, organize, and run the business and therefore are officers and other decision makers.
 - (b) To assist management, managerial accounting provides internal reports. Examples include financial comparisons of operating alternatives, projections of income from new sales campaigns, and forecasts of cash needs for the next year.
4.
 - (a) Investors (owners) use accounting information to make decisions to buy, hold, or sell ownership shares of a company.
 - (b) Creditors use accounting information to evaluate the risks of granting credit or lending money.
5. Bookkeeping usually involves only the recording of economic events and therefore is just one part of the entire accounting process. Accounting, on the other hand, involves the entire process of identifying, recording, and communicating economic events.
6. Karen Sommers Travel Agency should report the land at \$90,000 on its December 31, 2010 balance sheet. An important concept that accountants follow is the cost principle. The cost principle states that assets should be recorded at their cost. Cost has an important advantage over other valuations: it is reliable. Cost can be objectively measured and can be verified.
7. The monetary unit assumption requires that only transaction data that can be expressed in terms of money be included in the accounting records. This assumption enables accounting to quantify (measure) economic events.
8. The economic entity assumption requires that the activities of the entity be kept separate and distinct from the activities of its owners and all other economic entities.
9. The three basic forms of business organizations are: (1) proprietorship, (2) partnership, and (3) corporation.

- 10.** One of the advantages Maria Gonzalez would enjoy is that ownership of a corporation is represented by transferable shares of stock. This would allow Maria to raise money easily by selling a part of her ownership in the company. Another advantage is that because holders of the shares (stockholders) enjoy limited liability; they are not personally liable for the debts of the corporate entity. Also, because ownership can be transferred without dissolving the corporation, the corporation enjoys an unlimited life.
- 11.** The basic accounting equation is $\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$.
- 12.** (a) Assets are resources owned by a business. Liabilities are claims against assets. Put more simply, liabilities are existing debts and obligations. Owner's equity is the ownership claim on total assets.
(b) Owner's equity is affected by owner's investments, drawings, revenues, and expenses.
- 13.** The liabilities are: (b) Accounts payable and (g) Salaries payable.
- 14.** Yes, a business can enter into a transaction in which only the left side of the accounting equation is affected. An example would be a transaction where an increase in one asset is offset by a decrease in another asset. An increase in the Equipment account which is offset by a decrease in the Cash account is a specific example.
- 15.** Business transactions are the economic events of the enterprise recorded by accountants because they affect the basic equation.
(a) The death of the owner of the company is not a business transaction as it does not affect the basic equation.
(b) Supplies purchased on account is a business transaction as it affects the basic equation.
(c) An employee being fired is not a business transaction as it does not affect the basic equation.
(d) A withdrawal of cash from the business is a business transaction as it affects the basic equation.
- 16.** (a) Decrease assets and decrease owner's equity.
(b) Increase assets and decrease assets.
(c) Increase assets and increase owner's equity.
(d) Decrease assets and decrease liabilities.
- 17.** (a) Income statement. (d) Balance sheet.
(b) Balance sheet. (e) Balance sheet and owner's equity statement.
(c) Income statement. (f) Balance sheet.
- 18.** No, this treatment is not proper. While the transaction does involve a receipt of cash, it does not represent revenues. Revenues are the gross increase in owner's equity resulting from business activities entered into for the purpose of earning income. This transaction is simply an additional investment made by the owner in the business.
- 19.** Yes. Net income does appear on the income statement—it is the result of subtracting expenses from revenues. In addition, net income appears in the statement of owner's equity—it is shown as an addition to the beginning-of-period capital. Indirectly, the net income of a company is also included in the balance sheet. It is included in the capital account which appears in the owner's equity section of the balance sheet.

Questions Chapter 1 (Continued)

- 20.** (a) Ending capital balance \$198,000
Beginning capital balance 168,000
Net income \$ 30,000
- (b) Ending capital balance \$198,000
Beginning capital balance 168,000
..... 30,000
Deduct: Investment 13,000
Net income \$ 17,000
- 21.** (a) Total revenues (\$20,000 + \$70,000) \$90,000
- (b) Total expenses (\$26,000 + \$40,000) \$66,000
- (c) Total revenues \$90,000
Total expenses 66,000
Net income \$24,000
- 22.** Coca-Cola's accounting equation at December 31, 2007 was \$43,269,000,000 = \$21,525,000,000 + \$21,744,000,000.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 1-1

- (a) $\$90,000 - \$50,000 = \$40,000$ (Owner's Equity).
 (b) $\$40,000 + \$70,000 = \$110,000$ (Assets).
 (c) $\$94,000 - \$60,000 = \$34,000$ (Liabilities).

BRIEF EXERCISE 1-2

- (a) $\$120,000 + \$232,000 = \$352,000$ (Total assets).
 (b) $\$190,000 - \$80,000 = \$110,000$ (Total liabilities).
 (c) $\$800,000 - 0.5(\$800,000) = \$400,000$ (Owner's equity).

BRIEF EXERCISE 1-3

- (a) $(\$800,000 + \$150,000) - (\$500,000 - \$80,000) = \$530,000$
 (Owner's equity).
 (b) $(\$500,000 + \$100,000) + (\$800,000 - \$500,000 - \$70,000) = \$830,000$
 (Assets).
 (c) $(\$800,000 - \$80,000) - (\$800,000 - \$500,000 + \$120,000) = \$300,000$
 (Liabilities).

BRIEF EXERCISE 1-4

			Owner's Equity			
	Assets	=	Liabilities	+	Owner, Capital	- Owner Drawings + Revenues - Expenses
(a)	X	=	\$90,000	+	\$150,000	- \$40,000 + \$450,000 - \$320,000
	X	=	\$90,000	+	\$240,000	
	X	=	<u>\$330,000</u>			
(b)	\$57,000	=	X	+	\$25,000	- \$7,000 + \$50,000 - \$35,000
	\$57,000	=	X	+	\$33,000	
	X	=	<u>\$24,000</u>			(\$57,000 - \$33,000)
(c)	\$600,000	=	(\$600,000 x 2/3) + X (Owner's equity)			
	\$600,000	=	\$400,000	+	X	
	X	=	<u>\$200,000</u>			

BRIEF EXERCISE 1-5

<u>A</u>	(a)	Accounts receivable	<u>A</u>	(d)	Office supplies
<u>L</u>	(b)	Salaries payable	<u>OE</u>	(e)	Owner's investment
<u>A</u>	(c)	Equipment	<u>L</u>	(f)	Notes payable

BRIEF EXERCISE 1-6

	<u>Assets</u>	<u>Liabilities</u>	<u>Owner's Equity</u>
(a)	+	+	NE
(b)	+	NE	+
(c)	–	NE	–

BRIEF EXERCISE 1-7

	<u>Assets</u>	<u>Liabilities</u>	<u>Owner's Equity</u>
(a)	+	NE	+
(b)	–	NE	–
(c)	NE	NE	NE

BRIEF EXERCISE 1-8

<u>E</u>	(a)	Advertising expense	<u>D</u>	(e)	Bergman, Drawing
<u>R</u>	(b)	Commission revenue	<u>R</u>	(f)	Rent revenue
<u>E</u>	(c)	Insurance expense	<u>E</u>	(g)	Utilities expense
<u>E</u>	(d)	Salaries expense			

BRIEF EXERCISE 1-9

<u>R</u>	(a)	Received cash for services performed
<u>NOE</u>	(b)	Paid cash to purchase equipment
<u>E</u>	(c)	Paid employee salaries

BRIEF EXERCISE 1-10

LOPEZ COMPANY
Balance Sheet
December 31, 2010

Assets	
Cash	\$ 49,000
Accounts receivable	72,500
Total assets	<u>\$121,500</u>
Liabilities and Owner's Equity	
Liabilities	
Accounts payable	\$ 90,000
Owner's equity	
Kim Lopez, Capital	31,500
Total liabilities and owner's equity	<u>\$121,500</u>

BRIEF EXERCISE 1-11

<u>BS</u>	(a) Notes payable
<u>IS</u>	(b) Advertising expense
<u>OE, BS</u>	(c) Trent Buchanan, Capital
<u>BS</u>	(d) Cash
<u>IS</u>	(e) Service revenue

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 1-1

1. False. The three steps in the accounting process are identification, recording, and communication.
2. True
3. False. Congress passed the Sarbanes-Oxley Act of 2002 to reduce unethical behavior and decrease the likelihood of future corporate scandals.
4. False. The primary accounting standard-setting body in the United States is the Financial Accounting Standards Board (FASB).
5. True.

DO IT! 1-2

1. Drawings is owner's drawings (D); it decreases owner's equity.
2. Rent Revenue is revenue (R); it increases owner's equity.
3. Advertising Expense is an expense (E); it decreases owner's equity.
4. When the owner puts personal assets into the business, it is investment by owner (I); it increases owner's equity.

DO IT! 1-3

Assets		Liabilities		Owner's Equity			
Cash	Accounts Receivable	Accounts Payable	O. Cabrera, Capital	O. Cabrera, Drawings	Revenues	Expenses	
(1)	+\$20,000				+\$20,000		
(2) +\$20,000	-\$20,000						
(3)		+\$2,000					-\$2,000
(4) -\$ 5,000				-\$5,000			

DO IT! 1-4

- (a) The total assets are \$49,500, comprised of Cash \$7,000, Accounts Receivable \$13,500, and Equipment \$29,000.
- (b) Net income is \$21,000, computed as follows:

Revenues		
Service revenue		\$54,000
Expenses		
Rent expense	\$10,500	
Salaries expense	\$16,500	
Advertising expense	6,000	
Total expenses		<u>33,000</u>
Net income		<u>\$21,000</u>

DO IT! 1-4 (Continued)

- (c) The ending owner's equity balance of Broadway Company is \$21,500. By rewriting the accounting equation, we can compute Owner's Equity as Assets minus Liabilities, as follows:

Total assets [as computed in (a)]		\$49,500
Less: Liabilities		
Notes payable	\$25,000	
Accounts payable	<u>3,000</u>	<u>28,000</u>
Owner's equity		<u>\$21,500</u>

Note that it is not possible to determine the company's owner's equity in any other way, because the beginning balance for owner's equity is not provided.

SOLUTIONS TO EXERCISES

EXERCISE 1-1

- C Analyzing and interpreting information.
- R Classifying economic events.
- C Explaining uses, meaning, and limitations of data.
- R Keeping a systematic chronological diary of events.
- R Measuring events in dollars and cents.
- C Preparing accounting reports.
- C Reporting information in a standard format.
- I Selecting economic activities relevant to the company.
- R Summarizing economic events.

EXERCISE 1-2

(a) *Internal users*

Marketing manager
Production supervisor
Store manager
Vice-president of finance

External users

Customers
Internal Revenue Service
Labor unions
Securities and Exchange Commission
Suppliers

- ### (b)
- I Can we afford to give our employees a pay raise?
 - E Did the company earn a satisfactory income?
 - I Do we need to borrow in the near future?
 - E How does the company's profitability compare to other companies?
 - I What does it cost us to manufacture each unit produced?
 - I Which product should we emphasize?
 - E Will the company be able to pay its short-term debts?

EXERCISE 1-3

Larry Smith, president of Smith Company, instructed Ron Rivera, the head of the accounting department, to report the company's land in their accounting reports at its market value of \$170,000 instead of its cost of \$100,000, in an effort to make the company appear to be a better investment. The cost principle requires that assets be recorded and reported at their cost, because cost is reliable and can be objectively measured and verified.

The stakeholders include stockholders and creditors of Smith Company, potential stockholders and creditors, other users of Smith's accounting reports, Larry Smith, and Ron Rivera. All users of Smith's accounting reports could be harmed by relying on information which violates accounting principles. Larry Smith could benefit if the company is able to attract more investors, but would be harmed if the fraudulent reporting is discovered. Similarly, Ron Rivera could benefit by pleasing his boss, but would be harmed if the fraudulent reporting is discovered.

Ron's alternatives are to report the land at \$100,000 or to report it at \$170,000. Reporting the land at \$170,000 is not appropriate since it would mislead many people who rely on Smith's accounting reports to make financial decisions. Ron should report the land at its cost of \$100,000. He should try to convince Larry Smith that this is the appropriate course of action, but be prepared to resign his position if Smith insists.

EXERCISE 1-4

1. Incorrect. The *cost principle* requires that assets be recorded and reported at their cost.
2. Correct. The *monetary unit assumption* requires that companies include in the accounting records only transaction data that can be expressed in terms of money.
3. Incorrect. The *economic entity assumption* requires that the activities of the entity be kept separate and distinct from the activities of its owner and all other economic entities.

EXERCISE 1-5

Asset	Liability	Owner's Equity
Cash	Accounts payable	Karin Meredith, Capital
Cleaning equipment	Notes payable	
Cleaning supplies	Salaries payable	
Accounts receivable		

EXERCISE 1-6

1. Increase in assets and increase in owner's equity.
2. Decrease in assets and decrease in owner's equity.
3. Increase in assets and increase in liabilities.
4. Increase in assets and increase in owner's equity.
5. Decrease in assets and decrease in owner's equity.
6. Increase in assets and decrease in assets.
7. Increase in liabilities and decrease in owner's equity.
8. Increase in assets and decrease in assets.
9. Increase in assets and increase in owner's equity.

EXERCISE 1-7

1. (c)	5. (d)
2. (d)	6. (b)
3. (a)	7. (e)
4. (b)	8. (f)

EXERCISE 1-8

- (a)
1. Owner invested \$15,000 cash in the business.
 2. Purchased office equipment for \$5,000, paying \$2,000 in cash and the balance of \$3,000 on account.
 3. Paid \$750 cash for supplies.
 4. Earned \$8,300 in revenue, receiving \$4,600 cash and \$3,700 on account.
 5. Paid \$1,500 cash on accounts payable.

EXERCISE 1-8 (Continued)

6. Owner withdrew \$2,000 cash for personal use.
7. Paid \$650 cash for rent.
8. Collected \$450 cash from customers on account.
9. Paid salaries of \$4,900.
10. Incurred \$500 of utilities expense on account.

(b) Investment	\$15,000
Service revenue	8,300
Drawings.....	(2,000)
Rent expense	(650)
Salaries expense.....	(4,900)
Utilities expense.....	(500)
Increase in capital	<u>\$15,250</u>
(c) Service revenue	\$8,300
Rent expense	(650)
Salaries expense.....	(4,900)
Utilities expense.....	(500)
Net income.....	<u>\$2,250</u>

EXERCISE 1-9

S. MOSES & CO.
Income Statement
For the Month Ended August 31, 2010

Revenues	
Service revenue	\$8,300
Expenses	
Salaries expense.....	\$4,900
Rent expense	650
Utilities expense.....	<u>500</u>
Total expenses	<u>6,050</u>
Net income.....	<u>\$2,250</u>

EXERCISE 1-9 (Continued)

S. MOSES & CO.
Owner's Equity Statement
For the Month Ended August 31, 2010

S. Moses, Capital, August 1		\$ 0
Add: Investments	\$15,000	
Net income	<u>2,250</u>	<u>17,250</u>
		17,250
Less: Drawings		<u>2,000</u>
S. Moses, Capital, August 31		<u>\$15,250</u>

S. MOSES & CO.
Balance Sheet
August 31, 2010

Assets	
Cash	\$ 8,250
Accounts receivable	3,250
Supplies	750
Office equipment.....	<u>5,000</u>
Total assets.....	<u>\$17,250</u>
Liabilities and Owner's Equity	
Liabilities	
Accounts payable	\$ 2,000
Owner's equity	
S. Moses, Capital.....	<u>15,250</u>
Total liabilities and owner's equity	<u>\$17,250</u>

EXERCISE 1-10

(a) Owner's equity—12/31/09 (\$400,000 – \$250,000).....	\$150,000
Owner's equity—1/1/09	<u>100,000</u>
Increase in owner's equity	50,000
Add: Drawings	<u>15,000</u>
Net income for 2009	<u>\$ 65,000</u>

EXERCISE 1-10 (Continued)

(b) Owner's equity—12/31/10 (\$460,000 – \$300,000)	\$160,000
Owner's equity—1/1/10—see (a).....	<u>150,000</u>
Increase in owner's equity	10,000
Less: Additional investment.....	<u>50,000</u>
Net loss for 2010	<u>\$ 40,000</u>
 (c) Owner's equity—12/31/11 (\$590,000 – \$400,000)	\$190,000
Owner's equity—1/1/11—see (b)	<u>160,000</u>
Increase in owner's equity	30,000
Less: Additional investment.....	<u>15,000</u>
	15,000
Add: Drawings	<u>30,000</u>
Net income for 2011	<u>\$ 45,000</u>

EXERCISE 1-11

(a) Total assets (beginning of year).....	\$ 95,000
Total liabilities (beginning of year).....	<u>85,000</u>
Total owner's equity (beginning of year).....	<u>\$ 10,000</u>
 (b) Total owner's equity (end of year)	\$ 40,000
Total owner's equity (beginning of year).....	<u>10,000</u>
Increase in owner's equity	<u>\$ 30,000</u>
 Total revenues	\$215,000
Total expenses	<u>175,000</u>
Net income	<u>\$ 40,000</u>
 Increase in owner's equity	\$ 30,000
Less: Net income.....	<u>\$(40,000)</u>
Add: Drawings	<u>24,000</u>
Additional investment.....	<u>(16,000)</u>
	<u>\$ 14,000</u>
 (c) Total assets (beginning of year).....	\$129,000
Total owner's equity (beginning of year).....	<u>80,000</u>
Total liabilities (beginning of year).....	<u>\$ 49,000</u>

EXERCISE 1-11 (Continued)

(d) Total owner's equity (end of year).....		\$130,000
Total owner's equity (beginning of year)		<u>80,000</u>
Increase in owner's equity		<u>\$ 50,000</u>
 Total revenues		\$100,000
Total expenses.....		<u>55,000</u>
Net income		<u>\$ 45,000</u>
 Increase in owner's equity		\$ 50,000
Less: Net income	\$(45,000)	
Additional investment	<u>(25,000)</u>	<u>(70,000)</u>
Drawings		<u>\$ 20,000</u>

EXERCISE 1-12

LINDA STANLEY CO.
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue		\$62,500
Expenses		
Salaries expense	\$30,000	
Rent expense	10,400	
Utilities expense	3,100	
Advertising expense	<u>1,800</u>	
Total expenses		<u>45,300</u>
Net income		<u>\$17,200</u>

LINDA STANLEY CO.
Owner's Equity Statement
For the Year Ended December 31, 2010

Linda Stanley, Capital, January 1	\$48,000
Add: Net income	<u>17,200</u>
	65,200
Less: Drawings	<u>6,000</u>
Linda Stanley, Capital, December 31	<u>\$59,200</u>

EXERCISE 1-13

MENDEZ COMPANY
Balance Sheet
December 31, 2010

Assets	
Cash	\$15,000
Accounts receivable	8,500
Supplies	8,000
Equipment	<u>46,000</u>
Total assets	<u>\$77,500</u>
 Liabilities and Owner's Equity	
Liabilities	
Accounts payable	\$20,000
Owner's equity	
Mendez, Capital (\$67,500 – \$10,000)	<u>57,500</u>
Total liabilities and owner's equity	<u>\$77,500</u>

EXERCISE 1-14

(a) Camping fee revenues	\$140,000
General store revenues	<u>50,000</u>
Total revenue	190,000
Expenses	<u>150,000</u>
Net income	<u>\$ 40,000</u>

(b) **DEER PARK**
Balance Sheet
December 31, 2010

Assets	
Cash	\$ 23,000
Supplies	2,500
Equipment	<u>105,500</u>
Total assets	<u>\$131,000</u>

EXERCISE 1-14 (Continued)

DEER PARK
Balance Sheet (Continued)
December 31, 2010

Liabilities and Owner's Equity	
Liabilities	
Notes payable.....	\$ 60,000
Accounts payable	<u>11,000</u>
Total liabilities	71,000
Owner's equity	
Jan Nab, Capital (\$131,000 – \$71,000).....	<u>60,000</u>
Total liabilities and owner's equity	<u><u>\$131,000</u></u>

EXERCISE 1-15

SUMMERS CRUISE COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues	
Ticket revenue.....	\$325,000
Expenses	
Salaries expense	\$142,000
Maintenance expense	95,000
Property tax expense.....	10,000
Advertising expense	<u>3,500</u>
Total expenses.....	<u>250,500</u>
Net income	<u><u>\$ 74,500</u></u>

EXERCISE 1-16

KEVIN JOHNSON, ATTORNEY
Owner's Equity Statement
For the Year Ended December 31, 2010

Kevin Johnson, Capital, January 1	\$ 23,000 (a)
Add: Net income	<u>139,000 (b)</u>
	162,000
Less: Drawings.....	<u>79,000</u>
Kevin Johnson, Capital, December 31	<u><u>\$ 83,000 (c)</u></u>

EXERCISE 1-16 (Continued)**Supporting Computations**

(a)	Assets, January 1, 2010	\$ 85,000
	Liabilities, January 1, 2010	62,000
	Capital, January 1, 2010	<u>\$ 23,000</u>
(b)	Legal service revenue	\$350,000
	Total expenses	211,000
	Net income	<u>\$139,000</u>
(c)	Assets, December 31, 2010	\$168,000
	Liabilities, December 31, 2010	85,000
	Capital, December 31, 2010	<u>\$ 83,000</u>

PROBLEM 1-1A

BARONE REPAIR SHOP									
	Accounts			Accounts			Owner's Equity		
	Cash	+ Receivable	+ Supplies + Equipment	= Payable	+ Capital	N. Barone, - Drawings	+ Revenues	- Expenses	
1.	+\$10,000				+\$10,000				
	10,000				10,000				
2.	-5,000		+\$5,000						
	5,000		+ 5,000		+ 10,000				
3.	-400							-400	
	4,600				+ 10,000			-400	
4.	-500		+\$500					-400	
	4,100		+ 500		+ 10,000			-250	
5.	4,100		+ 500	+\$250				-650	
	+5,100		+ 5,000	250	+ 10,000		+\$5,100		
6.	9,200		+ 500	250	+ 10,000		5,100	-650	
7.	-1,000					-\$1,000			
	8,200		+ 500	250	+ 10,000	-1,000	5,100	-650	
8.	-2,000							-2,000	
	6,200		+ 500	250	+ 10,000	-1,000	5,100	-2,650	
9.	-140							-140	
	6,060		+ 500	250	+ 10,000	-1,000	5,100	-2,790	
10.		+\$750					+750		
	6,060	+ 750	+ 500	250	+ 10,000	-1,000	5,850	-2,790	
11.	+120	-120							
	\$ 6,180	+ \$630	+ \$500	+ \$250	+ \$10,000	- \$1,000	+ \$5,850	- \$2,790	
			\$12,310			\$12,310			

PROBLEM 1-1A (Continued)

(b) Service revenue (\$5,100 + \$750).....		\$5,850
Expenses		
Salaries	\$2,000	
Rent	400	
Advertising	250	
Utilities	140	<u>2,790</u>
Net income		<u>\$3,060</u>

PROBLEM 1-2A

MARIA GONZALEZ, VETERINARIAN

(a)

M. Gonzalez, M.									

PROBLEM 1-2A (Continued)**(b)**

MARIA GONZALEZ, VETERINARIAN
Income Statement
For the Month Ended September 30, 2010

Revenues		
Service revenue.....		\$8,000
Expenses		
Salaries expense.....	\$1,700	
Rent expense	900	
Advertising expense.....	300	
Utilities expense.....	170	
Total expenses		<u>3,070</u>
Net income.....		<u>\$4,930</u>

MARIA GONZALEZ, VETERINARIAN
Owner's Equity Statement
For the Month Ended September 30, 2010

M. Gonzalez, Capital, September 1	\$13,700
Add: Net income.....	<u>4,930</u>
	18,630
Less: Drawings	<u>1,000</u>
M. Gonzalez, Capital, September 30.....	<u>\$17,630</u>

MARIA GONZALEZ, VETERINARIAN
Balance Sheet
September 30, 2010

Assets	
Cash	\$15,200
Accounts receivable	5,900
Supplies	600
Office equipment.....	<u>8,100</u>
Total assets.....	<u>\$29,800</u>
Liabilities and Owner's Equity	
Liabilities	
Notes payable.....	\$10,000
Accounts payable	<u>2,170</u>
Total liabilities	12,170
Owner's equity	
M. Gonzalez, Capital.....	<u>17,630</u>
Total liabilities and owner's equity	<u>\$29,800</u>

PROBLEM 1-3A

(a)

SKYLINE FLYING SCHOOL
Income Statement
For the Month Ended May 31, 2010

Revenues		
Lesson revenue.....		\$7,500
Expenses		
Fuel expense	\$2,500	
Rent expense	1,200	
Advertising expense.....	500	
Insurance expense	400	
Repair expense.....	<u>400</u>	
Total expenses		<u>5,000</u>
Net income		<u>\$2,500</u>

SKYLINE FLYING SCHOOL
Owner's Equity Statement
For the Month Ended May 31, 2010

Jeff Wilkins, Capital, May 1		\$ 0
Add: Investments.....	\$45,000	
Net income.....	<u>2,500</u>	<u>47,500</u>
		47,500
Less: Drawings		<u>1,500</u>
Jeff Wilkins, Capital, May 31		<u>\$46,000</u>

SKYLINE FLYING SCHOOL
Balance Sheet
May 31, 2010

Assets		
Cash		\$ 5,600
Accounts receivable		7,200
Equipment.....		<u>64,000</u>
Total assets		<u>\$76,800</u>

**SKYLINE FLYING SCHOOL
Balance Sheet (Continued)
May 31, 2010**

Liabilities and Owner's Equity		
Liabilities		
Notes payable.....		\$30,000
Accounts payable		<u>800</u>
Total liabilities		30,800
Owner's equity		
Jeff Wilkins, Capital.....		<u>46,000</u>
Total liabilities and owner's equity		<u>\$76,800</u>

(b)

**SKYLINE FLYING SCHOOL
Income Statement
For the Month Ended May 31, 2010**

Revenues		
Lesson revenue (\$7,500 + \$900).....		\$8,400
Expenses		
Fuel expense (\$2,500 + \$1,500)	\$4,000	
Rent expense	1,200	
Advertising expense	500	
Insurance expense	400	
Repair expense	<u>400</u>	
Total expenses.....		<u>6,500</u>
Net income		<u>\$1,900</u>

**SKYLINE FLYING SCHOOL
Owner's Equity Statement
For the Month Ended May 31, 2010**

Jeff Wilkins, Capital, May 1.....		\$ 0
Add: Investments	\$45,000	
Net income	<u>1,900</u>	<u>46,900</u>
		46,900
Less: Drawings		<u>1,500</u>
Jeff Wilkins, Capital, May 31		<u>\$45,400</u>

PROBLEM 1-4A

(a)

MILLER DELIVERIES

Date	Assets			=	Liabilities		+	Owner's Equity			
	Cash	Accounts + Receivable	Supplies + Delivery Van		Notes Payable	Accounts Payable		M. Miller, Capital	M. Miller, Drawings	Revenues	Expenses
June 1	\$10,000							\$10,000			
2	(2,000)		\$12,000	\$10,000							
3	(500)										
5		\$4,400							\$4,400		(\$500)
9	(200)								(\$200)		
12			\$150			\$150					
15	1,250	(1,250)									
17						100				1,500	(100)
20	1,500										
23	(500)				(500)						
26	(250)										
29	(100)					(100)					
30	(1,000)										(1,000)
	<u>\$ 8,200</u>	<u>+\$3,150</u>	<u>+\$150</u>	<u>+\$12,000</u>	<u>=\$9,500</u>	<u>+\$150</u>	<u>+</u>	<u>\$10,000</u>	<u>+\$200</u>	<u>+\$5,900</u>	<u>-\$1,850</u>

PROBLEM 1-4A (Continued)

(b)

MILLER DELIVERIES
Income Statement
For the Month Ended June 30, 2010

Revenues		
Service revenue (\$4,400 + \$1,500)		\$5,900
Expenses		
Salaries expense	\$1,000	
Rent expense	500	
Utilities expense	250	
Gasoline expense	100	
Total expenses		<u>1,850</u>
Net income		<u>\$4,050</u>

(c)

MILLER DELIVERIES
Balance Sheet
June 30, 2010

Assets		
Cash		\$ 8,200
Accounts receivable		3,150
Supplies		150
Delivery van		<u>12,000</u>
Total assets		<u>\$23,500</u>
Liabilities and Owner's Equity		
Liabilities		
Notes payable		\$ 9,500
Accounts payable		<u>150</u>
Total liabilities		9,650
Owner's equity		
M. Miller, Capital		<u>13,850*</u>
Total liabilities and owner's equity		<u>\$23,500</u>

***(\$10,000 + \$4,050 – \$200)**

PROBLEM 1-5A

(a)	Karma Company	Yates Company	McCain Company	Dench Company
	(a) \$ 45,000	(d) \$50,000	(g) \$120,000	(j) \$ 80,000
	(b) 115,000	(e) 62,000	(h) 70,000	(k) 250,000
	(c) 10,000	(f) 48,000	(i) 431,000	(l) 435,000

(b)

YATES COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

Capital, January 1		\$ 60,000
Add: Investment	\$15,000	
Net income.....	<u>35,000</u>	<u>50,000</u>
		110,000
Less: Drawings		<u>48,000</u>
Capital, December 31		<u><u>\$ 62,000</u></u>

- (c) The sequence of preparing financial statements is income statement, owner's equity statement, and balance sheet. The interrelationship of the owner's equity statement to the other financial statements results from the fact that net income from the income statement is reported in the owner's equity statement and ending capital reported in the owner's equity statement is the amount reported for owner's equity on the balance sheet.

PROBLEM 1-1B

(a)

(a)	VINNIE'S TRAVEL AGENCY					Owner's Equity		
	Accounts		Office	Accounts	V. Venuchi,	V. Venuchi,		
	Cash	+ Receivable	+ Supplies + Equipment	= Payable	+ Capital	- Drawings	+ Revenues - Expenses	
1.	<u>+\$15,000</u>				<u>+\$15,000</u>			
	15,000			=	15,000			
2.	<u>-600</u>						<u>-\$600</u>	
	14,400			=	15,000		<u>-600</u>	
3.	<u>-3,000</u>		<u>+\$3,000</u>					
	11,400	+	3,000	=	15,000		<u>-600</u>	
4.				<u>+\$700</u>			<u>-700</u>	
	11,400	+	3,000	=	15,000		<u>-1,300</u>	
5.	<u>-800</u>		<u>+\$800</u>					
	10,600	+	800	=	15,000		<u>-1,300</u>	
6.	<u>+3,000</u>	<u>+\$8,000</u>				<u>+\$11,000</u>		
	13,600	+	800	=	15,000		<u>-1,300</u>	
7.	<u>-500</u>					<u>-\$500</u>		
	13,100	+	800	=	15,000		<u>-1,300</u>	
8.	<u>-700</u>			<u>-700</u>				
	12,400	+	800	=	15,000		<u>-1,300</u>	
9.	<u>-2,200</u>			0				
	10,200	+	800	=	15,000		<u>-2,200</u>	
10.	<u>+4,000</u>						<u>-3,500</u>	
	<u>\$14,200</u>	+	<u>\$800</u>	=	<u>\$ 0</u>	<u>\$500</u>	<u>+\$3,500</u>	

PROBLEM 1-1B (Continued)

(b) Service revenue		\$11,000
Expenses		
Salaries	\$2,200	
Rent	600	
Advertising	700	3,500
Net income		<u>\$ 7,500</u>

PROBLEM 1-2B

(a)

[illegible]

PROBLEM 1-2B (Continued)**(b)**

JENNY BROWN, ATTORNEY AT LAW
Income Statement
For the Month Ended August 31, 2010

Revenues		
Service revenue.....		\$8,000
Expenses		
Salaries expense.....	\$2,500	
Rent expense.....	900	
Advertising expense.....	400	
Utilities expense.....	220	
Total expenses.....		<u>4,020</u>
Net income		<u>\$3,980</u>

JENNY BROWN, ATTORNEY AT LAW
Owner's Equity Statement
For the Month Ended August 31, 2010

Jenny Brown, Capital, August 1	\$ 8,800
Add: Net income	<u>3,980</u>
	12,780
Less: Drawings.....	<u>700</u>
Jenny Brown, Capital, August 31	<u>\$12,080</u>

JENNY BROWN, ATTORNEY AT LAW
Balance Sheet
August 31, 2010

Assets	
Cash.....	\$ 3,000
Accounts receivable.....	5,300
Supplies.....	500
Office equipment.....	<u>8,000</u>
Total assets	<u>\$16,800</u>
Liabilities and Owner's Equity	
Liabilities	
Notes payable.....	\$ 1,500
Accounts payable	<u>3,220</u>
Total liabilities	4,720
Owner's equity	
Jenny Brown, Capital.....	<u>12,080</u>
Total liabilities and owner's equity	<u>\$16,800</u>

PROBLEM 1-3B

(a)

DIVINE CREATIONS CO.
Income Statement
For the Month Ended June 30, 2010

Revenues		
Service revenue.....		\$7,000
Expenses		
Supplies expense	\$1,600	
Gas and oil expense	200	
Advertising expense	400	
Utilities expense.....	150	
Total expenses.....		<u>2,350</u>
Net income		<u>\$4,650</u>

DIVINE CREATIONS CO.
Owner's Equity Statement
For the Month Ended June 30, 2010

Michelle Sasse, Capital, June 1		\$ 0
Add: Investments	\$15,200	
Net income	<u>4,650</u>	<u>19,850</u>
		19,850
Less: Drawings.....		<u>1,300</u>
Michelle Sasse, Capital, June 30		<u>\$18,550</u>

DIVINE CREATIONS CO.
Balance Sheet
June 30, 2010

Assets	
Cash	\$13,750
Accounts receivable	3,000
Craft supplies.....	2,000
Equipment	<u>10,000</u>
Total assets.....	<u>\$28,750</u>

PROBLEM 1-3B (Continued)

DIVINE CREATIONS CO.
Balance Sheet (Continued)
June 30, 2010

Liabilities and Owner's Equity	
Liabilities	
Notes payable	\$ 9,000
Accounts payable	<u>1,200</u>
Total liabilities	10,200
Owner's equity	
Michelle Sasse, Capital	<u>18,550</u>
Total liabilities and owner's equity.....	<u>\$28,750</u>

(b)

DIVINE CREATIONS CO.
Income Statement
For the Month Ended June 30, 2010

Revenues	
Service revenue (\$7,000 + \$900).....	\$7,900
Expenses	
Supplies expense	\$1,600
Gas and oil expense (\$200 + \$150).....	350
Advertising expense	400
Utilities expense	<u>150</u>
Total expenses	<u>2,500</u>
Net income.....	<u>\$5,400</u>

DIVINE CREATIONS CO.
Owner's Equity Statement
For the Month Ended June 30, 2010

Michelle Sasse, Capital, June 1		\$ 0
Add: Investments.....	\$15,200	
Net income	<u>5,400</u>	<u>20,600</u>
		20,600
Less: Drawings		<u>1,300</u>
Michelle Sasse, Capital, June 30.....		<u>\$19,300</u>

PROBLEM 1-4B

(a)

Date	Assets = Liabilities + Owner's Equity					
	Cash	Accounts Receivable + Supplies	Office Equipment	Notes Payable	Accounts Payable + Capital	M. Rodriguez, M. Rodriguez, - Drawings + Revenues - Expenses
May 1	\$ 7,000					
2	(900)					
3		\$600			\$ 600	
5	(125)					
9	4,000					
12	(1,000)					
15		\$6,400				
17	(2,500)					
20	(600)					
23	4,000	(4,000)				
26	5,000			\$5,000		
29			\$3,100		3,100	
30	(175)					
	<u>\$14,700 +</u>	<u>\$2,400 +</u>	<u>\$600 +</u>	<u>\$5,000 +</u>	<u>\$3,100 +</u>	<u>\$7,000 +</u>
				-	-	-
					<u>\$1,000</u>	<u>\$10,400 -</u>
						<u>\$3,700</u>

PROBLEM 1-4B (Continued)

(b) **RODRIGUEZ CONSULTING**
Income Statement
For the Month Ended May 31, 2010

Revenues		
Service revenue (\$4,000 + \$6,400)		\$10,400
Expenses		
Salaries expense	\$2,500	
Rent expense	900	
Utilities expense	175	
Advertising expense	125	
Total expenses		<u>3,700</u>
Net income		<u>\$ 6,700</u>

(c) **RODRIGUEZ CONSULTING**
Balance Sheet
May 31, 2010

Assets		
Cash		\$14,700
Accounts receivable		2,400
Supplies		600
Office equipment		<u>3,100</u>
Total assets		<u>\$20,800</u>
Liabilities and Owner's Equity		
Liabilities		
Notes payable		\$ 5,000
Accounts payable		<u>3,100</u>
Total liabilities		8,100
Owner's equity		
M. Rodriguez, Capital		<u>12,700*</u>
Total liabilities and owner's equity		<u>\$20,800</u>

*($\$7,000 + \$6,700 - \$1,000$)

PROBLEM 1-5B

(a)	Donatello Company	(d)	Raphael Company	(g)	Michelangelo Company	(j)	Leonardo Company
	(a) \$ 32,000		(d) \$50,000		(g) \$129,000		(j) \$ 60,000
	(b) 100,000		(e) 40,000		(h) 110,000		(k) 245,000
	(c) 6,000		(f) 33,000		(i) 373,000		(l) 450,000

(b)

DONATELLO COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

Capital, January 1		\$32,000
Add: Investment	\$ 6,000	
Net income	<u>17,000</u>	<u>23,000</u>
		55,000
Less: Drawings		<u>15,000</u>
Capital, December 31		<u><u>\$40,000</u></u>

- (c) The sequence of preparing financial statements is income statement, owner's equity statement, and balance sheet. The interrelationship of the owner's equity statement to the other financial statements results from the fact that net income from the income statement is reported in the owner's equity statement and ending capital reported in the owner's equity statement is the amount reported for owner's equity on the balance sheet.

- (a) PepsiCo's total assets at December 29, 2007 were \$34,628 million and at December 30, 2006 were \$29,930 million.
- (b) PepsiCo had \$910 million of cash and cash equivalents at December 29, 2007.
- (c) PepsiCo had accounts payable (and other current liabilities) totaling \$7,602 million on December 29, 2007 and \$6,496 million on December 30, 2006.
- (d) PepsiCo reports net sales for three consecutive years as follows:
- | | |
|------|------------------|
| 2005 | \$32,562 million |
| 2006 | \$35,137 million |
| 2007 | \$39,474 million |
- (e) From 2006 to 2007, PepsiCo's net income increased \$16 million from \$5,642 million to \$5,658 million.

(a)	(in millions)	PepsiCo	Coca-Cola
1.	Total assets	\$34,628	\$43,269
2.	Accounts receivable (net)	\$ 4,389	\$ 3,317
3.	Net sales	\$39,474	\$28,857
4.	Net income	\$ 5,658	\$ 5,981

- (b)** Coca-Cola's total assets were approximately 25% greater than PepsiCo's total assets, but PepsiCo's net sales were 37% greater than Coca-Cola's net sales. PepsiCo's accounts receivable were 32% greater than Coca-Cola's and represent 11.1% of its net sales. Coca-Cola's accounts receivable amount to 11.5% of its net sales. Both PepsiCo's and Coca-Cola's accounts receivable are at satisfactory levels.

Coca-Cola's net income was 105.7% of PepsiCo's. It appears that these two companies' operations are comparable in some ways, with Coca-Cola's operations slightly more profitable.

(a) The field is normally divided into three broad areas: auditing, financial/tax, and management accounting.

(b) The skills required in these areas:

People skills, sales skills, communication skills, analytical skills, ability to synthesize, creative ability, initiative, computer skills.

(c) The skills required in these areas differ as follows:

	Auditing	Financial and Tax	Management Accounting
People skills	Medium	Medium	Medium
Sales skills	Medium	Medium	Low
Communication skills	Medium	Medium	High
Analytical skills	High	Very High	High
Ability to synthesize	Medium	Low	High
Creative ability	Low	Medium	Medium
Initiative	Medium	Medium	Medium
Computer skills	High	High	Very High

(d) Some key job functions in accounting:

Auditing: Work in audit involves checking accounting ledgers and financial statements within corporations and government. This work is becoming increasingly computerized and can rely on sophisticated random sampling methods. Audit is the bread-and-butter work of accounting. This work can involve significant travel and allows you to really understand how money is being made in the company that you are analyzing. It's great background!

Budget Analysis: Budget analysts are responsible for developing and managing an organization's financial plans. There are plentiful jobs in this area in government and private industry. Besides quantitative skills many budget analyst jobs require good people skills because of negotiations involved in the work.

Financial: Financial accountants prepare financial statements based on general ledgers and participate in important financial decisions involving mergers and acquisitions, benefits/ERISA planning, and long-term financial projections. This work can be varied over time. One day you may be running spreadsheets. The next day you may be visiting a customer or supplier to set up a new account and discuss business. This work requires a good understanding of both accounting and finance.

Management Accounting: Management accountants work in companies and participate in decisions about capital budgeting and line of business analysis. Major functions include cost analysis, analysis of new contracts, and participation in efforts to control expenses efficiently. This work often involves the analysis of the structure of organizations. Is responsibility to spend money in a company at the right level of our organization? Are goals and objectives to control costs being communicated effectively? Historically, many management accountants have been derided as “bean counters.” This mentality has undergone major change as management accountants now often work side by side with marketing and finance to develop new business.

Tax: Tax accountants prepare corporate and personal income tax statements and formulate tax strategies involving issues such as financial choice, how to best treat a merger or acquisition, deferral of taxes, when to expense items and the like. This work requires a thorough understanding of economics and the tax code. Increasingly, large corporations are looking for persons with both an accounting and a legal background in tax. A person, for example, with a JD and a CPA would be especially desirable to many firms.

(e) Junior Staff Accountant \$36-63,000

- (a) The estimate of the \$6,100 loss was based on the difference between the \$25,000 invested in the driving range and the bank balance of \$18,900 at March 31. This is not a valid basis for determining income because it only shows the change in cash between two points in time.
- (b) The balance sheet at March 31 is as follows:

CHIP-SHOT DRIVING RANGE
Balance Sheet
March 31, 2010

Assets	
Cash	\$18,900
Caddy shack	8,000
Equipment	800
Total assets	<u>\$27,700</u>
 Liabilities and Owner's Equity	
Liabilities	
Accounts payable (\$150 + \$100)	\$ 250
Owner's equity	
Mary and Jack Gray, Capital	<u>27,450</u>
Total liabilities and owner's equity	<u>\$27,700</u>

As shown in the balance sheet, the owner's capital at March 31 is \$27,450. The estimate of \$2,450 of net income is the difference between the initial investment of \$25,000 and \$27,450. This was not a valid basis for determining net income because changes in owner's equity between two points in time may have been caused by factors unrelated to net income. For example, there may be drawings and/or additional capital investments by the owner(s).

- (c) Actual net income for March can be determined by adding owner's drawings to the change in owner's capital during the month as shown below:

Owner's capital, March 31, per balance sheet	\$27,450
Owner's capital, March 1	<u>25,000</u>
Increase in owner's capital	2,450
Add: Drawings	<u>1,000</u>
Net income	<u>\$ 3,450</u>

Alternatively, net income can be found by determining the revenues earned [described in (d) below] and subtracting expenses.

- (d) Revenues earned can be determined by adding expenses incurred during the month to net income. March expenses were Rent, \$1,000; Wages, \$400; Advertising, \$750; and Utilities, \$100 for a total of \$2,250. Revenues earned, therefore, were \$5,700 (\$2,250 + \$3,450). Alternatively, since all revenues are received in cash, revenues earned can be computed from an analysis of the changes in cash as follows:

Beginning cash balance		\$25,000
Less: Cash payments		
Caddy shack	\$8,000	
Golf balls and clubs	800	
Rent	1,000	
Advertising	600	
Wages	400	
Drawings	<u>1,000</u>	<u>11,800</u>
Cash balance before revenues		13,200
Cash balance, March 31		<u>18,900</u>
Revenues earned		<u>\$ 5,700</u>

To: Lynn Benedict
From: Student

I have received the balance sheet of New York Company as of December 31, 2010. A number of items in this balance sheet are not properly reported. They are:

- 1. The balance sheet should be dated as of a specific date, not for a period of time. Therefore, it should be dated “December 31, 2010.”**
- 2. Equipment should be shown as an asset and reported below Supplies on the balance sheet.**
- 3. Accounts receivable should be shown as an asset, not a liability, and reported between Cash and Supplies on the balance sheet.**
- 4. Accounts payable should be shown as a liability, not an asset. The note payable is also a liability and should be reported in the liability section.**
- 5. Liabilities and owner’s equity should be shown on the balance sheet. Don Wenger, Capital and Don Wenger, Drawing are not liabilities.**
- 6. Don Wenger, Capital and Don Wenger, Drawing are part of owner’s equity. The Drawing account is not reported on the balance sheet but is subtracted from Don Wenger, Capital to arrive at owner’s equity at the end of the period.**

A correct balance sheet is as follows:

NEW YORK COMPANY
Balance Sheet
December 31, 2010

Assets	
Cash	\$ 9,000
Accounts receivable	6,000
Supplies	2,000
Equipment	<u>25,500</u>
	<u>\$42,500</u>
Liabilities and Owner's Equity	
Liabilities	
Notes payable	\$10,500
Accounts payable	<u>8,000</u>
Total liabilities	18,500
Owner's equity	
Don Wenger, Capital (\$26,000 – \$2,000)	<u>24,000</u>
Total liabilities and owner's equity	<u>\$42,500</u>

- (a) The students should identify all of the stakeholders in the case; that is, all the parties that are affected, either beneficially or negatively, by the action or decision described in the case. The list of stakeholders in this case are:
- ▶ Steve Baden, interviewee.
 - ▶ Both Baltimore firms.
 - ▶ Great Northern College.
- (b) The students should identify the ethical issues, dilemmas, or other considerations pertinent to the situation described in the case. In this case the ethical issues are:
- ▶ Is it proper that Steve charged both firms for the total travel costs rather than split the actual amount of \$296 between the two firms?
 - ▶ Is collecting \$592 as reimbursement for total costs of \$296 ethical behavior?
 - ▶ Did Steve deceive both firms or neither firm?
- (c) Each student must answer the question for himself/herself. Would you want to start your first job having deceived your employer before your first day of work? Would you be embarrassed if either firm found out that you double-charged? Would your school be embarrassed if your act was uncovered? Would you be proud to tell your professor that you collected your expenses twice?

- (a) Answers to the following will vary depending on students' opinions.
- (1) This does not represent the hiding of assets, but rather a choice as to the order of use of assets. This would seem to be ethical.
 - (2) This does not represent the hiding of assets, but rather is a change in the nature of assets. Since the expenditure was necessary, although perhaps accelerated, it would seem to be ethical.
 - (3) This represents an intentional attempt to deceive the financial aid office. It would therefore appear to be both unethical and potentially illegal.
 - (4) This is a difficult issue. By taking the leave, actual net income would be reduced. The form asks the applicant to report actual net income. However, it is potentially deceptive since you do not intend on taking unpaid absences in the future, thus future income would be higher than reported income.
- (b) Companies might want to overstate net income in order to potentially increase the stock price by improving investors' perceptions of the company. Also, a higher net income would make it easier to receive debt financing. Finally, managers would want a higher net income to increase the size of their bonuses.
- (c) Sometimes companies want to report a lower income if they are negotiating with employees. For example, professional sports teams frequently argue that they can not increase salaries because they aren't making enough money. This also occurs in negotiations with unions. For tax accounting (as opposed to the financial accounting in this course) companies frequently try to minimize the amount of reported taxable income.
- (d) Unfortunately many times people who are otherwise very ethical will make unethical decisions regarding financial reporting. They might be driven to do this because of greed. Frequently it is because their superiors have put pressure on them to take an unethical action, and they are afraid to not follow directions because they might lose their job. Also, in some instances top managers will tell subordinates that they should be a team player, and do the action because it would help the company, and therefore would help fellow employees.

CHAPTER 2

The Recording Process

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain what an account is and how it helps in the recording process.	1		2	1		
2. Define debits and credits and explain their use in recording business transactions.	2, 3, 4, 5, 6, 7, 8, 9, 14, 21	1, 2, 5	4	2, 4, 6, 7, 14	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
3. Identify the basic steps in the recording process.	10, 19	4	6	6, 7		
4. Explain what a journal is and how it helps in the recording process.	11, 12, 13, 14, 16	3, 6	7	3, 5, 6, 7, 10, 11, 12	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
5. Explain what a ledger is and how it helps in the recording process.	17			8		
6. Explain what posting is and how it helps in the recording process.	15, 17	7, 8		9, 12	2A, 3A, 5A	2B, 3B, 5B
7. Prepare a trial balance and explain its purposes.	18, 20	9, 10		9, 10, 11, 13, 14	2A, 3A, 4A, 5A	2B, 3B, 4B, 5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Journalize a series of transactions.	Simple	20–30
2A	Journalize transactions, post, and prepare a trial balance.	Simple	30–40
3A	Journalize and post transactions, and prepare a trial balance.	Moderate	40–50
4A	Prepare a correct trial balance.	Moderate	30–40
5A	Journalize transactions, post, and prepare a trial balance.	Moderate	40–50
1B	Journalize a series of transactions.	Simple	20–30
2B	Journalize transactions, post, and prepare a trial balance.	Simple	30–40
3B	Journalize transactions, post, and prepare a trial balance.	Moderate	40–50
4B	Prepare a correct trial balance.	Moderate	30–40
5B	Journalize transactions, post, and prepare a trial balance.	Moderate	40–50

WEYGANDT ACCOUNTING PRINCIPLES 9E**CHAPTER 2****THE RECORDING PROCESS**

Number	SO	BT	Difficulty	Time (min.)
BE1	2	C	Simple	6–8
BE2	2	C	Simple	4–6
BE3	4	AP	Simple	4–6
BE4	3	C	Moderate	4–6
BE5	2	C	Simple	6–8
BE6	4	AP	Simple	4–6
BE7	6	AP	Simple	4–6
BE8	6	AP	Simple	4–6
BE9	7	AP	Simple	4–6
BE10	7	AN	Moderate	6–8
DI1	2	C	Simple	3–5
DI2	4	AP	Simple	3–5
DI3	6	AP	Simple	2–4
DI4	7	AP	Simple	6–8
EX1	1	K	Simple	2–4
EX2	2	C	Simple	10–15
EX3	4	AP	Simple	8–10
EX4	2	C	Simple	6–8
EX5	4	AP	Simple	6–8
EX6	2–4	AP	Simple	6–8
EX7	2–4	AP	Simple	8–10
EX8	5	K	Simple	2–4
EX9	6, 7	AP	Simple	10–12
EX10	4, 7	AP	Moderate	10–12
EX11	4, 7	AP	Moderate	12–15
EX12	4, 6	AP	Moderate	12–15
EX13	7	AN	Moderate	6–8
EX14	2, 7	AP	Simple	8–10

THE RECORDING PROCESS (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	2, 4	AP	Simple	20–30
P2A	2, 4, 6, 7	AP	Simple	30–40
P3A	2, 4, 6, 7	AP	Moderate	40–50
P4A	7	AN	Moderate	30–40
P5A	2, 4, 6, 7	AP	Moderate	40–50
P1B	2, 4	AP	Simple	20–30
P2B	2, 4, 6, 7	AP	Simple	30–40
P3B	2, 4, 6, 7	AP	Moderate	40–50
P4B	7	AN	Moderate	30–40
P5B	2, 4, 6, 7	AP	Moderate	40–50
BYP1	2	C	Simple	8–10
BYP2	2, 6	AN	Simple	8–10
BYP3	—	AP	Simple	15–20
BYP4	6, 7	AP, S	Moderate	20–30
BYP5	3, 6	S	Simple	10–15
BYP6	7	AN, E	Moderate	10–15
BYP7	—	E	Moderate	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain what an account is and how it helps in the recording process.	Q2-1 E2-1					
2. Define debits and credits and explain their use in recording business transactions.	Q2-21	Q2-2 Q2-7 BE2-2 Q2-3 Q2-8 BE2-5 Q2-4 Q2-9 DI2-1 Q2-5 Q2-14 E2-2 Q2-6 BE2-1 E2-4	E2-6 P2-3A P2-5B E2-7 P2-5A E2-14 P2-1B P2-1A P2-2B P2-2A P2-3B			
3. Identify the basic steps in the recording process.	Q2-10	Q2-19 BE2-4	E2-6 E2-7			
4. Explain what a journal is and how it helps in the recording process.	Q2-12	Q2-11 Q2-13 Q2-14	Q2-16 E2-7 P2-5A BE2-3 E2-10 P2-1B BE2-6 E2-11 P2-2B DI2-2 E2-12 P2-3B E2-3 P2-1A P2-5B E2-5 P2-2A E2-6 P2-3A			
5. Explain what a ledger is and how it helps in the recording process.	E2-8	Q2-17				
6. Explain what posting is and how it helps in the recording process.		Q2-15 Q2-17	BE2-7 E2-12 P2-2B BE2-8 P2-2A P2-3B DI2-3 P2-3A P2-5B E2-9 P2-5A			
7. Prepare a trial balance and explain its purposes.		Q2-18	BE2-9 E2-11 P2-5A DI2-4 E2-14 P2-2B E2-9 P2-2A P2-3B E2-10 P2-3A P2-5B	Q2-20 BE2-10 E2-13 P2-4A	P2-4B	
Broadening Your Perspective		Financial Reporting	Decision Making Across the Organization Exploring the Web	Comparative Analysis	Communication Making Decision Across the Organization	All About You Ethics Case

ANSWERS TO QUESTIONS

1. A T account has the following parts: (a) the title, (b) the left or debit side, and (c) the right or credit side.
2. Disagree. The terms debit and credit mean left and right respectively.
3. Jeff is incorrect. The double-entry system merely records the dual effect of a transaction on the accounting equation. A transaction is not recorded twice; it is recorded once, with a dual effect.
4. Maria is incorrect. A debit balance only means that debit amounts exceed credit amounts in an account. Conversely, a credit balance only means that credit amounts are greater than debit amounts in an account. Thus, a debit or credit balance is neither favorable nor unfavorable.
5.
 - (a) Asset accounts are increased by debits and decreased by credits.
 - (b) Liability accounts are decreased by debits and increased by credits.
 - (c) Revenues and owner's capital are increased by credits and decreased by debits. Expenses and owner's drawing are increased by debits and decreased by credits.
6.
 - (a) Accounts Receivable—debit balance.
 - (b) Cash—debit balance.
 - (c) Owner's Drawing—debit balance.
 - (d) Accounts Payable—credit balance.
 - (e) Service Revenue—credit balance.
 - (f) Salaries Expense—debit balance.
 - (g) Owner's Capital—credit balance.
7.
 - (a) Accounts Receivable—asset—debit balance.
 - (b) Accounts Payable—liability—credit balance
 - (c) Equipment—asset—debit balance.
 - (d) Owner's Drawing—owner's equity—debit balance.
 - (e) Supplies—asset—debit balance.
8.
 - (a) Debit Supplies and credit Accounts Payable.
 - (b) Debit Cash and credit Notes Payable.
 - (c) Debit Salaries Expense and credit Cash.
9.
 - (1) Cash—both debit and credit entries.
 - (2) Accounts Receivable—both debit and credit entries.
 - (3) Owner's Drawing—debit entries only.
 - (4) Accounts Payable—both debit and credit entries.
 - (5) Salaries Expense—debit entries only.
 - (6) Service Revenue—credit entries only.
10. The basic steps in the recording process are:
 - (1) Analyze each transaction for its effect on the accounts.
 - (2) Enter the transaction information in a journal.
 - (3) Transfer the journal information to the appropriate accounts in the ledger.

Questions Chapter 2 (Continued)

11. The advantages of using the journal in the recording process are:
- (1) It discloses in one place the complete effects of a transaction.
 - (2) It provides a chronological record of all transactions.
 - (3) It helps to prevent or locate errors because the debit and credit amounts for each entry can be easily compared.
12. (a) The debit should be entered first.
(b) The credit should be indented.
13. When three or more accounts are required in one journal entry, the entry is referred to as a compound entry. An example of a compound entry is the purchase of equipment, part of which is paid for with cash and the remainder is on account.
14. (a) No, debits and credits should not be recorded directly in the ledger.
(b) The advantages of using the journal are:
1. It discloses in one place the complete effects of a transaction.
 2. It provides a chronological record of all transactions.
 3. It helps to prevent or locate errors because the debit and credit amounts for each entry can be easily compared.
15. The advantage of the last step in the posting process is to indicate that the item has been posted.
16. (a) Cash 9,000
Hector Molina, Capital 9,000
(Invested cash in the business)
- (b) Prepaid Insurance 800
Cash 800
(Paid one-year insurance policy)
- (c) Supplies 2,000
Accounts Payable 2,000
(Purchased supplies on account)
- (d) Cash 7,500
Service Revenue 7,500
(Received cash for services rendered)
17. (a) The entire group of accounts maintained by a company, including all the asset, liability, and owner's equity accounts, is referred to collectively as the ledger.
(b) A chart of accounts is a list of accounts and the account numbers that identify their location in the ledger. The chart of accounts is important, particularly for a company that has a large number of accounts, because it helps organize the accounts and define the level of detail that a company desires in its accounting system.

Questions Chapter 2 (Continued)

- 18.** A trial balance is a list of accounts and their balances at a given time. The primary purpose of a trial balance is to prove (check) that the debits equal the credits after posting. A trial balance also facilitates the discovery of errors in journalizing and posting. In addition, it is useful in preparing financial statements.
- 19.** No, Jim is not correct. The proper sequence is as follows:
- (b) Business transaction occurs.
 - (c) Information entered in the journal.
 - (a) Debits and credits posted to the ledger.
 - (e) Trial balance is prepared.
 - (d) Financial statements are prepared.
- 20.** (a) The trial balance would balance.
(b) The trial balance would not balance.
- 21.** The normal balances are Cash debit, Accounts Payable credit, and Interest Expense debit.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 2-1

	(a) Debit Effect	(b) Credit Effect	(c) Normal Balance
1. Accounts Payable	Decrease	Increase	Credit
2. Advertising Expense	Increase	Decrease	Debit
3. Service Revenue	Decrease	Increase	Credit
4. Accounts Receivable	Increase	Decrease	Debit
5. A. J. Ritter, Capital	Decrease	Increase	Credit
6. A. J. Ritter, Drawing	Increase	Decrease	Debit

BRIEF EXERCISE 2-2

	Account Debited	Account Credited
June 1	Cash	Hank Norris, Capital
2	Equipment	Accounts Payable
3	Rent Expense	Cash
12	Accounts Receivable	Service Revenue

BRIEF EXERCISE 2-3

June 1	Cash.....	5,000	
	Hank Norris, Capital		5,000
2	Equipment	900	
	Accounts Payable		900
3	Rent Expense.....	800	
	Cash.....		800
12	Accounts Receivable	300	
	Service Revenue.....		300

BRIEF EXERCISE 2-4

The basic steps in the recording process are:

1. **Analyze each transaction. In this step, business documents are examined to determine the effects of the transaction on the accounts.**
2. **Enter each transaction in a journal. This step is called journalizing and it results in making a chronological record of the transactions.**
3. **Transfer journal information to ledger accounts. This step is called posting. Posting makes it possible to accumulate the effects of journalized transactions on individual accounts.**

BRIEF EXERCISE 2-5

	(a) <u>Effect on Accounting Equation</u>	(b) <u>Debit-Credit Analysis</u>
Aug. 1	The asset Cash is increased; the owner's equity account T. J. Carlin, Capital is increased.	Debits increase assets: debit Cash \$8,000. Credits increase owner's equity: credit T. J. Carlin, Capital \$8,000.
4	The asset Prepaid Insurance is increased; the asset Cash is decreased.	Debits increase assets: debit Prepaid Insurance \$1,800. Credits decrease assets: credit Cash \$1,800.
16	The asset Cash is increased; the revenue Service Revenue is increased.	Debits increase assets: debit Cash \$800. Credits increase revenues: credit Service Revenue \$800.
27	The expense Salaries Expense is increased; the asset Cash is decreased.	Debits increase expenses: debit Salaries Expense \$1,000. Credits decrease assets: credit Cash \$1,000.

BRIEF EXERCISE 2-6

Aug. 1	Cash	8,000	
	T. J. Carlin, Capital		8,000
4	Prepaid Insurance.....	1,800	
	Cash.....		1,800
16	Cash	800	
	Service Revenue.....		800
27	Salaries Expense.....	1,000	
	Cash.....		1,000

BRIEF EXERCISE 2-7

Cash		Service Revenue	
5/12	2,400	5/5	5,000
5/15	3,000	5/15	3,000
Ending Bal. 5,400		Ending Bal. 8,000	

Accounts Receivable			
5/5	5,000	5/12	2,400
Ending Bal. 2,600			

BRIEF EXERCISE 2-8

Cash

Date	Explanation	Ref.	Debit	Credit	Balance
May 12		J1	2,400		2,400
15		J1	3,000		5,400

BRIEF EXERCISE 2-8 (Continued)

Accounts Receivable

Date	Explanation	Ref.	Debit	Credit	Balance
May 5		J1	5,000		5,000
12		J1		2,400	2,600

Service Revenue

Date	Explanation	Ref.	Debit	Credit	Balance
May 5		J1		5,000	5,000
15		J1		3,000	8,000

BRIEF EXERCISE 2-9

CLELAND COMPANY Trial Balance June 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash.....	\$ 8,800	
Accounts Receivable	3,000	
Equipment	17,000	
Accounts Payable		\$ 9,000
Cleland, Capital.....		20,000
Cleland, Drawing	1,200	
Service Revenue.....		8,000
Salaries Expense.....	6,000	
Rent Expense	1,000	
	<u>\$37,000</u>	<u>\$37,000</u>

BRIEF EXERCISE 2-10

KWUN COMPANY
Trial Balance
December 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$14,800	
Prepaid Insurance	3,500	
Accounts Payable.....		\$ 3,000
Unearned Revenue.....		2,200
P. Kwun, Capital.....		13,000
P. Kwun, Drawing	4,500	
Service Revenue		25,600
Salaries Expense	18,600	
Rent Expense.....	2,400	
	<u>\$43,800</u>	<u>\$43,800</u>

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 2-1

Josh would likely need the following accounts in which to record the transactions necessary to ready his photography studio for opening day:

Cash (debit balance)	Photography Equipment
Photography Supplies	(debit balance)
(debit balance)	Accounts Payable (credit balance)
Notes Payable (credit balance)	J. Borke, Capital (credit balance)

DO IT! 2-2

Each transaction that is recorded is entered in the general journal. The three activities would be recorded as follows:

1. Cash..... 8,000
 J. Borke, Capital..... 8,000
2. Photography Supplies..... 1,100
 Cash 400
 Accounts Payable..... 700
3. No entry because no transaction has occurred.

DO IT! 2-3

Cash			
4/1	1,600	4/16	600
4/3	3,400	4/20	300
4/30	4,100		

DO IT! 2-4

BOARDIN' COMPANY
Trial Balance
December 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash.....	\$ 6,000	
Accounts Receivable	8,000	
Supplies	5,000	
Equipment	80,000	
Notes Payable		\$ 20,000
Accounts Payable		11,000
Salaries Payable		3,000
Hawk, Capital		25,000
Hawk, Drawing	8,000	
Service Revenue.....		88,000
Supplies Expense	2,000	
Salaries Expense.....	38,000	
	<u>\$147,000</u>	<u>\$147,000</u>

SOLUTIONS TO EXERCISES

EXERCISE 2-1

1. **False.** An account is an accounting record of a specific asset, liability, *or owner's equity item*.
2. **False.** An account shows *increases and decreases* in the item it relates to.
3. **False.** Each asset, liability, and *owner's equity item has a separate account*.
4. **False.** An account has a left, or *debit* side, and a right, or *credit* side.
5. **True.**

EXERCISE 2-2

Transaction	Account Debited				Account Credited			
	(a) Basic Type	(b) Specific Account	(c) Effect	(d) Normal Balance	(a) Basic Type	(b) Specific Account	(c) Effect	(d) Normal Balance
Jan. 2	Asset	Cash	Increase	Debit	Owner's Equity	D. Reyes, Capital	Increase	Credit
3	Asset	Equipment	Increase	Debit	Asset	Cash	Decrease	Debit
9	Asset	Supplies	Increase	Debit	Liability	Accounts Payable	Increase	Credit
11	Asset	Accounts Receivable	Increase	Debit	Owner's Equity	Service Revenue	Increase	Credit
16	Owner's Equity	Advertising Expense	Increase	Debit	Asset	Cash	Decrease	Debit
20	Asset	Cash	Increase	Debit	Asset	Accounts Receivable	Decrease	Debit
23	Liability	Accounts Payable	Decrease	Credit	Asset	Cash	Decrease	Debit
28	Owner's Equity	D. Reyes, Drawing	Increase	Debit	Asset	Cash	Decrease	Debit

EXERCISE 2-3

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Jan. 2	Cash..... D. Reyes, Capital		10,000	10,000
3	Equipment Cash.....		4,000	4,000
9	Supplies Accounts Payable		500	500
11	Accounts Receivable..... Service Revenue.....		1,800	1,800
16	Advertising Expense..... Cash.....		200	200
20	Cash..... Accounts Receivable		700	700
23	Accounts Payable Cash.....		300	300
28	D. Reyes, Drawing..... Cash.....		1,000	1,000

EXERCISE 2-4

- Oct. 1 **Debits increase assets: debit Cash \$15,000.**
Credits increase owner's equity: credit Pete Hanshew, Capital \$15,000.
- 2 **No transaction.**
- 3 **Debits increase assets: debit Office Furniture \$1,900.**
Credits increase liabilities: credit Accounts Payable \$1,900.

EXERCISE 2-4 (Continued)

- Oct. 6 Debits increase assets: debit Accounts Receivable \$3,200.
 Credits increase revenues: credit Service Revenue \$3,200.
- 27 Debits decrease liabilities: debit Accounts Payable \$700.
 Credits decrease assets: credit Cash \$700.
- 30 Debits increase expenses: debit Salaries Expense \$2,500.
 Credits decrease assets: credit Cash \$2,500.

EXERCISE 2-5

General Journal				
Date	Account Titles and Explanation	Ref.	Debits	Credit
Oct. 1	Cash		15,000	
	Pete Hanshaw, Capital.....			15,000
2	No entry.			
3	Office Furniture		1,900	
	Accounts Payable			1,900
6	Accounts Receivable.....		3,200	
	Service Revenue.....			3,200
27	Accounts Payable.....		700	
	Cash.....			700
30	Salaries Expense		2,500	
	Cash.....			2,500

EXERCISE 2-6

- (a) 1. Increase the asset Cash, increase the liability Notes Payable.
 2. Increase the asset Computer, decrease the asset Cash.
 3. Increase the asset Supplies, increase the liability Accounts Payable.
- (b)
- | | | |
|------------------------|-------|-------|
| 1. Cash | 5,000 | |
| Notes Payable | | 5,000 |
| 2. Computer | 2,500 | |
| Cash | | 2,500 |
| 3. Supplies | 700 | |
| Accounts Payable | | 700 |

EXERCISE 2-7

- (a) **Assets = Liabilities + Owners' Equity**
- | | | |
|------|---|--------------|
| 1. + | + | (Investment) |
| 2. - | - | (Expense) |
| 3. + | + | (Revenue) |
| 4. - | - | (Drawings) |
- (b)
- | | | |
|------------------------------|-------|-------|
| 1. Cash | 4,000 | |
| A. Rowand, Capital | | 4,000 |
| 2. Rent Expense | 1,100 | |
| Cash | | 1,100 |
| 3. Accounts Receivable | 5,200 | |
| Consulting Revenue | | 5,200 |
| 4. A. Rowand, Drawing | 700 | |
| Cash | | 700 |

EXERCISE 2-8

- False. The general ledger contains all the asset, liability, *and owner's equity* accounts.
- True.
- False. The accounts in the general ledger are arranged in *financial statement order*: first the assets, then the liabilities, owner's capital, owner's drawing, revenues, and expenses.
- True.
- False. The general ledger is not a book of original entry; transactions are first recorded in the general journal, then in the general ledger.

EXERCISE 2-9

(a)

Cash			
Aug. 1	5,000	Aug. 12	1,000
10	2,400		
31	900		
Bal.	7,300		

Notes Payable		
	Aug. 12	4,000

Teresa Gonzalez, Capital		
	Aug. 1	5,000

Accounts Receivable			
Aug. 25	1,600	Aug. 31	900
Bal.	700		

Service Revenue		
	Aug. 10	2,400
	25	1,600
	Bal.	4,000

Office Equipment	
Aug. 12	5,000

(b)

TERESA GONZALEZ, INVESTMENT BROKER Trial Balance August 31, 2010

	Debit	Credit
Cash	\$ 7,300	
Accounts Receivable	700	
Office Equipment	5,000	
Notes Payable		\$ 4,000
Teresa Gonzalez, Capital		5,000
Service Revenue		4,000
	<u>\$13,000</u>	<u>\$13,000</u>

EXERCISE 2-10**(a)**

General Journal				
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 1	Cash.....		15,000	
	 J. Simon, Capital			15,000
	 (Owner's investment of			
	 cash in business)			
12	Cash.....		900	
	 Service Revenue.....			900
	 (Received cash for			
	 services provided)			
15	Salaries Expense.....		600	
	 Cash.....			600
	 (Paid salaries to date)			
25	Accounts Payable		1,500	
	 Cash.....			1,500
	 (Paid creditors on account)			
29	Cash.....		400	
	 Accounts Receivable			400
	 (Received cash in payment			
	 of account)			
30	Cash.....		1,000	
	 Unearned Revenue			1,000
	 (Received cash for future			
	 services)			

EXERCISE 2-10 (Continued)

(b) SIMON LANDSCAPING COMPANY
Trial Balance
April 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$15,200	
Accounts Receivable.....	2,800	
Supplies	1,800	
Accounts Payable.....		\$ 300
Unearned Revenue.....		1,000
J. Simon, Capital.....		15,000
Service Revenue		4,100
Salaries Expense	600	
	<u>\$20,400</u>	<u>\$20,400</u>

EXERCISE 2-11

(a)	Oct. 1	Cash	5,000	
		Heerey, Capital		5,000
		(Owner's investment of cash in business)		
	10	Cash	650	
		Service Revenue		650
		(Received cash for services provided)		
	10	Cash	4,000	
		Notes Payable		4,000
		(Obtained loan from bank)		
	20	Cash	500	
		Accounts Receivable		500
		(Received cash in payment of account)		
	20	Accounts Receivable	940	
		Service Revenue		940
		(Billed clients for services provided)		

EXERCISE 2-11 (Continued)

(b)

HEEREY CO. Trial Balance October 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash.....	\$ 9,200	
Accounts Receivable	1,240	
Supplies.....	400	
Furniture.....	2,000	
Notes Payable.....		\$ 4,000
Accounts Payable		500
Heerey, Capital		7,000
Heerey, Drawing	300	
Service Revenue.....		2,390
Store Wages Expense.....	500	
Rent Expense	250	
	<u>\$13,890</u>	<u>\$13,890</u>

EXERCISE 2-12

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Sept. 1	Cash.....	101	10,000	
	Tina Cordero, Capital	301		10,000
5	Equipment.....	157	12,000	
	Cash.....	101		5,000
	Accounts Payable	201		7,000
25	Accounts Payable	201	3,000	
	Cash.....	101		3,000
30	Tina Cordero, Drawing.....	306	500	
	Cash.....	101		500

EXERCISE 2-12 (Continued)**(b)****Cash** **No. 101**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1		J1	10,000		10,000
5		J1		5,000	5,000
25		J1		3,000	2,000
30		J1		500	1,500

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 5		J1	12,000		12,000

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 5		J1		7,000	7,000
25		J1	3,000		4,000

Tina Cordero, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1		J1		10,000	10,000

Tina Cordero, Drawing **No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 30		J1	500		500

EXERCISE 2-13

<u>Error</u>	<u>(a) In Balance</u>	<u>(b) Difference</u>	<u>(c) Larger Column</u>
1.	No	\$400	Debit
2.	Yes	—	—
3.	Yes	—	—
4.	No	300	Credit
5.	Yes	—	—
6.	No	18	Credit

EXERCISE 2-14

SANFORD DELIVERY SERVICE Trial Balance July 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash (\$82,907 – Debit total without Cash \$66,340).....	\$16,567	
Accounts Receivable	7,642	
Prepaid Insurance	1,968	
Delivery Equipment	49,360	
Notes Payable		\$18,450
Accounts Payable		8,396
Salaries Payable		815
Sanford, Capital		44,636
Sanford, Drawing	700	
Service Revenue.....		10,610
Salaries Expense.....	4,428	
Repair Expense.....	961	
Gas and Oil Expense.....	758	
Insurance Expense	523	
	<u>\$82,907</u>	<u>\$82,907</u>

SOLUTIONS TO PROBLEMS

PROBLEM 2-1A

				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 1	Cash		40,000	
	C. J. Mendez, Capital			40,000
	(Owner's investment of cash in business)			
4	Land		30,000	
	Cash			30,000
	(Purchased land for cash)			
8	Advertising Expense		1,800	
	Accounts Payable			1,800
	(Incurred advertising expense on account)			
11	Salaries Expense		1,500	
	Cash			1,500
	(Paid salaries)			
12	No entry—Not a transaction.			
13	Prepaid Insurance		1,500	
	Cash			1,500
	(Paid for one-year insurance policy)			
17	C. J. Mendez, Drawing		1,000	
	Cash			1,000
	(Withdrew cash for personal use)			
20	Cash		5,700	
	Admission Revenue			5,700
	(Received cash for services provided)			

PROBLEM 2-1A (Continued)

Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 25	Cash.....		2,500	
	 Unearned Admission Revenue			2,500
	 (Received cash for future services)			
30	Cash.....		8,900	
	 Admission Revenue			8,900
	 (Received cash for services provided)			
30	Accounts Payable		900	
	 Cash			900
	 (Paid creditor on account)			

PROBLEM 2-2A

(a)

				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
May 1	Cash	101	25,000	
	Jane Kent, Capital	301		25,000
	(Owner's investment of cash in business)			
2	No entry—not a transaction.			
3	Supplies	126	2,500	
	Accounts Payable	201		2,500
	(Purchased supplies on account)			
7	Rent Expense	729	900	
	Cash	101		900
	(Paid office rent)			
11	Accounts Receivable	112	2,100	
	Service Revenue	400		2,100
	(Billed client for services provided)			
12	Cash	101	3,500	
	Unearned Revenue	205		3,500
	(Received cash for future services)			
17	Cash	101	1,200	
	Service Revenue	400		1,200
	(Received cash for services provided)			
31	Salaries Expense	726	2,000	
	Cash	101		2,000
	(Paid salaries)			

PROBLEM 2-2A (Continued)

Date	Account Titles and Explanation	Ref.	Debit	Credit
May 31	Accounts Payable (\$2,500 X 40%).....	201	1,000	
	Cash	101		1,000
	(Paid creditor on account)			

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
May 1		J1	25,000		25,000
7		J1		900	24,100
12		J1	3,500		27,600
17		J1	1,200		28,800
31		J1		2,000	26,800
31		J1		1,000	25,800

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
May 11		J1	2,100		2,100

Supplies					No. 126
Date	Explanation	Ref.	Debit	Credit	Balance
May 3		J1	2,500		2,500

Accounts Payable					No. 201
Date	Explanation	Ref.	Debit	Credit	Balance
May 3		J1		2,500	
31		J1	1,000		1,500

Unearned Revenue					No. 205
Date	Explanation	Ref.	Debit	Credit	Balance
May 12		J1		3,500	3,500

PROBLEM 2-2A (Continued)

Jane Kent, Capital No. 301

Date	Explanation	Ref.	Debit	Credit	Balance
May 1		J1		25,000	25,000

Service Revenue No. 400

Date	Explanation	Ref.	Debit	Credit	Balance
May 11		J1		2,100	2,100
17		J1		1,200	3,300

Salaries Expense No. 726

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		J1	2,000		2,000

Rent Expense No. 729

Date	Explanation	Ref.	Debit	Credit	Balance
May 7		J1	900		900

(c) **JANE KENT, CPA**
Trial Balance
May 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$25,800	
Accounts Receivable.....	2,100	
Supplies	2,500	
Accounts Payable.....		\$ 1,500
Unearned Revenue.....		3,500
Jane Kent, Capital		25,000
Service Revenue		3,300
Salaries Expense	2,000	
Rent Expense.....	900	
	<u>\$33,300</u>	<u>\$33,300</u>

PROBLEM 2-3A

(a) & (c)

Cash			
Balance	8,000		
		(1)	1,000
		(3)	2,000
(4)	14,000		
		(5)	15,000
(7)	6,000		
		(8)	3,000
		(9)	3,000
	4,000		

Accounts Receivable			
Balance	15,000		
		(4)	14,000
(7)	9,000		
	10,000		

Parts Inventory			
Balance	13,000		
(2)	4,000		
		(6)	4,000
	13,000		

Prepaid Rent			
Balance	3,000		
	3,000		

Shop Equipment			
Balance	21,000		
	21,000		

Accounts Payable			
		Balance	19,000
		(2)	4,000
(5)	15,000		
			8,000

Jack Shellenkamp, Capital			
		Balance	41,000
			41,000

Jack Shellenkamp, Drawing			
(9)	3,000		
	3,000		

Repair Services Revenue			
		(7)	15,000
			15,000

Advertising Expense			
(1)	1,000		
	1,000		

Miscellaneous Expense			
(3)	2,000		
	2,000		

Repair Parts Expense			
(6)	4,000		
	4,000		

Wage Expense			
(8)	3,000		
	3,000		

PROBLEM 2-3A (Continued)**(b)**

Trans.	Account Titles and Explanation	Debit	Credit
1.	Advertising Expense..... Cash.....	1,000	1,000
2.	Parts Inventory..... Accounts Payable	4,000	4,000
3.	Miscellaneous Expense	2,000	
	Cash.....		2,000
4.	Cash..... Accounts Receivable	14,000	14,000
5.	Accounts Payable	15,000	
	Cash.....		15,000
6.	Repair Parts Expense	4,000	
	Parts Inventory		4,000
7.	Cash.....	6,000	
	Accounts Receivable	9,000	
	Repair Services Revenue.....		15,000
8.	Wage Expense	3,000	
	Cash.....		3,000
9.	Jack Shellenkamp, Drawing	3,000	
	Cash.....		3,000

PROBLEM 2-3A (Continued)**(d)****BYTE REPAIR SERVICE
Trial Balance
January 31, 2010**

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 4,000	
Accounts Receivable	10,000	
Parts Inventory	13,000	
Prepaid Rent	3,000	
Shop Equipment	21,000	
Accounts Payable		\$ 8,000
Jack Shellenkamp, Capital		41,000
Jack Shellenkamp, Drawing	3,000	
Repair Services Revenue		15,000
Advertising Expense	1,000	
Miscellaneous Expense	2,000	
Repair Parts Expense	4,000	
Wage Expense	3,000	
	<u>\$64,000</u>	<u>\$64,000</u>

PROBLEM 2-4A

STERLING COMPANY
Trial Balance
May 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash (\$5,850 + \$520 – \$405)	\$ 5,965	
Accounts Receivable (\$2,570 – \$210).....	2,360	
Prepaid Insurance (\$700 + \$100).....	800	
Supplies (\$0 + \$520)	520	
Equipment (\$8,000 – \$520)	7,480	
Accounts Payable (\$4,500 – \$100 + \$520 – \$210).....		\$ 4,710
Property Taxes Payable		560
M. Sterling, Capital (\$11,700 + \$1,000)		12,700
M. Sterling, Drawing (\$0 + \$1,000)	1,000	
Service Revenue.....		6,960
Salaries Expense (\$4,200 + \$200)	4,400	
Advertising Expense (\$1,100 + \$405)	1,505	
Property Tax Expense (\$800 + \$100)	900	
	<u>\$24,930</u>	<u>\$24,930</u>

PROBLEM 2-5A

(a) & (c)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			6,000
2		J1		800	5,200
9		J1	2,800		8,000
10		J1		3,000	5,000
12		J1		500	4,500
25		J1	5,200		9,700
29		J1		2,000	7,700
30		J1	85		7,785
30		J1		900	6,885

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 30		J1	85		85

Prepaid Rentals					No. 136
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 30		J1	900		900

Land					No. 140
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			10,000

Buildings					No. 145
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			8,000

PROBLEM 2-5A (Continued)**Equipment** **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			6,000

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			2,000
10		J1	1,000		1,000
20		J1		1,000	2,000

Mortgage Payable **No. 275**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			8,000
10		J1	2,000		6,000

Tony Carpino, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			20,000

Admission Revenue **No. 405**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 9		J1		2,800	2,800
25		J1		5,200	8,000

Concession Revenue **No. 406**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 30		J1		170	170

PROBLEM 2-5A (Continued)

Advertising Expense					No. 610
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 12		J1	500		500

Film Rental Expense					No. 632
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 2		J1	800		800
20		J1	1,000		1,800

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 29		J1	2,000		2,000

(b)

					J1
Date	Account Titles and Explanation	Ref.	Debit	Credit	
Apr. 2	Film Rental Expense	632	800		
	Cash	101		800	
	(Paid film rental)				
3	No entry—not a transaction.				
9	Cash.....	101	2,800		
	Admission Revenue.....	405		2,800	
	(Received cash for services provided)				
10	Mortgage Payable	275	2,000		
	Accounts Payable	201	1,000		
	Cash	101		3,000	
	(Made payments on mortgage and accounts payable)				

PROBLEM 2-5A (Continued)

Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 11	No entry—not a transaction.			
12	Advertising Expense.....	610	500	
	Cash	101		500
	(Paid advertising expenses)			
20	Film Rental Expense	632	1,000	
	Accounts Payable	201		1,000
	(Rented film on account)			
25	Cash.....	101	5,200	
	Admission Revenue.....	405		5,200
	(Received cash for services provided)			
29	Salaries Expense.....	726	2,000	
	Cash	101		2,000
	(Paid salaries expense)			
30	Cash.....	101	85	
	Accounts Receivable	112	85	
	Concession Revenue	406		170
	(17% X \$1,000)			
	(Received cash and balance on account for concession revenue)			
30	Prepaid Rentals	136	900	
	Cash	101		900
	(Paid cash for future film rentals)			

PROBLEM 2-5A (Continued)**(d)****LAKE THEATER
Trial Balance
April 30, 2010**

	Debit	Credit
Cash	\$ 6,885	
Accounts Receivable	85	
Prepaid Rentals	900	
Land.....	10,000	
Buildings.....	8,000	
Equipment	6,000	
Accounts Payable.....		\$ 2,000
Mortgage Payable		6,000
Tony Carpino, Capital.....		20,000
Admission Revenue.....		8,000
Concession Revenue.....		170
Advertising Expense	500	
Film Rental Expense	1,800	
Salaries Expense	2,000	
	<u>\$36,170</u>	<u>\$36,170</u>

PROBLEM 2-1B

J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 1	Cash		20,000	
	Barry Schultz, Capital.....			20,000
	(Owner's investment of cash			
	in business)			
3	Land		12,000	
	Buildings		2,000	
	Equipment.....		1,000	
	Cash			15,000
	(Purchased Heeren's Golf Land)			
5	Advertising Expense		700	
	Cash			700
	(Paid for advertising)			
6	Prepaid Insurance		600	
	Cash			600
	(Paid for one-year insurance			
	policy)			
10	Equipment.....		1,050	
	Accounts Payable.....			1,050
	(Purchased equipment on			
	account)			
18	Cash		340	
	Golf Revenue.....			340
	(Received cash for services			
	provided)			
19	Cash		1,000	
	Unearned Revenue			1,000
	(Received cash for coupon			
	books sold)			

PROBLEM 2-1B (Continued)

Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 25	Barry Schultz, Drawing		800	
	 Cash			800
	 (Withdrew cash for personal use)			
30	Salaries Expense.....		250	
	 Cash			250
	 (Paid salaries)			
30	Accounts Payable		1,050	
	 Cash			1,050
	 (Paid creditor on account)			
31	Cash		200	
	 Golf Revenue.....			200
	 (Received cash for services provided)			

PROBLEM 2-2B

(a)

J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 1	Cash	101	40,000	
	 Maria Juarez, Capital	301		40,000
	 (Owner's investment of cash			
	 in business)			
1	No entry—not a transaction.			
2	Rent Expense	729	1,000	
	 Cash	101		1,000
	 (Paid monthly office rent)			
3	Supplies	126	4,000	
	 Accounts Payable	201		4,000
	 (Purchased supplies on			
	 account from Smile Company)			
10	Accounts Receivable	112	5,100	
	 Service Revenue	400		5,100
	 (Billed clients for services			
	 provided)			
11	Cash	101	1,000	
	 Unearned Revenue	205		1,000
	 (Received cash for future			
	 service)			
20	Cash	101	2,100	
	 Service Revenue	400		2,100
	 (Received cash for services			
	 provided)			
30	Salaries Expense	726	2,400	
	 Cash	101		2,400
	 (Paid monthly salary)			

PROBLEM 2-2B (Continued)

Date	Account Titles and Explanation	Ref.	Debits	Credit
Apr. 30	Accounts Payable	201	1,600	
	Cash	101		1,600
	(Paid Smile Company on account)			

(b)

Cash	No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1		J1	40,000		40,000
2		J1		1,000	39,000
11		J1	1,000		40,000
20		J1	2,100		42,100
30		J1		2,400	39,700
30		J1		1,600	38,100

Accounts Receivable	No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 10		J1	5,100		5,100

Supplies	No. 126

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 3		J1	4,000		4,000

Accounts Payable	No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 3		J1		4,000	4,000
30		J1	1,600		2,400

Unearned Revenue	No. 205

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 11		J1		1,000	1,000

PROBLEM 2-2B (Continued)

Maria Juarez, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1		J1		40,000	40,000

Service Revenue **No. 400**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 10		J1		5,100	5,100
20		J1		2,100	7,200

Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 30		J1	2,400		2,400

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 2		J1	1,000		1,000

(c) **MARIA JUAREZ, DENTIST**
Trial Balance
April 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash.....	\$38,100	
Accounts Receivable	5,100	
Supplies.....	4,000	
Accounts Payable		\$ 2,400
Unearned Revenue		1,000
Maria Juarez, Capital.....		40,000
Service Revenue.....		7,200
Salaries Expense.....	2,400	
Rent Expense	1,000	
	<u>\$50,600</u>	<u>\$50,600</u>

PROBLEM 2-3B

(a)

Trans.	Account Titles and Explanation	Debit	Credit
1.	Cash	50,000	
	Eric Clapton, Capital		50,000
2.	No entry—Not a transaction.		
3.	Prepaid Rent.....	24,000	
	Cash.....		24,000
4.	Furniture & Equipment	30,000	
	Cash.....		10,000
	Accounts Payable		20,000
5.	Prepaid Insurance	1,800	
	Cash.....		1,800
6.	Office Supplies	500	
	Cash.....		500
7.	Office Supplies	1,500	
	Accounts Payable		1,500
8.	Cash	8,000	
	Accounts Receivable.....	12,000	
	Service Revenue.....		20,000
9.	Accounts Payable.....	400	
	Cash.....		400
10.	Cash	3,000	
	Accounts Receivable		3,000
11.	Utility Expense.....	200	
	Accounts Payable		200

PROBLEM 2-3B (Continued)

Trans.	Account Titles and Explanation	Debit	Credit
12.	Salaries Expense	5,600	
	Cash		5,600

(b)

Cash			
(1)	50,000		
		(3)	24,000
		(4)	10,000
		(5)	1,800
		(6)	500
(8)	8,000		
		(9)	400
(10)	3,000		
		(12)	5,600
	18,700		

Accounts Receivable			
(8)	12,000		
		(10)	3,000
	9,000		

Office Supplies			
(6)	500		
(7)	1,500		
	2,000		

Prepaid Insurance			
(5)	1,800		
	1,800		

Prepaid Rent			
(3)	24,000		
	24,000		

Furniture & Equipment			
(4)	30,000		
	30,000		

Accounts Payable			
		(4)	20,000
		(7)	1,500
(9)	400		
		(11)	200
			21,300

Eric Clapton, Capital			
		(1)	50,000
			50,000

Service Revenue			
		(8)	20,000
			20,000

Salaries Expense			
(12)	5,600		
	5,600		

Utility Expense			
(11)	200		
	200		

PROBLEM 2-3B (Continued)**(c)****SLOWHAND SERVICES
Trial Balance
May 31, 2010**

	Debit	Credit
Cash	\$18,700	
Accounts Receivable	9,000	
Office Supplies	2,000	
Prepaid Insurance	1,800	
Prepaid Rent	24,000	
Furniture & Equipment	30,000	
Accounts Payable		\$21,300
Eric Clapton, Capital		50,000
Service Revenue		20,000
Salaries Expense	5,600	
Utility Expense	200	
	<u>\$91,300</u>	<u>\$91,300</u>

PROBLEM 2-4B**SYED MOIZ CO.
Trial Balance
June 30, 2010**

	Debit	Credit
Cash (\$3,340 + \$360)	\$ 3,700	
Accounts Receivable (\$2,731 – \$360).....	2,371	
Supplies (\$1,200 – \$620)	580	
Equipment (\$2,600 + \$620).....	3,220	
Accounts Payable (\$3,666 – \$306 – \$360).....		\$ 3,000
Unearned Revenue		1,100
S. Moiz, Capital		8,000
S. Moiz, Drawing (\$800 + \$600).....	1,400	
Service Revenue (\$2,480 + \$801)		3,281
Salaries Expense (\$3,200 + \$700 – \$600)	3,300	
Office Expense	810	
	<u>\$15,381</u>	<u>\$15,381</u>

PROBLEM 2-5B

(a) & (c)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			9,000
2		J1		1,500	7,500
9		J1	4,000		11,500
10		J1		4,100	7,400
12		J1		450	6,950
20		J1	5,000		11,950
20		J1		2,000	9,950
31		J1		2,500	7,450
31		J1	450		7,900
31		J1	9,000		16,900

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31		J1	450		450

Land					No. 140
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			24,000

Buildings					No. 145
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			10,000

Equipment					No. 157
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			10,000

PROBLEM 2-5B (Continued)**Accounts Payable** **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			7,000
2		J1		2,000	9,000
10		J1	4,100		4,900

J. Micheals, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1	Balance	✓			46,000

Admission Revenue **No. 405**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 9		J1		4,000	4,000
20		J1		5,000	9,000
31		J1		9,000	18,000

Concession Revenue **No. 406**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar.31		J1		900	900

Advertising Expense **No. 610**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar.12		J1	450		450

Film Rental Expense **No. 632**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 2		J1	3,500		3,500
20		J1	2,000		5,500

PROBLEM 2-5B (Continued)

Salaries Expense

No. 726

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31		J1	2,500		2,500

(b)

					J1
Date	Account Titles and Explanation	Ref.	Debit	Credit	
Mar. 2	Film Rental Expense	632	3,500		
	Accounts Payable	201		2,000	
	Cash	101		1,500	
	(Rented films for cash and on account)				
3	No entry.				
9	Cash	101	4,000		
	Admission Revenue	405		4,000	
	(Received cash for services provided)				
10	Accounts Payable (\$2,000 + \$2,100)	201	4,100		
	Cash	101		4,100	
	(Paid creditors on account)				
11	No entry.				
12	Advertising Expense	610	450		
	Cash	101		450	
	(Paid advertising expense)				
20	Cash	101	5,000		
	Admission Revenue	405		5,000	
	(Received cash for services provided)				
20	Film Rental Expense	632	2,000		
	Cash	101		2,000	
	(Paid film rental)				

PROBLEM 2-5B (Continued)

Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 31	Salaries Expense	726	2,500	
	Cash	101		2,500
	(Paid salaries expense)			
31	Cash	101	450	
	Accounts Receivable.....	112	450	
	Concession Revenue.....	406		900
	(15% X \$6,000)			
	(Received cash and balance			
	on account for concession			
	revenue)			
31	Cash	101	9,000	
	Admission Revenue.....	405		9,000
	(Received cash for services			
	provided)			

(d)

JOSIE THEATER
Trial Balance
March 31, 2010

	Debit	Credit
Cash	\$16,900	
Accounts Receivable	450	
Land.....	24,000	
Buildings.....	10,000	
Equipment	10,000	
Accounts Payable		\$ 4,900
J. Michaels, Capital		46,000
Admission Revenue		18,000
Concession Revenue.....		900
Advertising Expense.....	450	
Film Rental Expense	5,500	
Salaries Expense.....	2,500	
	<u>\$69,800</u>	<u>\$69,800</u>

(a)	(1) Increase Side	(1) Decrease Side	(2) Normal Balance
Account			
Accounts Payable	Credit	Debit	Credit
Accounts Receivable	Debit	Credit	Debit
Property, Plant, and Equipment	Debit	Credit	Debit
Income Taxes Payable	Credit	Debit	Credit
Interest Expense	Debit	Credit	Debit
Inventory	Debit	Credit	Debit

- (b)
1. Cash is increased.
 2. Cash is decreased.
 3. Cash is decreased or Accounts Payable is increased.

- (c)
1. Cash is decreased.
 2. Cash is decreased or Notes or Mortgage Payable is increased.

(a)		PepsiCo	Coca-Cola
1.	Inventory:	debit	1. Accounts Receivable: debit
2.	Property, Plant, and Equipment:	debit	2. Cash and Cash Equivalents: debit
3.	Accounts Payable:	credit	3. Cost of Goods Sold: debit
4.	Interest Expense:	debit	4. Sales (revenue): credit

(b) The following other accounts are ordinarily involved:

1. Increase in Accounts Receivable: Service Revenue or Sales is increased (credited).
2. Decrease in Wages Payable: Cash is decreased (credited).
3. Increase in Property, Plant, and Equipment: Notes Payable is increased (credited) or Cash is decreased (credited).
4. Increase in Interest Expense: Cash is decreased (credited).

The answer is dependent upon the company selected by the student.

(a) May 1 Correct.

5	Cash	250	
	Lesson Revenue		250
7	Cash	300	
	Unearned Boarding Revenue		300
14	Office Equipment	800	
	Cash		800
15	Lisa Ortega, Drawing	400	
	Cash		400
20	Cash	184	
	Riding Revenue		184
30	Correct.		
31	Hay and Feed Supplies	1,700	
	Accounts Payable		1,700

(b) The errors in the entries of May 14 and 20 would prevent the trial balance from balancing.

(c)	Net income as reported		\$4,500
	Add: 5/15, Salaries expense (Lisa Ortega, Drawing)	\$ 400	
	5/31, Hay and feed expense (still on hand)	<u>1,700</u>	<u>2,100</u>
			6,600
	Less: 5/7, Boarding revenue unearned		<u>300</u>
	Correct net income		<u>\$6,300</u>

(d)	Cash as reported		\$12,475
	Add: 5/20, Transposition error	\$ 36	
	5/31, Purchase on account	<u>1,700</u>	<u>1,736</u>
			<u>\$14,211</u>

Date: May 25, 2010

To: Accounting Instructor

From: Student

In the first transaction, bills totaling \$6,000 were sent to customers for services rendered. Therefore, the asset Accounts Receivable is increased \$6,000 and the revenue Service Revenue is increased \$6,000. Debits increase assets and credits increase revenues, so the journal entry is:

Accounts Receivable.....	6,000	
Service Revenue		6,000
(Bill customers for services provided)		

The \$6,000 amount is then posted to the debit side of the general ledger account Accounts Receivable and to the credit side of the general ledger account Service Revenue.

In the second transaction, \$2,000 was paid in salaries to employees. Therefore, the expense Salaries Expense is increased \$2,000 and the asset Cash is decreased \$2,000. Debits increase expenses and credits decrease assets, so the journal entry is:

Salaries Expense	2,000	
Cash		2,000
(Salaries paid)		

The \$2,000 amount is then posted to the debit side of the general ledger account Salaries Expense and to the credit side of the general ledger account Cash.

(a) The stakeholders in this situation are:

- ▶ **Mary Jansen, assistant chief accountant.**
- ▶ **Users of the company's financial statements.**
- ▶ **The Casey Company.**

(b) By adding \$1,000 to the Equipment account, that account total is intentionally misstated. By not locating the error causing the imbalance, some other account may also be misstated by \$1,000. If the amount of \$1,000 is determined to be immaterial, and the intent is not to commit fraud (cover up an embezzlement or other misappropriation of assets), Mary's action might not be considered unethical in the preparation of interim financial statements. However, if Mary is violating a company accounting policy by her action, then she is acting unethically.

(c) Mary's alternatives are:

- 1. Miss the deadline but find the error causing the imbalance.**
- 2. Tell her supervisor of the imbalance and suffer the consequences.**
- 3. Do as she did and locate the error later, making the adjustment in the next quarter.**

- (a) **Students' responses to this question will vary. It is important that the steps that they identify be as specific as possible, and clearly directed toward achieving their goal. You may wish to ask a follow-up question asking them to explain how each step will assist them in achieving their goal.**
- (b) **There are many sites on the Internet that provide information about preparing a résumé. For example, you can find extensive resources at: <http://www.rileyguide.com/resprep.html>. Many schools also have resources in their placement centers or writing labs. The Writing Center at Rensselaer Polytechnic Institute provides useful, concise information on its website at <http://www.rpi.edu/web/writingcenter/resume.html>. A wide variety of sample résumés can be found. For example, Monster.com provides samples for a wide variety of professions and situations at <http://content.monster.com/experts/resume/library/>.**
- (c) **As noted in the All About You feature in chapter 2 of the text, overstating accomplishments on a résumé can result in many problems. It is important to provide accurate and complete documentation of all relevant training, education, and employment experiences so as to provide assurance to the potential employer, and also to enable that employer to do follow-up work. If you say you have certain skills, such as computer skills, try to substantiate the claim with recognized proof of proficiency. Make sure that all addresses and phone numbers are accurate and up-to-date. Also, ensure that the people you use as references have a copy of your résumé and cover letter, and that they are informed that you are interviewing so they know to expect a call.**
- (d) **See the sample résumés provided in the websites above for various format options. You might also mention to students that there are electronic résumé templates available on the Internet.**

CHAPTER 3

Adjusting the Accounts

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain the time period assumption.	1		1, 2	1		
2. Explain the accrual basis of accounting.	2, 3, 4, 5		5	2, 3, 10		
3. Explain the reasons for adjusting entries.	6, 7	1	6			
4. Identify the major types of adjusting entries.	8, 18	2, 8	7	4, 6, 11		
5. Prepare adjusting entries for deferrals.	8, 9, 10, 11, 12, 13, 18, 19, 20, 23	3, 4, 5, 6		5, 6, 7, 8, 9, 10, 11, 12, 13, 15	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B
6. Prepare adjusting entries for accruals.	8, 14, 15, 16, 17, 18, 19, 20	7		5, 6, 7, 8, 9, 10, 11, 12, 13, 15	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B
7. Describe the nature and purpose of an adjusted trial balance.	21	9, 10		10, 11, 12, 13, 14	1A, 2A, 3A, 5A, 6A	1B, 2B, 3B, 5B
*8. Prepare adjusting entries for the alternative treatment of deferrals.	22	11		16, 17	6A	

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare adjusting entries, post to ledger accounts, and prepare an adjusted trial balance.	Simple	40–50
2A	Prepare adjusting entries, post, and prepare adjusted trial balance and financial statements.	Simple	50–60
3A	Prepare adjusting entries and financial statements.	Moderate	40–50
4A	Prepare adjusting entries.	Moderate	30–40
5A	Journalize transactions and follow through accounting cycle to preparation of financial statements.	Moderate	60–70
*6A	Prepare adjusting entries, adjusted trial balance, and financial statements using appendix.	Moderate	40–50
1B	Prepare adjusting entries, post to ledger accounts, and prepare an adjusted trial balance.	Simple	40–50
2B	Prepare adjusting entries, post, and prepare adjusted trial balance and financial statements.	Simple	50–60
3B	Prepare adjusting entries and financial statements.	Moderate	40–50
4B	Prepare adjusting entries.	Moderate	30–40
5B	Journalize transactions and follow through accounting cycle to preparation of financial statements.	Moderate	60–70

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CHAPTER 3
ADJUSTING THE ACCOUNTS

Number	SO	BT	Difficulty	Time (min.)
BE1	3	C	Simple	4–6
BE2	4	AN	Moderate	6–8
BE3	5	AN	Simple	3–5
BE4	5	AN	Simple	3–5
BE5	5	AN	Simple	2–4
BE6	5	AN	Simple	2–4
BE7	6	AN	Simple	4–6
BE8	4	AN	Simple	5–7
BE9	7	AP	Simple	4–6
BE10	7	AP	Simple	2–4
BE11*	8	AN	Moderate	3–5
DI1	1, 2	K	Simple	2–4
DI2	5	AN	Simple	6–8
DI3	6	AN	Simple	4–6
DI4	7	AN	Moderate	20–30
EX1	1	C	Simple	3–5
EX2	2	E	Moderate	10–15
EX3	2	AP	Simple	6–8
EX4	4	AN	Simple	5–6
EX5	5, 6	AN	Moderate	10–15
EX6	4–6	AN	Moderate	10–12
EX7	5, 6	AN	Moderate	8–10
EX8	5, 6	AN	Moderate	8–10
EX9	5, 6	AN	Simple	8–10
EX10	2, 5–7	AN	Moderate	8–10
EX11	4–7	AN	Moderate	12–15
EX12	5–7	AN	Moderate	8–10
EX13	5–7	AN	Simple	8–10
EX14	7	AP	Simple	12–15

ADJUSTING THE ACCOUNTS (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	5, 6	AN, S	Moderate	8–10
EX16	8	AN	Moderate	6–8
EX17	8	AN	Moderate	10–12
P1A	5–7	AN	Simple	40–50
P2A	5–7	AN	Simple	50–60
P3A	5–7	AN	Moderate	40–50
P4A	5, 6	AN	Moderate	30–40
P5A	5–7	AN	Moderate	60–70
P6A	5–8	AN	Moderate	40–50
P1B	5–7	AN	Simple	40–50
P2B	5–7	AN	Simple	50–60
P3B	5–7	AN	Moderate	40–50
P4B	5, 6	AN	Moderate	30–40
P5B	5–7	AN	Moderate	60–70
BYP1	5, 6	AN	Simple	10–15
BYP2	—	AN	Simple	10–15
BYP3	—	AN	Simple	10–15
BYP4	2–7	S	Moderate	15–20
BYP5	3–6	C	Simple	10–15
BYP6	3–6	E	Moderate	10–15
BYP7	—	E	Moderate	10–15

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain the time period assumption.	D13-1	Q3-1 E3-1				
2. Explain the accrual basis of accounting.	D13-1	Q3-2 Q3-3	Q3-5 E3-3	E3-10		E3-2
3. Explain the reasons for adjusting entries.		Q3-6 Q3-7				
4. Identify the major types of adjusting entries.		Q3-8		Q3-18 BE3-2 BE3-8 E3-4 E3-6 E3-11		
5. Prepare adjusting entries for deferrals.		Q3-8 Q3-9 Q3-10 Q3-11 Q3-12 Q3-13 Q3-19 Q3-20 Q3-23		Q3-18 BE3-3 BE3-4 BE3-5 BE3-6 DI3-2 E3-5 E3-6 E3-7 E3-8 E3-9 E3-10 E3-11 E3-12 E3-13 E3-15 P3-1A P3-2A P3-3A P3-4A P3-5A P3-6A P3-1B P3-2B P3-3B P3-4B P3-5B	E3-15	
6. Prepare adjusting entries for accruals.		Q3-8 Q3-14 Q3-15 Q3-19 Q3-20	Q3-17	Q3-16 Q3-18 BE3-7 DI3-3 E3-5 E3-6 E3-7 E3-8 E3-9 E3-10 E3-11 E3-12 E3-13 E3-15 P3-1A P3-2A P3-3A P3-4A P3-5A P3-6A	E3-15	
7. Describe the nature and purpose of an adjusted trial balance.		Q3-21	BE3-9 BE3-10 E3-14	DI3-4 E3-10 E3-11 E3-12 E3-13 E3-15 P3-1A P3-2A P3-3A P3-4A P3-5A P3-6A		
*8. Prepare adjusting entries for the alternative treatment of deferrals.			Q3-22	BE3-11 E3-16 E3-17 P3-6A		
Broadening Your Perspective		Communication		Financial Reporting Comparative Analysis Exploring the Web	Decision Making Across the Organization	All About You Ethics Case

ANSWERS TO QUESTIONS

1. (a) Under the time period assumption, an accountant is required to determine the relevance of each business transaction to specific accounting periods.
(b) An accounting time period of one year in length is referred to as a fiscal year. A fiscal year that extends from January 1 to December 31 is referred to as a calendar year. Accounting periods of less than one year are called interim periods.
2. The two generally accepted accounting principles that relate to adjusting the accounts are:
The revenue recognition principle, which states that revenue should be recognized in the accounting period in which it is earned.
The matching principle, which states that efforts (expenses) be matched with accomplishments (revenues).
3. The law firm should recognize the revenue in April. The revenue recognition principle states that revenue should be recognized in the accounting period in which it is earned.
4. Information presented on an accrual basis is more useful than on a cash basis because it reveals relationships that are likely to be important in predicting future results. To illustrate, under accrual accounting, revenues are recognized when earned so they can be related to the economic environment in which they occur. Trends in revenues are thus more meaningful.
5. Expenses of \$4,500 should be deducted from the revenues in April. Under the matching principle efforts (expenses) should be matched with accomplishments (revenues).
6. No, adjusting entries are required by the revenue recognition and matching principles.
7. A trial balance may not contain up-to-date information for financial statements because:
 - (1) Some events are not journalized daily because it is not efficient to do so.
 - (2) The expiration of some costs occurs with the passage of time rather than as a result of daily transactions.
 - (3) Some items may be unrecorded because the transaction data are not yet known.
8. The two categories of adjusting entries are deferrals and accruals. Deferrals consist of prepaid expenses and unearned revenues. Accruals consist of accrued revenues and accrued expenses.
9. In the adjusting entry for a prepaid expense, an expense is debited and an asset is credited.
10. No. Depreciation is the process of allocating the cost of an asset to expense over its useful life in a rational and systematic manner. Depreciation results in the presentation of the book value of the asset, not its market value.
11. Depreciation expense is an expense account whose normal balance is a debit. This account shows the cost that has expired during the current accounting period. Accumulated depreciation is a contra asset account whose normal balance is a credit. The balance in this account is the depreciation that has been recognized from the date of acquisition to the balance sheet date.
12.

Equipment	\$18,000	
Less: Accumulated Depreciation	<u>6,000</u>	\$12,000

Questions Chapter 3 (Continued)

13. In the adjusting entry for an unearned revenue, a liability is debited and a revenue is credited.
14. Asset and revenue. An asset would be debited and a revenue would be credited.
15. An expense is debited and a liability is credited.
16. Net income was understated \$200 because prior to adjustment, revenues are understated by \$900 and expenses are understated by \$700. The difference in this case is \$200 (\$900 – \$700).
17. The entry is:
- | | | | |
|--------|------------------------|-------|-------|
| Jan. 9 | Salaries Payable | 2,000 | |
| | Salaries Expense | 3,000 | |
| | Cash | | 5,000 |
18. (a) Accrued revenues. (d) Accrued expenses or prepaid expenses.
(b) Unearned revenues. (e) Prepaid expenses.
(c) Accrued expenses. (f) Accrued revenues or unearned revenues.
19. (a) Salaries Payable. (d) Supplies Expense.
(b) Accumulated Depreciation. (e) Service Revenue.
(c) Interest Expense. (f) Service Revenue.
20. Disagree. An adjusting entry affects only one balance sheet account and one income statement account.
21. Financial statements can be prepared from an adjusted trial balance because the balances of all accounts have been adjusted to show the effects of all financial events that have occurred during the accounting period.
- *22. For Supplies Expense (prepaid expense): expenses are overstated and assets are understated. The adjusting entry is:
- | | | |
|-----------------------------------|----|----|
| Assets (Supplies) | XX | |
| Expenses (Supplies Expense) | | XX |
- For Rent Revenue (unearned revenues): revenues are overstated and liabilities are understated. The adjusting entry is:
- | | | |
|---|----|----|
| Revenues (Rent Revenue) | XX | |
| Liabilities (Unearned Rent Revenue) | | XX |
23. PepsiCo's depreciation was \$1,304 million for 2007 and \$1,182 million for 2006.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 3-1

- (a) **Prepaid Insurance**—to recognize insurance expired during the period.
- (b) **Depreciation Expense**—to account for the depreciation that has occurred on the asset during the period.
- (c) **Unearned Revenue**—to record revenue earned for services provided.
- (d) **Interest Payable**—to recognize interest accrued but unpaid on notes payable.

BRIEF EXERCISE 3-2

<u>Item</u>	<u>(a) Type of Adjustment</u>	<u>(b) Account Balances before Adjustment</u>
1.	Prepaid Expenses	Assets Overstated Expenses Understated
2.	Accrued Revenues	Assets Understated Revenues Understated
3.	Accrued Expenses	Expenses Understated Liabilities Understated
4.	Unearned Revenues	Liabilities Overstated Revenues Understated

BRIEF EXERCISE 3-3

Dec. 31	Advertising Supplies Expense.....	4,000	
	Advertising Supplies (\$6,700 – \$2,700)		4,000

<u>Advertising Supplies</u>			<u>Advertising Supplies Expense</u>		
6,700	12/31	4,000	12/31	4,000	
12/31 Bal. 2,700					

BRIEF EXERCISE 3-4

Dec. 31	Depreciation Expense—Equipment.....	5,000	
	Accumulated Depreciation— Equipment.....		5,000

Depr. Expense—Equipment		Accum. Depreciation—Equipment	
12/31	5,000	12/31	5,000

Balance Sheet:

Equipment.....	\$30,000	
Less: Accumulated Depreciation.....	<u>5,000</u>	\$25,000

BRIEF EXERCISE 3-5

July 1	Prepaid Insurance.....	18,000	
	Cash.....		18,000

Dec. 31	Insurance Expense [(\$18,000 ÷ 3) X 1/2]	3,000	
	Prepaid Insurance.....		3,000

Prepaid Insurance		Insurance Expense	
7/1	18,000	12/31	3,000
12/31	Bal. 15,000		

BRIEF EXERCISE 3-6

July 1	Cash	18,000	
	Unearned Insurance Revenue		18,000

Dec. 31	Unearned Insurance Revenue	3,000	
	Insurance Revenue.....		3,000

Unearned Insurance Revenue		Insurance Revenue	
12/31	3,000	7/1	18,000
		12/31	Bal. 15,000

BRIEF EXERCISE 3-7

1.	Dec. 31	Interest Expense	400	
		Interest Payable		400
2.	31	Accounts Receivable	1,500	
		Service Revenue		1,500
3.	31	Salaries Expense	900	
		Salaries Payable		900

BRIEF EXERCISE 3-8

<u>Account</u>	<u>(a) Type of Adjustment</u>	<u>(b) Related Account</u>
Accounts Receivable	Accrued Revenues	Service Revenue
Prepaid Insurance	Prepaid Expenses	Insurance Expense
Accum. Depr.—Equipment	Prepaid Expenses	Depreciation Expense
Interest Payable	Accrued Expenses	Interest Expense
Unearned Service Revenue	Unearned Revenues	Service Revenue

BRIEF EXERCISE 3-9

HARMONY COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue		\$35,400
Expenses		
Salaries expense	\$16,000	
Rent expense	4,000	
Insurance expense	2,000	
Supplies expense	1,500	
Depreciation expense	1,300	
Total expenses		<u>24,800</u>
Net income		<u>\$10,600</u>

BRIEF EXERCISE 3-10

HARMONY COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

S. Harmony, Capital, January 1	\$15,600
Add: Net income.....	<u>10,600</u>
	26,200
Less: Drawings	<u>6,000</u>
S. Harmony, Capital, December 31	<u><u>\$20,200</u></u>

***BRIEF EXERCISE 3-11**

(a)	Apr. 30	Supplies.....	1,000	
		Supplies Expense.....		1,000
(b)	30	Service Revenue.....	3,000	
		Unearned Service Revenue.....		3,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES**DO IT! 3-1**

1. (d) 2. (e) 3. (h) 4. (c)

DO IT! 3-2

1.	Insurance Expense.....	300	
	Prepaid Insurance		300
	(To record insurance expired)		
2.	Office Supplies Expense (\$2,500 – \$900).....	1,600	
	Office Supplies		1,600
	(To record supplies used)		
3.	Depreciation Expense	500	
	Accumulated Depreciation—Off. Equip.		500
	(To record monthly depreciation)		

DO IT! 3-2 (Continued)

4.	Unearned Revenue (\$10,000 x 2/5)	4,000	
	Service Revenue		4,000
	(To record revenue for services provided)		

DO IT! 3-3

1.	Salaries Expense	1,100	
	Salaries Payable		1,100
	(To record accrued salaries)		
2.	Interest Expense (\$20,000 x .12 x 1/12)	200	
	Interest Payable		200
	(To record accrued interest)		
3.	Accounts Receivable	1,600	
	Service Revenue		1,600
	(To record revenue for service provided)		

DO IT! 3-4

- (a) The net income is determined by adding revenues and subtracting expenses. The net income is computed as follows:

Revenues

Commission revenue	\$11,360
Rent revenue	<u>690</u>
Total revenues	\$12,050

Expenses

Salaries expense	\$7,520
Rent expense	1,200
Depreciation expense	700
Utilities expense	410
Supplies expense	160
Interest expense	<u>40</u>
Total expenses	<u>10,030</u>

Net income	<u>\$ 2,020</u>

(b) Total assets and liabilities are computed as follows:

Assets

Cash		\$ 5,360
Accounts receivable		480
Prepaid rent		720
Supplies		800
Equipment.....	\$12,000	
Less: Accumulated depreciation.....	<u>700</u>	<u>11,300</u>
Total assets		<u>\$18,660</u>

Liabilities

Notes payable		\$ 4,000
Accounts payable.....		1,200
Salaries payable.....		300
Interest payable.....		40
Unearned rent		<u>400</u>
Total Liabilities		<u>\$ 5,940</u>

(c) John Danks, Capital at June 30, 2010, can be computed in one of two ways. Using the basic accounting equation (Assets = Liabilities + Owner's Equity), we find that total assets are \$18,660 and total liabilities are \$5,940; therefore, Owner's Equity (John Danks, Capital) is \$12,720 (\$18,660 – \$5,940).

Another way to compute the John Danks, Capital at June 30, 2010, is as follows:

John Danks, Capital, April 1		\$ -0-
Add: Investments	\$11,200	
Net income	<u>2,020</u>	<u>13,220</u>
Less: Drawings.....		<u>500</u>
John Danks, Capital, June 30.....		<u>\$12,720</u>

SOLUTIONS TO EXERCISES

EXERCISE 3-1

1. True.
2. True.
3. False. Many business transactions affect more than one of these artificial time periods. For example, the purchase of a building affects expenses for many years.
4. True.
5. False. A time period that lasts *less than one year*, such as monthly or quarterly periods, is called an interim period.
6. False. All *calendar* years are *fiscal* years, but not all *fiscal* years are *calendar* years. An accounting time period that is one year in length is referred to as a fiscal year. A fiscal year that starts on January 1 and ends on December 31 is a calendar year.

EXERCISE 3-2

- (a) Accrual-basis accounting records the transactions that change a company's financial statements in the periods in which the events occur rather than in the periods in which the company receives or pays cash. Information presented on an accrual basis is useful because it reveals relationships that are likely to be important in predicting future results. Conversely, under cash-basis accounting, revenue is recorded only when cash is received, and an expense is recognized only when cash is paid. As a result, the cash basis of accounting often leads to misleading financial statements.
- (b) Politicians might desire a cash-basis accounting system over an accrual-basis system because if an accrual-accounting system is used, it could mean that billions in government liabilities presently unrecorded would have to be reported in the federal budget immediately. The recognition of these additional liabilities would make the deficit even worse. This is not what politicians would like to see and be held responsible for.

EXERCISE 3-2 (Continued)

(c) Dear Senator,

It is my understanding, after having taken a beginning course in accounting principles, that the Federal government uses a cash-basis system rather than an accrual-basis accounting system.

I am shocked at such a practice! There must be billions of dollars of liabilities hidden in many contracts that have not been recorded yet for the mere reason that they haven't been paid yet. I realize that the deficit would dramatically increase if we were to implement an accrual system, but in all fairness, we citizens should be given a more accurate picture of what our government is up to.

Sincerely,

CONCERNED STUDENT

EXERCISE 3-3

(a)	Cash received from revenue	\$100,000
	Cash paid for expenses	<u>(70,000)</u>
	Cash-basis net income.....	<u>\$ 30,000</u>
(b)	Revenues [(\$100,000 – \$25,000) + \$40,000].....	\$115,000
	Expenses [(\$70,000 – \$30,000) + \$42,000]	<u>(82,000)</u>
	Accrual-basis net income.....	<u>\$ 33,000</u>

EXERCISE 3-4

1. Unearned revenue.
2. Accrued expense.
3. Accrued expense.
4. Accrued revenue.
5. Prepaid expense.
6. Unearned revenue.
7. Accrued revenue.
8. Prepaid expense.
9. Prepaid expense.
10. Prepaid expense.
11. Accrued expense.

EXERCISE 3-5

1.	Interest Expense.....	400	
	Interest Payable.....		400
	(\$10,000 X 12% X 4/12)		
2.	Supplies Expense	1,650	
	Supplies		1,650
	(\$2,450 – \$800)		
3.	Depreciation Expense.....	1,000	
	Accumulated Depreciation—Equipment.....		1,000
4.	Insurance Expense	1,225	
	Prepaid Insurance.....		1,225
	(\$2,100 X 7/12)		
5.	Unearned Consulting Revenue.....	10,000	
	Consulting Revenue.....		10,000
	(\$40,000 X 1/4)		
6.	Accounts Receivable	4,200	
	Consulting Revenue.....		4,200
7.	Salaries Expense.....	5,400	
	Salaries Payable		5,400
	(\$9,000 X 3/5)		

EXERCISE 3-6

<u>Item</u>	<u>(a) Type of Adjustment</u>	<u>(b) Accounts before Adjustment</u>
1.	Accrued Revenues	Assets Understated Revenues Understated
2.	Prepaid Expenses	Assets Overstated Expenses Understated
3.	Accrued Expenses	Expenses Understated Liabilities Understated
4.	Unearned Revenues	Liabilities Overstated Revenues Understated
5.	Accrued Expenses	Expenses Understated Liabilities Understated
6.	Prepaid Expenses	Assets Overstated Expenses Understated

EXERCISE 3-7

1.	Mar. 31	Depreciation Expense (\$400 X 3)	1,200	
		Accumulated Depreciation— Equipment		1,200
2.	31	Unearned Rent Revenue	3,300	
		Rent Revenue (\$9,900 X 1/3)		3,300
3.	31	Interest Expense	500	
		Interest Payable		500
4.	31	Supplies Expense	2,100	
		Supplies (\$2,800 – \$700)		2,100
5.	31	Insurance Expense (\$200 X 3)	600	
		Prepaid Insurance		600

EXERCISE 3-8

1.	Jan. 31	Accounts Receivable.....	875	
		Service Revenue		875
2.	31	Utilities Expense	520	
		Utilities Payable.....		520
3.	31	Depreciation Expense	400	
		Accumulated Depreciation— Dental Equipment.....		400
	31	Interest Expense	500	
		Interest Payable.....		500
4.	31	Insurance Expense (\$12,000 ÷ 12)	1,000	
		Prepaid Insurance.....		1,000
5.	31	Supplies Expense (\$1,600 – \$400).....	1,200	
		Supplies		1,200

EXERCISE 3-9

1.	Oct. 31	Advertising Supplies Expense	2,000	
		Advertising Supplies		2,000
		(\$2,500 – \$500)		
2.	31	Insurance Expense.....	100	
		Prepaid Insurance.....		100
3.	31	Depreciation Expense	50	
		Accumulated Depreciation— Office Equipment.....		50
4.	31	Unearned Revenue.....	600	
		Service Revenue		600
5.	31	Accounts Receivable.....	300	
		Service Revenue		300

EXERCISE 3-9 (Continued)

6.	Oct. 31	Interest Expense.....	70	
		Interest Payable		70
7.	31	Salaries Expense.....	1,500	
		Salaries Payable		1,500

EXERCISE 3-10

BENNING CO.
Income Statement
For the Month Ended July 31, 2010

Revenues		
Service revenue (\$5,500 + \$500).....		\$6,000
Expenses		
Wages expense (\$2,300 + \$300).....	\$2,600	
Supplies expense (\$1,200 – \$200).....	1,000	
Utilities expense.....	600	
Insurance expense.....	400	
Depreciation expense	150	
Total expenses		<u>4,750</u>
Net income.....		<u>\$1,250</u>

EXERCISE 3-11

<u>Answer</u>	<u>Computation</u>								
(a) Supplies balance = \$1,300	<table> <tr> <td>Supplies expense</td><td>\$ 950</td></tr> <tr> <td>Add: Supplies (1/31)</td><td>850</td></tr> <tr> <td>Less: Supplies purchased</td><td><u>(500)</u></td></tr> <tr> <td>Supplies (1/1)</td><td><u>\$1,300</u></td></tr> </table>	Supplies expense	\$ 950	Add: Supplies (1/31)	850	Less: Supplies purchased	<u>(500)</u>	Supplies (1/1)	<u>\$1,300</u>
Supplies expense	\$ 950								
Add: Supplies (1/31)	850								
Less: Supplies purchased	<u>(500)</u>								
Supplies (1/1)	<u>\$1,300</u>								
(b) Total premium = \$4,800	Total premium = Monthly premium X 12; \$400 X 12 = \$4,800								
Purchase date = Aug. 1, 2009	Purchase date: On Jan. 31, there are 6 months' coverage remaining (\$400 X 6). Thus, the purchase date was 6 months earlier on Aug. 1, 2009.								

EXERCISE 3-11 (Continued)

(c) Salaries payable = \$2,500	Cash paid	\$3,500
	Salaries payable (1/31/10)	<u>800</u>
		4,300
	Less: Salaries expense	<u>1,800</u>
	Salaries payable (12/31/09)	<u>\$2,500</u>
(d) Unearned revenue = \$1,150	Service revenue	\$2,000
	Unearned service revenue	
	(1/31/10)	<u>750</u>
		2,750
	Cash received in January	<u>1,600</u>
	Unearned service revenue	
	(12/31/09)	<u>\$1,150</u>

EXERCISE 3-12

(a) July 10	Supplies	400	
	Cash		400
14	Cash	2,000	
	Service Revenue		2,000
15	Salaries Expense	1,200	
	Cash		1,200
20	Cash	1,000	
	Unearned Revenue		1,000
(b) July 31	Supplies Expense	800	
	Supplies		800
31	Accounts Receivable	500	
	Service Revenue		500
31	Salaries Expense	1,200	
	Salaries Payable		1,200
31	Unearned Revenue	900	
	Service Revenue		900

EXERCISE 3-13

Aug. 31	Accounts Receivable.....	1,000	
	Service Revenue		1,000
31	Office Supplies Expense.....	1,600	
	Office Supplies		1,600
31	Insurance Expense.....	1,500	
	Prepaid Insurance		1,500
31	Depreciation Expense.....	900	
	Accumulated Depreciation—Office Equipment		900
31	Salaries Expense	1,100	
	Salaries Payable.....		1,100
31	Unearned Rent Revenue	900	
	Rent Revenue.....		900

EXERCISE 3-14

GARCIA COMPANY
Income Statement
For the Year Ended August 31, 2010

Revenues		
Service revenue		\$35,000
Rent revenue		<u>11,900</u>
Total revenues		46,900
Expenses		
Salaries expense.....	\$18,100	
Rent expense	15,000	
Office supplies expense.....	1,600	
Insurance expense	1,500	
Depreciation expense	<u>900</u>	
Total expenses		<u>37,100</u>
Net income.....		<u>\$ 9,800</u>

EXERCISE 3-14 (Continued)

GARCIA COMPANY
Owner's Equity Statement
For the Year Ended August 31, 2010

Capital, September 1, 2009	\$15,600
Add: Net income	<u>9,800</u>
Capital, August 31, 2010	<u>\$25,400</u>

GARCIA COMPANY
Balance Sheet
August 31, 2010

Assets		
Cash		\$10,400
Accounts receivable		9,800
Office supplies		700
Prepaid insurance		2,500
Office equipment	\$14,000	
Less: Accum. depreciation—office equipment	<u>4,500</u>	<u>9,500</u>
Total assets		<u>\$32,900</u>

Liabilities and Owner's Equity

Liabilities

Accounts payable	\$ 5,800
Salaries payable	1,100
Unearned rent revenue	<u>600</u>
Total liabilities	7,500

Owner's equity

T. Garcia, Capital	<u>25,400</u>
Total liabilities and owner's equity	<u>\$32,900</u>

EXERCISE 3-15

(a) 1.	Cash	9,000	
	Fees Receivable		9,000
2.	Unearned Fees	25,000	
	Fees Revenue		25,000
3. (a)	Cash	35,000	
	Unearned Fees.....		35,000
(b)	Unearned Fees	18,000	
	(\$35,000 – \$17,000)		
	Fees Revenue		18,000
4.	Fees Receivable	110,000	
	Fees Revenue		110,000
	(\$153,000 – \$25,000 – \$18,000)		
5.	Cash	96,000	
	Fees Receivable.....		96,000
	(\$110,000 – \$14,000)		

(b) Cash received with respect to fees = \$9,000 + \$96,000 + \$35,000
= \$140,000

***EXERCISE 3-16**

1.	Prepaid Insurance	875	
	Insurance Expense		875
	(\$2,100 X 5/12)		
2.	Consulting Revenue	30,000	
	Unearned Consulting Revenue.....		30,000
	(\$40,000 X 3/4)		
3.	Supplies.....	800	
	Supplies Expense.....		800

***EXERCISE 3-17**

(a)	Jan. 2	Insurance Expense.....	1,800	
		Cash		1,800
	10	Supplies Expense	1,700	
		Cash		1,700
	15	Cash	6,100	
		Service Revenue		6,100

Insurance Expense				Supplies Expense			
1/2	1,800			1/10	1,700		
Cash				Service Revenue			
1/15	6,100	1/2	1,800		1/15	6,100	
		1/10	1,700				

(b)	Jan. 31	Prepaid Insurance (\$150 X 11 months).....	1,650	
		Insurance Expense.....		1,650
	31	Supplies	800	
		Supplies Expense		800
	31	Service Revenue	3,600	
		Unearned Revenue		3,600

Insurance Expense				Supplies Expense				Service Revenue			
1/2	1,800	1/31	1,650	1/10	1,700	1/31	800	1/31	3,600	1/15	6,100
Bal.	150			Bal.	900					Bal.	2,500
Prepaid Insurance				Supplies				Unearned Revenue			
1/31	1,650			1/31	800					1/31	3,600

(c)	Insurance expense	\$ 150
	Supplies expense.....	900
	Service revenue.....	2,500
	Prepaid insurance.....	1,650
	Supplies	800
	Unearned revenue	3,600

SOLUTIONS TO PROBLEMS

PROBLEM 3-1A

(a)

					J3
Date	Account Titles and Explanation		Ref.	Debit	Credit
2010					
June	30	Supplies Expense.....	631	1,400	
		Supplies	126		1,400
		(\$2,000 – \$600)			
	30	Utilities Expense	732	150	
		Utilities Payable	244		150
	30	Insurance Expense	722	250	
		Prepaid Insurance.....	130		250
		(\$3,000 ÷ 12 months)			
	30	Unearned Service Revenue.....	209	2,500	
		Service Revenue.....	400		2,500
	30	Salaries Expense	726	2,000	
		Salaries Payable	212		2,000
	30	Depreciation Expense	711	250	
		Accumulated Depreciation—			
		Office Equipment.....	158		250
		(\$15,000 ÷ 60 months)			
	30	Accounts Receivable	112	1,000	
		Service Revenue.....	400		1,000

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Balance	✓			7,150

PROBLEM 3-1A (Continued)**Accounts Receivable** **No. 112**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			6,000
	30	Adjusting	J3	1,000		7,000

Supplies **No. 126**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			2,000
	30	Adjusting	J3		1,400	600

Prepaid Insurance **No. 130**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			3,000
	30	Adjusting	J3		250	2,750

Office Equipment **No. 157**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			15,000

Accumulated Depreciation—Office Equipment **No. 158**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Adjusting	J3		250	250

Accounts Payable **No. 201**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			4,500

PROBLEM 3-1A (Continued)**Unearned Service Revenue****No. 209**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			4,000
	30	Adjusting	J3	2,500		1,500

Salaries Payable**No. 212**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Adjusting	J3		2,000	2,000

Utilities Payable**No. 244**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Adjusting	J3		150	150

T. Masasi, Capital**No. 301**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			21,750

Service Revenue**No. 400**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Balance	✓			7,900
	30	Adjusting	J3		2,500	10,400
	30	Adjusting	J3		1,000	11,400

Supplies Expense**No. 631**

Date		Explanation	Ref.	Debit	Credit	Balance
2010						
June	30	Adjusting	J3	1,400		1,400

PROBLEM 3-1A (Continued)**Depreciation Expense** **No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Adjusting	J3	250		250

Insurance Expense **No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Adjusting	J3	250		250

Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Balance	✓			4,000
30	Adjusting	J3	2,000		6,000

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Balance	✓			1,000

Utilities Expense **No. 732**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
June 30	Adjusting	J3	150		150

PROBLEM 3-1A (Continued)**(c)****MASASI COMPANY
Adjusted Trial Balance
June 30, 2010**

	Debit	Credit
Cash.....	\$ 7,150	
Accounts Receivable	7,000	
Supplies.....	600	
Prepaid Insurance.....	2,750	
Office Equipment.....	15,000	
Accumulated Depreciation—Office Equipment.....		\$ 250
Accounts Payable		4,500
Unearned Service Revenue		1,500
Salaries Payable		2,000
Utilities Payable		150
T. Masasi, Capital		21,750
Service Revenue.....		11,400
Supplies Expense	1,400	
Depreciation Expense.....	250	
Insurance Expense	250	
Salaries Expense.....	6,000	
Rent Expense	1,000	
Utilities Expense.....	150	
	<u>\$41,550</u>	<u>\$41,550</u>

PROBLEM 3-2A

(a)

				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Aug. 31	Insurance Expense (\$400 X 3)	722	1,200	
	Prepaid Insurance	130		1,200
31	Supplies Expense (\$3,300 – \$600)	631	2,700	
	Supplies	126		2,700
31	Depreciation Expense—Cottages	620	1,500	
	(\$6,000 X 1/4)			
	Accumulated Depreciation—			
	Cottages	144		1,500
31	Depreciation Expense—Furniture	621	600	
	(\$2,400 X 1/4)			
	Accumulated Depreciation—			
	Furniture	150		600
31	Unearned Rent Revenue	208	4,100	
	Rent Revenue	429		4,100
31	Salaries Expense	726	400	
	Salaries Payable	212		400
31	Accounts Receivable	112	1,000	
	Rent Revenue	429		1,000
31	Interest Expense	718	600	
	Interest Payable	230		600
	[((\$80,000 X 9%) X 1/12)]			

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			19,600

PROBLEM 3-2A (Continued)

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	1,000		1,000

Supplies					No. 126
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			3,300
31	Adjusting	J1		2,700	600

Prepaid Insurance					No. 130
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			6,000
31	Adjusting	J1		1,200	4,800

Land					No. 140
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			25,000

Cottages					No. 143
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			125,000

Accumulated Depreciation—Cottages					No. 144
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1		1,500	1,500

Furniture					No. 149
Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			26,000

PROBLEM 3-2A (Continued)**Accumulated Depreciation—Furniture** **No. 150**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1		600	600

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			6,500

Unearned Rent Revenue **No. 209**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			7,400
31	Adjusting	J1	4,100		3,300

Salaries Payable **No. 212**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1		400	400

Interest Payable **No. 230**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1		600	600

Mortgage Payable **No. 275**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			80,000

P. Harder, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			100,000

PROBLEM 3-2A (Continued)**P. Harder, Drawing** **No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			5,000

Rent Revenue **No. 429**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			80,000
31	Adjusting	J1		4,100	84,100
31	Adjusting	J1		1,000	85,100

Depreciation Expense—Cottages **No. 620**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	1,500		1,500

Depreciation Expense—Furniture **No. 621**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	600		600

Repair Expense **No. 622**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			3,600

Supplies Expense **No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	2,700		2,700

Interest Expense **No. 718**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	600		600

PROBLEM 3-2A (Continued)**Insurance Expense** **No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Adjusting	J1	1,200		1,200

Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			51,000
31	Adjusting	J1	400		51,400

Utilities Expense **No. 732**

Date	Explanation	Ref.	Debit	Credit	Balance
Aug. 31	Balance	✓			9,400

PROBLEM 3-2A (Continued)**(c)**

NEOSHO RIVER RESORT
Adjusted Trial Balance
August 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash.....	\$ 19,600	
Accounts Receivable	1,000	
Supplies.....	600	
Prepaid Insurance.....	4,800	
Land	25,000	
Cottages	125,000	
Accumulated Depreciation—Cottages.....		\$ 1,500
Furniture.....	26,000	
Accumulated Depreciation—Furniture		600
Accounts Payable		6,500
Unearned Rent Revenue		3,300
Salaries Payable		400
Interest Payable		600
Mortgage Payable		80,000
P. Harder, Capital		100,000
P. Harder, Drawing.....	5,000	
Rent Revenue		85,100
Depreciation Expense—Cottages.....	1,500	
Depreciation Expense—Furniture	600	
Repair Expense.....	3,600	
Supplies Expense	2,700	
Interest Expense.....	600	
Insurance Expense	1,200	
Salaries Expense.....	51,400	
Utilities Expense.....	9,400	
	<u>\$278,000</u>	<u>\$278,000</u>

(d)

NEOSHO RIVER RESORT
Income Statement
For the Three Months Ended August 31, 2010

Revenues		
Rent revenue		\$ 85,100
Expenses		
Salaries expense	\$51,400	
Utilities expense	9,400	
Repair expense	3,600	
Supplies expense	2,700	
Depreciation expense—cottages	1,500	
Insurance expense	1,200	
Interest expense	600	
Depreciation expense—furniture	600	
Total expenses		<u>71,000</u>
Net income		<u>\$ 14,100</u>

NEOSHO RIVER RESORT
Owner's Equity Statement
For the Three Months Ended August 31, 2010

P. Harder, Capital, June 1	\$	0
Investment by owner		100,000
Add: Net income		<u>14,100</u>
		114,100
Less: Drawings		<u>5,000</u>
P. Harder, Capital, August 31		<u>\$109,100</u>

NEOSHO RIVER RESORT
Balance Sheet
August 31, 2010

Assets			
Cash			\$ 19,600
Accounts receivable			1,000
Supplies			600
Prepaid insurance			4,800
Land			25,000
Cottages	\$125,000		
Less: Accum. depreciation—cottages	1,500	123,500	
Furniture	26,000		
Less: Accum. depreciation—furniture	600	25,400	
Total assets			<u>\$199,900</u>
Liabilities and Owner's Equity			
Liabilities			
Accounts payable			\$ 6,500
Mortgage payable			80,000
Unearned rent revenue			3,300
Interest payable			600
Salaries payable			400
Total liabilities			<u>90,800</u>
Owner's equity			
P. Harder, Capital			<u>109,100</u>
Total liabilities and owner's equity			<u>\$199,900</u>

PROBLEM 3-3A

(a)	Dec. 31	Accounts Receivable	2,500	
		Advertising Revenue		2,500
	31	Unearned Advertising Fees	1,600	
		Advertising Revenue		1,600
	31	Art Supplies Expense	3,600	
		Art Supplies		3,600
	31	Depreciation Expense	6,000	
		Accumulated Depreciation		6,000
	31	Interest Expense	150	
		Interest Payable		150
	31	Insurance Expense	850	
		Prepaid Insurance		850
	31	Salaries Expense	1,300	
		Salaries Payable		1,300

(b)

FERNETTI ADVERTISING AGENCY **Income Statement** **For the Year Ended December 31, 2010**

Revenues		
Advertising revenue		\$62,700
Expenses		
Salaries expense	\$11,300	
Depreciation expense	6,000	
Rent expense	4,000	
Art supplies expense	3,600	
Insurance expense	850	
Interest expense	500	
Total expenses		<u>26,250</u>
Net income		<u>\$36,450</u>

FERNETTI ADVERTISING AGENCY
Owner's Equity Statement
For the Year Ended December 31, 2010

J. Ferneti, Capital, January 1	\$25,500
Add: Net income	<u>36,450</u>
	61,950
Less: Drawing	<u>12,000</u>
J. Ferneti, Capital, December 31	<u>\$49,950</u>

FERNETTI ADVERTISING AGENCY
Balance Sheet
December 31, 2010

Assets	
Cash	\$11,000
Accounts receivable	22,500
Art supplies	5,000
Prepaid insurance	2,500
Printing equipment	\$60,000
Less: Accumulated depreciation	<u>34,000</u>
	26,000
Total assets	<u>\$67,000</u>

Liabilities and Owner's Equity

Liabilities	
Notes payable	\$ 5,000
Accounts payable	5,000
Unearned advertising fees	5,600
Salaries payable	1,300
Interest payable	<u>150</u>
Total liabilities	17,050
Owner's equity	
J. Ferneti, Capital	<u>49,950</u>
Total liabilities and owner's equity	<u>\$67,000</u>

PROBLEM 3-3A (Continued)

(c) (1) $I = P \times R \times T$

$$\$150 = \$5,000 \times R \times 1/2$$

$$\$150 = \$2,500R$$

$$R = \frac{\$150}{\$2,500}$$

$$R = 6\%$$

- (2) **Salaries Expense, \$11,300 less Salaries Payable 12/31/10, \$1,300 = \$10,000. Total payments, \$12,500 – \$10,000 = \$2,500 Salaries Payable 12/31/09.**

PROBLEM 3-4A

1.	Dec. 31	Salaries Expense.....	2,320	
		Salaries Payable		2,320
		[5 X \$800 X 2/5 = \$1,600		
		3 X \$600 X 2/5 = 720		
		<u>\$2,320]</u>		
2.	31	Unearned Rent.....	74,000	
		Rent Revenue		74,000
		[5 X \$4,000 X 2 = \$40,000		
		4 X \$8,500 X 1 = 34,000		
		<u>\$74,000]</u>		
3.	31	Advertising Expense.....	4,800	
		Prepaid Advertising.....		4,800
		[A650 – \$450 per month		
		for 8 months = \$3,600		
		B974 – \$400 per month		
		for 3 months = 1,200		
		<u>\$4,800]</u>		
4.	31	Interest Expense.....	6,300	
		Interest Payable		6,300
		(\$120,000 X 9% X 7/12)		

PROBLEM 3-5A

(a), (c) & (e)

Cash						No. 101
Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			4,880
	8		J1		1,400	3,480
	10		J1	1,200		4,680
	12		J1	3,400		8,080
	20		J1		4,500	3,580
	22		J1		500	3,080
	25		J1		1,250	1,830
	29		J1	650		2,480

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			3,520
10		J1		1,200	2,320
27		J1	1,500		3,820

Supplies					No. 126
Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			2,000
17		J1	1,200		3,200
30	Adjusting	J1		2,000	1,200

Store Equipment						No. 153
Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			15,000
	15		J1	3,000		18,000

PROBLEM 3-5A (Continued)**Accumulated Depreciation—Equipment** **No. 154**

Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			1,500
	30	Adjusting	J1		100	1,600

Accounts Payable **No. 201**

Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			3,400
	15		J1		3,000	6,400
	17		J1		1,200	7,600
	20		J1	4,500		3,100

Unearned Service Revenue **No. 209**

Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			1,400
	29		J1		650	2,050
	30	Adjusting	J1	1,450		600

Salaries Payable **No. 212**

Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			500
	8		J1	500		0
	30	Adjusting	J1		400	400

J. Rand, Capital **No. 301**

Date		Explanation	Ref.	Debit	Credit	Balance
Sept.	1	Balance	✓			18,600

PROBLEM 3-5A (Continued)**Service Revenue** **No. 407**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 12		J1		3,400	3,400
27		J1		1,500	4,900
30	Adjusting	J1		1,450	6,350

Depreciation Expense **No. 615**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 30	Adjusting	J1	100		100

Supplies Expense **No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 30	Adjusting	J1	2,000		2,000

Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 8		J1	900		900
25		J1	1,250		2,150
30	Adjusting	J1	400		2,550

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 22		J1	500		500

PROBLEM 3-5A (Continued)
(b)
General Journal
J1

Date	Account Titles	Ref.	Debit	Credit
Sept. 8	Salaries Payable.....	212	500	
	Salaries Expense	726	900	
	Cash.....	101		1,400
10	Cash	101	1,200	
	Accounts Receivable.....	112		1,200
12	Cash	101	3,400	
	Service Revenue	407		3,400
15	Store Equipment	153	3,000	
	Accounts Payable.....	201		3,000
17	Supplies	126	1,200	
	Accounts Payable.....	201		1,200
20	Accounts Payable.....	201	4,500	
	Cash	101		4,500
22	Rent Expense	729	500	
	Cash	101		500
25	Salaries Expense	726	1,250	
	Cash	101		1,250
27	Accounts Receivable.....	112	1,500	
	Service Revenue	407		1,500
29	Cash	101	650	
	Unearned Service Revenue.....	209		650

PROBLEM 3-5A (Continued)

(d) & (f)

RAND EQUIPMENT REPAIR
Trial Balances
September 30, 2010

	Before Adjustment		After Adjustment	
	Dr.	Cr.	Dr.	Cr.
Cash	\$ 2,480		\$ 2,480	
Accounts Receivable.....	3,820		3,820	
Supplies	3,200		1,200	
Store Equipment	18,000		18,000	
Accumulated Depreciation		\$ 1,500		\$ 1,600
Accounts Payable.....		3,100		3,100
Unearned Service Revenue.....		2,050		600
Salaries Payable.....		-0-		400
J. Rand, Capital		18,600		18,600
Service Revenue		4,900		6,350
Depreciation Expense			100	
Supplies Expense			2,000	
Salaries Expense	2,150		2,550	
Rent Expense	500		500	
	<u>\$30,150</u>	<u>\$30,150</u>	<u>\$30,650</u>	<u>\$30,650</u>

(e) 1.	Sept. 30	Supplies Expense	631	2,000	
		Supplies (\$3,200 – \$1,200)	126		2,000
2.	30	Salaries Expense	726	400	
		Salaries Payable	212		400
3.	30	Depreciation Expense	615	100	
		Accumulated Depreciation— Equipment	154		100
4.	30	Unearned Service Revenue	209	1,450	
		Service Revenue	407		1,450

PROBLEM 3-5A (Continued)**(g)**

RAND EQUIPMENT REPAIR
Income Statement
For the Month Ended September 30, 2010

Revenues		
Service revenue		\$6,350
Expenses		
Salaries expense.....	\$2,550	
Supplies expense	2,000	
Rent expense	500	
Depreciation expense	100	
Total expenses		<u>5,150</u>
Net income.....		<u>\$1,200</u>

RAND EQUIPMENT REPAIR
Owner's Equity Statement
For the Month Ended September 30, 2010

J. Rand, Capital, September 1	\$18,600
Add: Net income	<u>1,200</u>
J. Rand, Capital, September 30.....	<u>\$19,800</u>

**RAND EQUIPMENT REPAIR
Balance Sheet
September 30, 2010**

Assets		
Cash		\$ 2,480
Accounts receivable		3,820
Supplies		1,200
Equipment	\$18,000	
Less: Accumulated depreciation— equipment	1,600	16,400
Total assets.....		<u>\$23,900</u>
Liabilities and Owner's Equity		
Liabilities		
Accounts payable		\$ 3,100
Unearned service revenue		600
Salaries payable		400
Total liabilities		<u>4,100</u>
Owner's equity		
J. Rand, Capital.....		<u>19,800</u>
Total liabilities and owner's equity		<u>\$23,900</u>

***PROBLEM 3-6A**

(a)	1.	June 30	Supplies	1,300	
			Supplies Expense		1,300
	2.	30	Interest Expense	750	
			(\$20,000 X 9% X 5/12)		
			Interest Payable.....		750
	3.	30	Prepaid Insurance	1,200	
			[((\$1,800 ÷ 12) X 8)]		
			Insurance Expense.....		1,200
	4.	30	Consulting Revenue	1,500	
			Unearned Consulting Revenue		1,500
	5.	30	Accounts Receivable.....	2,000	
			Graphic Revenue		2,000
	6.	30	Depreciation Expense	1,000	
			(\$2,000 ÷ 2)		
			Accumulated Depreciation—		
			Equipment		1,000

***PROBLEM 3-6A (Continued)**

(b) GIVENS GRAPHICS COMPANY
Adjusted Trial Balance
June 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 9,500	
Accounts Receivable (\$14,000 + \$2,000)	16,000	
Supplies	1,300	
Prepaid Insurance	1,200	
Equipment	45,000	
Accumulated Depreciation		\$ 1,000
Notes Payable		20,000
Accounts Payable		9,000
Interest Payable		750
Unearned Consulting Revenue		1,500
Sue Givens, Capital		22,000
Graphic Revenue (\$52,100 + \$2,000)		54,100
Consulting Revenue (\$6,000 – \$1,500)		4,500
Salaries Expense	30,000	
Supplies Expense (\$3,700 – \$1,300)	2,400	
Advertising Expense	1,900	
Rent Expense	1,500	
Utilities Expense	1,700	
Depreciation Expense	1,000	
Insurance Expense (\$1,800 – \$1,200)	600	
Interest Expense	750	
	<u>\$112,850</u>	<u>\$112,850</u>

***PROBLEM 3-6A (Continued)**

(c)

GIVENS GRAPHICS COMPANY
Income Statement
For the Six Months Ended June 30, 2010

Revenues		
Graphic revenue.....		\$54,100
Consulting revenue.....		<u>4,500</u>
Total revenues		58,600
Expenses		
Salaries expense.....	\$30,000	
Supplies expense	2,400	
Advertising expense.....	1,900	
Utilities expense.....	1,700	
Rent expense	1,500	
Depreciation expense	1,000	
Interest expense.....	750	
Insurance expense	<u>600</u>	
Total expenses		<u>39,850</u>
Net income		<u>\$18,750</u>

GIVENS GRAPHICS COMPANY
Owner's Equity Statement
For the Six Months Ended June 30, 2010

Sue Givens, Capital, January 1	\$ 0
Investment by owner	22,000
Add: Net income	<u>18,750</u>
Sue Givens, Capital, June 30.....	<u>\$40,750</u>

GIVENS GRAPHICS COMPANY
Balance Sheet
June 30, 2010

Assets		
Cash		\$ 9,500
Accounts receivable		16,000
Supplies		1,300
Prepaid insurance		1,200
Equipment	\$45,000	
Less: Accumulated depreciation	<u>1,000</u>	<u>44,000</u>
Total assets		<u>\$72,000</u>
 Liabilities and Owner's Equity		
Liabilities		
Notes payable		\$20,000
Accounts payable		9,000
Unearned consulting revenue		1,500
Interest payable		<u>750</u>
Total liabilities		31,250
Owner's equity		
Sue Givens, Capital		<u>40,750</u>
Total liabilities and owner's equity		<u>\$72,000</u>

PROBLEM 3-1B

(a)

					J4
Date	Account Titles	Ref.	Debit	Credit	
2010					
May 31	Supplies Expense.....	631	900		
	Supplies	126		900	
31	Travel Expense.....	736	250		
	Travel Payable	229		250	
31	Insurance Expense	722	150		
	Prepaid Insurance.....	130		150	
	(\$3,600 ÷ 24 months)				
31	Unearned Service Revenue.....	209	1,600		
	Service Revenue	400		1,600	
	(\$2,000 – \$400)				
31	Salaries Expense	726	960		
	Salaries Payable.....	212		960	
	[(3/5 X \$800) X 2 employees]				
31	Depreciation Expense.....	717	170		
	Accumulated Depreciation—				
	Office Furniture.....	150		170	
	(\$10,200 ÷ 60 months)				
31	Accounts Receivable.....	112	1,200		
	Service Revenue	400		1,200	

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			5,700

PROBLEM 3-1B (Continued)**Accounts Receivable** **No. 112**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			6,000
31	Adjusting	J4	1,200		7,200

Supplies **No. 126**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			1,900
31	Adjusting	J4		900	1,000

Prepaid Insurance **No. 130**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			3,600
31	Adjusting	J4		150	3,450

Office Furniture **No. 149**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			10,200

Accumulated Depreciation—Office Furniture **No. 150**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4		170	170

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			4,500

PROBLEM 3-1B (Continued)**Unearned Service Revenue****No. 209**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			2,000
	31 Adjusting	J4	1,600		400

Salaries Payable**No. 212**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4		960	960

Travel Payable**No. 229**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4		250	250

K. Ham, Capital**No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			17,700

Service Revenue**No. 400**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			7,500
	31 Adjusting	J4		1,600	9,100
	31 Adjusting	J4		1,200	10,300

Supplies Expense**No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4	900		900

PROBLEM 3-1B (Continued)**Depreciation Expense** **No. 717**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4	170		170

Insurance Expense **No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4	150		150

Salaries Expense **726**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			3,400
31	Adjusting	J4	960		4,360

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Balance	✓			900

Travel Expense **No. 736**

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
May 31	Adjusting	J4	250		250

PROBLEM 3-1B (Continued)**(c)****HAMBONE CONSULTING
Adjusted Trial Balance
May 31, 2010**

	Debit	Credit
Cash.....	\$ 5,700	
Accounts Receivable	7,200	
Prepaid Insurance	3,450	
Supplies.....	1,000	
Office Furniture.....	10,200	
Accumulated Depreciation—Office Furniture		\$ 170
Accounts Payable		4,500
Travel Payable.....		250
Salaries Payable		960
Unearned Service Revenue		400
K. Ham, Capital		17,700
Service Revenue.....		10,300
Salaries Expense.....	4,360	
Rent Expense	900	
Depreciation Expense.....	170	
Insurance Expense	150	
Travel Expense	250	
Supplies Expense	900	
	<u>\$34,280</u>	<u>\$34,280</u>

PROBLEM 3-2B

(a)

				J1
Date	Account Titles	Ref.	Debit	Credit
May 31	Insurance Expense.....	722	190	
	Prepaid Insurance.....	130		190
	(\$2,280 X 1/12)			
31	Supplies Expense.....	631	1,450	
	Supplies (\$2,200 – \$750).....	126		1,450
31	Depreciation Expense—Lodge.....	619	250	
	(\$3,000 X 1/12)			
	Accumulated Depreciation—			
	Lodge.....	142		250
31	Depreciation Expense—Furniture.....	621	225	
	(\$2,700 X 1/12)			
	Accumulated Depreciation—			
	Furniture.....	150		225
31	Interest Expense.....	718	350	
	Interest Payable.....	230		350
	[((\$35,000 X 12%) X 1/12)]			
31	Unearned Rent.....	208	2,200	
	Rent Revenue.....	429		2,200
	(2/3 X \$3,300)			
31	Salaries Expense.....	726	750	
	Salaries Payable.....	212		750

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			3,500

PROBLEM 3-2B (Continued)

Supplies						No. 126
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Balance	✓			2,200
	31	Adjusting	J1		1,450	750

Prepaid Insurance						No. 130
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Balance	✓			2,280
	31	Adjusting	J1		190	2,090

Land						No. 140
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Balance	✓			12,000

Lodge						No. 141
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Balance	✓			60,000

Accumulated Depreciation—Lodge						No. 142
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Adjusting	J1		250	250

Furniture						No. 149
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Balance	✓			15,000

Accumulated Depreciation—Furniture						No. 150
Date		Explanation	Ref.	Debit	Credit	Balance
May 31		Adjusting	J1		225	225

PROBLEM 3-2B (Continued)

Accounts Payable					No. 201
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			4,800

Unearned Rent Revenue					No. 209
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			3,300
31	Adjusting	J1	2,200		1,100

Salaries Payable					No. 212
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1		750	750

Interest Payable					No. 230
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1		350	350

Mortgage Payable					No. 275
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			35,000

Kevin Henry, Capital					No. 301
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			46,380

Rent Revenue					No. 429
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			10,300
31	Adjusting	J1		2,200	12,500

PROBLEM 3-2B (Continued)

Advertising Expense					No. 610
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			600

Depreciation Expense—Lodge					No. 619
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1	250		250

Depreciation Expense—Furniture					No. 621
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1	225		225

Supplies Expense					No. 631
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1	1,450		1,450

Interest Expense					No. 718
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1	350		350

Insurance Expense					No. 722
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Adjusting	J1	190		190

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			3,300
31	Adjusting	J1	750		4,050

PROBLEM 3-2B (Continued)

Utilities Expense					No. 732
Date	Explanation	Ref.	Debit	Credit	Balance
May 31	Balance	✓			900

(c) **MOUND VIEW MOTEL**
Adjusted Trial Balance
May 31, 2010

	Debit	Credit
Cash	\$ 3,500	
Supplies	750	
Prepaid Insurance	2,090	
Land	12,000	
Lodge	60,000	
Accumulated Depreciation—Lodge		\$ 250
Furniture	15,000	
Accumulated Depreciation—Furniture		225
Accounts Payable		4,800
Unearned Rent Revenue		1,100
Salaries Payable		750
Interest Payable		350
Mortgage Payable		35,000
Kevin Henry, Capital		46,380
Rent Revenue		12,500
Advertising Expense	600	
Depreciation Expense—Lodge	250	
Depreciation Expense—Furniture	225	
Supplies Expense	1,450	
Interest Expense	350	
Insurance Expense	190	
Salaries Expense	4,050	
Utilities Expense	900	
	<u>\$101,355</u>	<u>\$101,355</u>

PROBLEM 3-2B (Continued)**(d)**

MOUND VIEW MOTEL
Income Statement
For the Month Ended May 31, 2010

Revenues		
Rent revenue		\$12,500
Expenses		
Salaries expense.....	\$4,050	
Supplies expense	1,450	
Utilities expense.....	900	
Advertising expense.....	600	
Interest expense.....	350	
Depreciation expense—lodge	250	
Depreciation expense—furniture	225	
Insurance expense	190	
Total expenses		<u>8,015</u>
Net income.....		<u>\$ 4,485</u>

MOUND VIEW MOTEL
Owner's Equity Statement
For the Month Ended May 31, 2010

Kevin Henry, Capital, May 1	\$ 0
Investment by owner	46,380
Add: Net income	<u>4,485</u>
Kevin Henry, Capital, May 31	<u>\$50,865</u>

**MOUND VIEW MOTEL
Balance Sheet
May 31, 2010**

Assets		
Cash		\$ 3,500
Supplies		750
Prepaid insurance.....		2,090
Land.....		12,000
Lodge	\$60,000	
Less: Accumulated depreciation—lodge.....	<u>250</u>	59,750
Furniture	15,000	
Less: Accumulated depreciation—furniture	<u>225</u>	14,775
Total assets.....		<u>\$92,865</u>

Liabilities and Owner's Equity

Liabilities		
Accounts payable		\$ 4,800
Mortgage payable		35,000
Unearned rent.....		1,100
Salaries payable		750
Interest payable		<u>350</u>
Total liabilities		42,000
Owner's equity		
Kevin Henry, Capital		<u>50,865</u>
Total liabilities and owner's equity		<u>\$92,865</u>

PROBLEM 3-3B

(a)	Sept. 30	Accounts Receivable.....	800	
		Commission Revenue		800
	30	Rent Expense.....	900	
		Prepaid Rent		900
	30	Supplies Expense.....	600	
		Supplies		600
	30	Depreciation Expense	500	
		Accum. Depreciation—Equipment.....		500
	30	Interest Expense	100	
		Interest Payable		100
	30	Unearned Rent.....	850	
		Rent Revenue		850
	30	Salaries Expense	725	
		Salaries Payable		725

(b)

POBLANO CO.
Income Statement
For the Quarter Ended September 30, 2010

Revenues			
	Commission revenue		\$16,800
	Rent revenue		<u>2,260</u>
	Total revenues		19,060
Expenses			
	Salaries expense.....	\$8,725	
	Rent expense	2,800	
	Utilities expense.....	1,510	
	Supplies expense	600	
	Depreciation expense	500	
	Interest expense.....	<u>100</u>	
	Total expenses		<u>14,235</u>
	Net income.....		<u>\$ 4,825</u>

PROBLEM 3-3B (Continued)

POBLANO CO.
Owner's Equity Statement
For the Quarter Ended September 30, 2010

Rikki Poblano, Capital, July 1, 2010.....	\$ 0
Investment by owner	22,000
Add: Net income	4,825
	<u>26,825</u>
Less: Drawings.....	1,600
Rikki Poblano, Capital, September 30, 2010	<u>\$25,225</u>

POBLANO CO.
Balance Sheet
September 30, 2010

Assets		
Cash		\$ 8,700
Accounts receivable		11,200
Supplies		900
Prepaid rent		1,300
Equipment	\$18,000	
Less: Accum. depreciation—equipment.....	<u>500</u>	17,500
Total assets.....		<u>\$39,600</u>

Liabilities and Owner's Equity

Liabilities		
Notes payable.....		\$10,000
Accounts payable		2,500
Salaries payable		725
Unearned rent.....		1,050
Interest payable		100
Total liabilities		<u>\$14,375</u>
Owner's equity		
Rikki Poblano, Capital		<u>25,225</u>
Total liabilities and owner's equity		<u>\$39,600</u>

- (c) Interest of 12% per year equals a monthly rate of 1%; monthly interest is \$100 (\$10,000 X 1%). Since total interest expense is \$100, the note has been outstanding one month.

PROBLEM 3-4B

1.	Dec. 31	Insurance Expense 4,650 Prepaid Insurance 4,650 $[(\$7,200 \div 3) = \$2,400]$ $(\$4,500 \div 2) = \underline{2,250}$ <u>\$4,650</u>	
2.	Dec. 31	Unearned Subscriptions 6,375 Subscription Revenue 6,375 $[\text{Oct. } 200 \times \$45 \times 3/12 = \$2,250]$ $\text{Nov. } 300 \times \$45 \times 2/12 = \underline{2,250}$ $\text{Dec. } 500 \times \$45 \times 1/12 = \underline{1,875}$ <u>\$6,375</u>	
3.	Dec. 31	Interest Expense 1,500 Interest Payable 1,500 $(\$100,000 \times 9\% \times 2/12)$	
4.	Dec. 31	Salaries Expense 2,000 Salaries Payable 2,000 $[5 \times \$700 \times 2/5 = \$1,400]$ $3 \times \$500 \times 2/5 = \underline{600}$ <u>\$2,000</u>	

PROBLEM 3-5B

(a), (c) & (e)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			2,400
8		J1		1,700	700
10		J1	3,420		4,120
12		J1	3,100		7,220
20		J1		2,700	4,520
22		J1		400	4,120
25		J1		1,700	2,420
29		J1	600		3,020

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			4,250
10		J1		3,420	830
27		J1	900		1,730

Supplies					No. 126
Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			1,800
17		J1	700		2,500
30	Adjusting	J1		1,300	1,200

Store Equipment					No. 153
Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			12,000
15		J1	2,000		14,000

PROBLEM 3-5B (Continued)**Accumulated Depreciation—Store Equipment** **No. 154**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			2,000
30	Adjusting	J1		200	2,200

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			2,600
15		J1		2,000	4,600
17		J1		700	5,300
20		J1	2,700		2,600

Unearned Service Revenue **No. 209**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			1,200
29		J1		600	1,800
30	Adjusting	J1	1,250		550

Salaries Payable **No. 212**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			700
8		J1	700		0
30	Adjusting	J1		400	400

V. Morelli, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			13,950

PROBLEM 3-5B (Continued)**Service Revenue** **No. 407**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 12		J1		3,100	3,100
27		J1		900	4,000
30	Adjusting	J1		1,250	5,250

Depreciation Expense **No. 615**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 30	Adjusting	J1	200		200

Supplies Expense **No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 30	Adjusting	J1	1,300		1,300

Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 8		J1	1,000		1,000
25		J1	1,700		2,700
30	Adjusting	J1	400		3,100

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 22		J1	400		400

PROBLEM 3-5B (Continued)
(b)
General Journal
J1

Date	Account Titles and Explanation	Ref.	Debit	Credit
Nov. 8	Salaries Payable.....	212	700	
	Salaries Expense	726	1,000	
	Cash.....	101		1,700
10	Cash	101	3,420	
	Accounts Receivable	112		3,420
12	Cash	101	3,100	
	Service Revenue	407		3,100
15	Store Equipment	153	2,000	
	Accounts Payable	201		2,000
17	Supplies	126	700	
	Accounts Payable	201		700
20	Accounts Payable.....	201	2,700	
	Cash	101		2,700
22	Rent Expense	729	400	
	Cash	101		400
25	Salaries Expense	726	1,700	
	Cash	101		1,700
27	Accounts Receivable.....	112	900	
	Service Revenue	407		900
29	Cash	101	600	
	Unearned Service Revenue	209		600

PROBLEM 3-5B (Continued)
(d) & (f)

MORELLI EQUIPMENT REPAIR
Trial Balances
November 30, 2010

	Before Adjustment		After Adjustment	
	Dr.	Cr.	Dr.	Cr.
Cash	\$ 3,020		\$ 3,020	
Accounts Receivable.....	1,730		1,730	
Supplies	2,500		1,200	
Store Equipment	14,000		14,000	
Accumulated Depreciation		\$ 2,000		\$ 2,200
Accounts Payable.....		2,600		2,600
Unearned Service Revenue.....		1,800		550
Salaries Payable.....		—0—		400
V. Morelli, Capital.....		13,950		13,950
Service Revenue		4,000		5,250
Depreciation Expense			200	
Supplies Expense			1,300	
Salaries Expense	2,700		3,100	
Rent Expense	400		400	
	<u>\$24,350</u>	<u>\$24,350</u>	<u>\$24,950</u>	<u>\$24,950</u>

(e) 1.	Nov. 30	Supplies Expense	631	1,300	
		Supplies (\$2,500 – \$1,200).....	126		1,300
2.	30	Salaries Expense	726	400	
		Salaries Payable	212		400
3.	30	Depreciation Expense.....	615	200	
		Accumulated Depreciation— Store Equipment	154		200
4.	30	Unearned Service Revenue.....	209	1,250	
		Service Revenue.....	407		1,250

PROBLEM 3-5B (Continued)**(g)**

MORELLI EQUIPMENT REPAIR
Income Statement
For the Month Ended November 30, 2010

Revenues		
Service revenue		\$5,250
Expenses		
Salaries expense.....	\$3,100	
Supplies expense	1,300	
Rent expense	400	
Depreciation expense	200	
Total expenses		<u>5,000</u>
Net Income		<u>\$ 250</u>

MORELLI EQUIPMENT REPAIR
Owner's Equity Statement
For the Month Ended November 30, 2010

V. Morelli, Capital, November 1	\$13,950
Plus: Net income	<u>250</u>
V. Morelli, Capital, November 30	<u>\$14,200</u>

**MORELLI EQUIPMENT REPAIR
Balance Sheet
November 30, 2010**

Assets		
Cash		\$ 3,020
Accounts receivable		1,730
Supplies		1,200
Equipment	\$14,000	
Less: Accumulated depreciation— equipment	<u>2,200</u>	<u>11,800</u>
Total assets.....		<u>\$17,750</u>
 Liabilities and Owner's Equity		
Liabilities		
Accounts payable		\$ 2,600
Unearned service revenue		550
Salaries payable		<u>400</u>
Total liabilities		3,550
Owner's equity		
V. Morelli, Capital		<u>14,200</u>
Total liabilities and owner's equity		<u>\$17,750</u>

- (a) Items that may result in adjusting entries for prepayments are:
1. Prepaid expenses and other current assets (per balance sheet).
 2. Property, plant and equipment, net of depreciation (per balance sheet).
 3. Amortizable intangible assets, net (per balance sheet)—amortization is similar to depreciation (explained later in Chapter 10).
- (b) Accrual adjusting entries were probably made for accounts payable and other current liabilities, interest expense, and income taxes payable.
- (c) As indicated in the 5-Year Summary, the trend in net income has been positive. In every year since 2003 (except 2005), net income has increased. In 2003 net income was \$3,568 million and in 2007 it was \$5,658 million.

	<u>PepsiCo</u>	<u>Coca-Cola</u>
(a) Net increase (decrease) in property, plant, and equipment (net) from 2006 to 2007.	\$1,541,000,000	\$1,590,000,000
(b) Increase (decrease) in selling, general, and administrative expenses from 2006 to 2007.	\$1,497,000,000	\$1,514,000,000
(c) Increase (decrease) in long-term debt (obligations) from 2006 to 2007.	\$1,653,000,000	\$1,963,000,000
(d) Increase (decrease) in net income from 2006 to 2007.	\$ 16,000,000	\$ 901,000,000
(e) Increase (decrease) in cash and cash equivalents from 2006 to 2007.	(\$ 741,000,000)	\$1,653,000,000

(a) The categories are:

1. The Big 4	10. Edgar
2. Professional	11. FASB
3. Associations	12. International
4. Education	13. Publishers
5. Finance	14. Journals and Publications
6. Professors	15. Softwares
7. Taxation	16. Other sites
8. Audit and Law	17. Entertainment
9. Government	18. Interest books

(b) Student answers will vary depending on the category selected.

(a)

HAPPY CAMPER PARK
Income Statement
For the Quarter Ended March 31, 2010

Revenues		
Rental revenue (\$90,000 – \$15,000).....		\$75,000
Expenses		
Wages expense [\$29,800 + (\$300 X 2)].....	\$30,400	
Advertising expense (\$5,200 + \$110).....	5,310	
Supplies expense (\$6,200 – \$1,700).....	4,500	
Repairs expense (\$4,000 + \$260).....	4,260	
Insurance expense (\$7,200 X 3/12).....	1,800	
Utilities expense (\$900 + \$180).....	1,080	
Depreciation expense.....	800	
Interest expense (\$12,000 X 10% X 3/12).....	300	
Total expenses.....		<u>48,450</u>
Net income		<u>\$26,550</u>

- (b) The generally accepted accounting principles pertaining to the income statement that were not recognized by Amaya were the revenue recognition principle and the matching principle. The revenue recognition principle states that revenue is recognized when it is earned. The fees of \$15,000 for summer rentals have not been earned and, therefore, should not be reported in income for the quarter ended March 31. The matching principle dictates that efforts (expenses) be matched with accomplishments (revenues) whenever it is reasonable and practicable to do so. This means that the expenses should include amounts incurred in March but not paid until April. The difference in expenses was \$7,750 (\$48,450 – \$40,700). The overstatement of revenues (\$15,000) plus the understatement of expenses (\$7,750) equals the difference in reported income of \$22,750 (\$49,300 – \$26,550).

Dear President Nickels:

Upon reviewing the accounts of your company at the end of the year, I discovered that adjusting entries were not made.

Adjusting entries are made at the end of the accounting period to ensure that the revenue recognition and matching principles required under generally accepted accounting principles are followed. The use of adjusting entries makes it possible to report on the balance sheet the appropriate assets, liabilities, and owner's equity at the statement date and to report on the income statement the proper net income (or loss) for the year.

Adjusting entries are needed because the trial balance may not contain an up-to-date and complete record of transactions and events for the following reasons:

- 1. Some events are not journalized daily because it is not efficient to do so. Examples are the use of supplies and the earning of wages by employees.**
- 2. The expiration of some costs is not journalized during the accounting period because these costs expire with the passage of time rather than as a result of recurring daily transactions. Examples of such costs are building and equipment depreciation, rent, and insurance.**
- 3. Some expenses, such as the cost of utility service and property taxes, may be unrecorded because the bills for the costs have not been received.**

There are four types of adjusting entries:

- 1. Prepaid expenses—expenses paid in cash and recorded as assets before they are used or consumed.**
- 2. Unearned revenues—revenues received in cash and recorded as liabilities before they are earned.**

BYP 3-5 (Continued)

- 3. Accrued revenues—revenues earned but not yet received in cash or recorded.**
- 4. Accrued expenses—expenses incurred but not yet paid in cash or recorded.**

I will be happy to answer any questions you may have on adjusting entries.

Signature

- (a) The stakeholders in this situation are:
- ▶ Cathi Bell, controller.
 - ▶ The president of Bluestem Company.
 - ▶ Bluestem Company stockholders.
- (b) 1. It is unethical for the president to place pressure on Cathi to misstate net income by requesting her to prepare incorrect adjusting entries.
2. It is customary for adjusting entries to be dated as of the balance sheet date although the entries are prepared at a later date. Cathi did nothing unethical by dating the adjusting entries December 31.
- (c) Cathi can accrue revenues and defer expenses through the preparation of adjusting entries and be ethical so long as the entries reflect economic reality. Intentionally misrepresenting the company's financial condition and its results of operations is unethical (it is also illegal).

We address the issue of contingent liabilities with greater precision in Chapter 11. Our primary interest in this exercise is to engage students in a discussion regarding the general nature of the financial statement elements (assets, liabilities, equity, revenues and expenses).

- (a) By taking out the bank loan your friend has incurred a liability. You do not have a liability unless your friend defaults, or unless it becomes clear that he will default. The loan application may, however, require you to disclose any guarantees that you have signed, since they represent potential liabilities.
- (b) Accounting standards have specific requirements regarding accounting for situations where there is uncertainty regarding whether a liability has been incurred. Those standards require an evaluation of the probability of an amount being owed. Without going into detail regarding those standards, the basic idea is that if it is probable that you will owe money, then you should accrue a liability. If it is not probable, but it is possible that you will owe money, then you should disclose facts regarding the situation. The most important point is that this event has the potential to materially impact your finances, and therefore you have a responsibility to disclose it to the bank in some form.
- (c) Losing your job would not create a financial liability, although it would most certainly reduce your revenues. You are obviously concerned that you might lose your job, but you don't have specific information that would suggest that it will happen. Therefore, you probably don't have an obligation to disclose this information to the bank. However, unless you are relatively certain that you would be able to find suitable employment relatively quickly, you might want to wait until your job situation has stabilized before pursuing a loan of this size.

CHAPTER 4

Completing the Accounting Cycle

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Prepare a worksheet.	1, 2, 3, 4, 5	1, 2, 3	1	1, 2, 3, 5, 6, 17	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
2. Explain the process of closing the books.	6, 7, 11, 12	4, 5, 6	5	4, 7, 8, 11, 19	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
3. Describe the content and purpose of a post-closing trial balance.	8, 9	7	1, 6	4, 7, 8	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
4. State the required steps in the accounting cycle.	10, 11, 12	8	2, 3	10, 19	5A	5B
5. Explain the approaches to preparing correcting entries.	13	9		12, 13	6A	
6. Identify the sections of a classified balance sheet.	14, 15, 16, 17, 18, 19	10, 11		3, 9, 14, 15, 16, 17	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
*7. Prepare reversing entries.	10, 20, 21	12		18, 19		

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare worksheet, financial statements, and adjusting and closing entries.	Simple	40–50
2A	Complete worksheet; prepare financial statements, closing entries, and post-closing trial balance.	Moderate	50–60
3A	Prepare financial statements, closing entries, and post-closing trial balance.	Moderate	40–50
4A	Complete worksheet; prepare classified balance sheet, entries, and post-closing trial balance.	Moderate	50–60
5A	Complete all steps in accounting cycle.	Complex	70–90
6A	Analyze errors and prepare correcting entries and trial balance.	Moderate	40–50
1B	Prepare worksheet, financial statements, and adjusting and closing entries.	Simple	40–50
2B	Complete worksheet; prepare financial statements, closing entries, and post-closing trial balance.	Moderate	50–60
3B	Prepare financial statements, closing entries, and post-closing trial balance.	Moderate	40–50
4B	Complete worksheet; prepare classified balance sheet, entries, and post-closing trial balance.	Moderate	50–60
5B	Complete all steps in accounting cycle.	Complex	70–90
Comprehensive Problem: Chapters 2 to 4			

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 4
COMPLETING THE ACCOUNTING CYCLE

Number	SO	BT	Difficulty	Time (min.)
BE1	1	K	Simple	2–4
BE2	1	AN	Moderate	6–8
BE3	1	C	Simple	3–5
BE4	2	AP	Simple	3–5
BE5	2	AP	Simple	4–6
BE6	2	AP	Simple	6–8
BE7	3	C	Simple	2–4
BE8	4	K	Simple	3–5
BE9	5	AN	Moderate	4–6
BE10	6	AP	Simple	4–6
BE11	6	C	Simple	3–5
BE12	7	AN	Moderate	4–6
DI1	1	C	Simple	4–6
DI2	5	AP	Simple	2–4
DI3	6	AP	Simple	6–8
DI4	6	C	Simple	4–6
EX1	1	AP	Simple	12–15
EX2	1	AP	Simple	10–12
EX3	1, 6	AP	Simple	12–15
EX4	2, 3	AP	Simple	12–15
EX5	1	AN	Simple	10–12
EX6	1	AN	Moderate	12–15
EX7	2, 3	AP	Simple	8–10
EX8	2, 3	AP	Simple	10–12
EX9	6	AP	Simple	12–15
EX10	4	C	Simple	3–5
EX11	2	AP	Simple	6–8
EX12	5	AN	Moderate	8–10
EX13	5	AN	Moderate	4–6
EX14	6	AP	Moderate	10–12
EX15	6	C	Simple	5–8
EX16	6	AP	Simple	8–10

COMPLETING THE ACCOUNTING CYCLE (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX17	1, 6	AP	Simple	12–15
EX18	7	AN	Moderate	5–7
EX19	2, 4, 7	AN	Moderate	10–12
P1A	1-3, 6	AN	Simple	40–50
P2A	1-3, 6	AP	Moderate	50–60
P3A	1-3, 6	AP	Moderate	40–50
P4A	1-3, 6	AN	Moderate	50–60
P5A	1-4, 6	AN	Complex	70–90
P6A	5	AN	Moderate	40–50
P1B	1-3, 6	AN	Simple	40–50
P2B	1-3, 6	AP	Moderate	50–60
P3B	1-3, 6	AP	Moderate	40–50
P4B	1-3, 6	AN	Moderate	50–60
P5B	1-4, 6	AN	Complex	70–90
BYP1	6	AN	Simple	10–12
BYP2	6	AN	Simple	8–10
BYP3	—	E	Simple	10–12
BYP4	6	AN	Moderate	15–20
BYP5	4	C	Simple	15–20
BYP6	—	E	Moderate	10–15
BYP7	6	AP	Moderate	12–16

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Prepare a worksheet.	BE4-1	Q4-1 Q4-2 Q4-3 Q4-4 Q4-5	E4-1 E4-2 E4-3 E4-17 P4-2A	BE4-2 E4-5 E4-6 P4-1A P4-4A	P4-5A P4-1B P4-4B P4-5B	
2. Explain the process of closing the books.	Q4-6 Q4-11 Q4-12	Q4-7	BE4-4 BE4-5 BE4-6 E4-4 E4-7 E4-8	E4-11 P4-2A P4-3A P4-2B P4-3B P4-3B	P4-5B P4-1A P4-4A P4-5A P4-1B P4-4B	
3. Describe the content and purpose of a post-closing trial balance.		Q4-8 Q4-9 BE4-7	E4-4 E4-7 E4-8 P4-2A	P4-3A P4-2B P4-3B	P4-4B P4-5B	
4. State the required steps in the accounting cycle.	Q4-11 Q4-12 BE4-8	Q4-10 E4-10		E4-19 P4-5A P4-5B		
5. Explain the approaches to preparing correcting entries.		Q4-13	DI4-2	BE4-9 E4-12 E4-13 P4-6A		
6. Identify the sections of a classified balance sheet.	Q4-14 Q4-15 Q4-16	Q4-17 Q4-18 BE4-11 DI4-4 E4-15	Q4-19 BE4-10 DI4-3 E4-3 E4-9 E4-14	E4-16 E4-17 P4-2A P4-3A P4-2B P4-3B	P4-1A P4-4A P4-5A P4-1B P4-4B P4-5B	
*7. Prepare reversing entries.		Q4-10 Q4-20		Q4-21 BE4-12	E4-18 E4-19	
Broadening Your Perspective		Communication	All About You	Financial Reporting Comparative Analysis Decision Making Across the Organization		Exploring the Web Ethics Case

ANSWERS TO QUESTIONS

1. No. A worksheet is not a permanent accounting record. The use of a worksheet is an optional step in the accounting cycle.
2. The worksheet is merely a device used to make it easier to prepare adjusting entries and the financial statements.
3. The amount shown in the adjusted trial balance column for an account equals the account balance in the ledger after adjusting entries have been journalized and posted.
4. The net income of \$12,000 will appear in the income statement debit column and the balance sheet credit column. A net loss will appear in the income statement credit column and the balance sheet debit column.
5. Formal financial statements are needed because the columnar data are not properly arranged and classified for statement purposes. For example, a drawing account is listed with assets.
6.
 - (1) (Dr) Individual revenue accounts and (Cr) Income Summary.
 - (2) (Dr) Income Summary and (Cr) Individual expense accounts.
 - (3) (Dr) Income Summary and (Cr) Owner's Capital (for net income).
 - (4) (Dr) Owner's Capital and (Cr) Owner's Drawing.
7. Income Summary is a temporary account that is used in the closing process. The account is debited for expenses and credited for revenues. The difference, either net income or loss, is then closed to the owner's capital account.
8. The post-closing trial balance contains only balance sheet accounts. Its purpose is to prove the equality of the permanent account balances that are carried forward into the next accounting period.
9. The accounts that will not appear in the post-closing trial balance are Depreciation Expense; Jennifer Shaeffer, Drawing; and Service Revenue.
10. A reversing entry is the exact opposite, both in amount and in account titles, of an adjusting entry and is made at the beginning of the new accounting period. Reversing entries are an optional step in the accounting cycle.
11. The steps that involve journalizing are: (1) journalize the transactions, (2) journalize the adjusting entries, and (3) journalize the closing entries.
12. The three trial balances are the: (1) trial balance, (2) adjusted trial balance, and (3) post-closing trial balance.
13. Correcting entries differ from adjusting entries because they: (1) are not a required part of the accounting cycle, (2) may be made at any time, and (3) may affect any combination of accounts.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 4-1

The steps in using a worksheet are performed in the following sequence: (1) prepare a trial balance on the worksheet, (2) enter adjustment data, (3) enter adjusted balances, (4) extend adjusted balances to appropriate statement columns and (5) total the statement columns, compute net income (loss), and complete the worksheet. Filling in the blanks, the answers are 1, 3, 4, 5, 2.

The solution to BRIEF EXERCISE 4-2 is on page 4-9.

BRIEF EXERCISE 4-3

Account	Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.
Accumulated Depreciation				X
Depreciation Expense	X			
N. Batan, Capital				X
N. Batan, Drawing			X	
Service Revenue		X		
Supplies			X	
Accounts Payable				X

BRIEF EXERCISE 4-4

Dec. 31	Service Revenue	50,000	
	Income Summary		50,000
31	Income Summary	31,000	
	Salaries Expense		27,000
	Supplies Expense		4,000
31	Income Summary	19,000	
	D. Swann, Capital		19,000
31	D. Swann, Capital	2,000	
	D. Swann, Drawing		2,000

BRIEF EXERCISE 4-2

LEY COMPANY Worksheet

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Prepaid Insurance	3,000			(a) 1,200	1,800				1,800	
Service Revenue		58,000		(b) 1,100		59,100	59,100			
Salaries Expense	25,000		(c) 800		25,800		25,800			
Accounts Receivable			(b) 1,100		1,100				1,100	
Salaries Payable				(c) 800		800				800
Insurance Expense			(a) 1,200		1,200		1,200			

BRIEF EXERCISE 4-5

Salaries Expense		Income Summary		Service Revenue	
Bal. 27,000	(2) 27,000	(2) 31,000	(1) 50,000	(1) 50,000	Bal. 50,000
		(3) 19,000			
		50,000	50,000		

Supplies Expense		D. Swann, Capital		D. Swann, Drawing	
Bal. 4,000	(2) 4,000	(4) 2,000	Bal. 30,000	Bal. 2,000	(4) 2,000
			(3) 19,000		
			Bal. 47,000		

BRIEF EXERCISE 4-6

July 31	Green Fee Revenue.....	13,600	
	Income Summary		13,600
31	Income Summary	10,700	
	Salaries Expense		8,200
	Maintenance Expense		2,500

Green Fee Revenue

Date	Explanation	Ref.	Debit	Credit	Balance
7/31	Balance			13,600	13,600
7/31	Closing entry		13,600		<u>0</u>

Salaries Expense

Date	Explanation	Ref.	Debit	Credit	Balance
7/31	Balance		8,200		8,200
7/31	Closing entry			8,200	<u>0</u>

BRIEF EXERCISE 4-6 (Continued)

Maintenance Expense					
Date	Explanation	Ref.	Debit	Credit	Balance
7/31	Balance		2,500		2,500
7/31	Closing entry			2,500	<u>0</u>

BRIEF EXERCISE 4-7

The accounts that will appear in the post-closing trial balance are:

Accumulated Depreciation
N. Batan, Capital
Supplies
Accounts Payable

BRIEF EXERCISE 4-8

The proper sequencing of the required steps in the accounting cycle is as follows:

1. Analyze business transactions.
2. Journalize the transactions.
3. Post to ledger accounts.
4. Prepare a trial balance.
5. Journalize and post adjusting entries.
6. Prepare an adjusted trial balance.
7. Prepare financial statements.
8. Journalize and post closing entries.
9. Prepare a post-closing trial balance.

Filling in the blanks, the answers are 4, 2, 8, 7, 5, 3, 9, 6, 1.

BRIEF EXERCISE 4-9

1.	Service Revenue	780	
	Accounts Receivable.....		780
2.	Accounts Payable (\$1,750 – \$1,570).....	180	
	Store Supplies		180

BRIEF EXERCISE 4-10

DIAZ COMPANY Partial Balance Sheet

Current assets

Cash	\$15,400
Short-term investments.....	6,700
Accounts receivable	12,500
Supplies	5,200
Prepaid insurance	3,600
Total current assets	<u>\$43,400</u>

BRIEF EXERCISE 4-11

<u>CL</u> Accounts payable	<u>CL</u> Income tax payable
<u>CA</u> Accounts receivable	<u>LT</u> Investment in long-term bonds
<u>PPE</u> Accumulated depreciation	<u>PPE</u> Land
<u>PPE</u> Building	<u>CA</u> Merchandise inventory
<u>CA</u> Cash	<u>IA</u> Patent
<u>IA</u> Copyrights	<u>CA</u> Supplies

*BRIEF EXERCISE 4-12

Nov. 1	Salaries Payable.....	1,400	
	Salaries Expense		1,400

The balances after posting the reversing entry are Salaries Expense (Cr.) \$1,400 and Salaries Payable \$0.

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 4-1

Income statement debit column—Utilities Expense

Income statement credit column—Service Revenue

Balance sheet debit column—Accounts Receivable

Balance sheet credit column—Notes Payable; Accumulated Depreciation;
V. Klitschko, Capital

DO IT! 4-2

Dec. 31	Income Summary	29,000	
	J. Q. Adams, Capital		29,000
Dec. 31	J. Q. Adams, Capital.....	22,000	
	J. Q. Adams, Drawing.....		22,000

DO IT! 4-3

VASQUEZ COMPANY Partial Balance Sheet

Current assets			
Cash	\$13,400		
Short-term investments	120		
Accounts receivable	4,300		
Inventories	<u>2,900</u>		
Total current assets			\$20,720
Long-term investments			
Investments in stock			6,500
Property, plant and equipment			
Equipment.....	21,700		
Less: Accumulated depreciation	<u>5,700</u>		<u>16,000</u>
Total assets			<u>\$43,220</u>

DO IT! 4-4

<u>NA</u>	Interest revenue	<u>OE</u>	J. Crofoot, Capital
<u>CL</u>	Utilities payable	<u>PPE</u>	Accumulated depreciation
<u>CL</u>	Accounts payable	<u>PPE</u>	Machinery
<u>CA</u>	Supplies	<u>NA</u>	Salaries expense
<u>LTL</u>	Bonds Payable	<u>LTI</u>	Investment in real estate
<u>IA</u>	Trademarks	<u>CL</u>	Unearned rent

SOLUTIONS TO EXERCISES

EXERCISE 4-1

BRISCOE COMPANY Worksheet For the Month Ended June 30, 2010

Account Titles	Trial Balance		Adjustments		Adj. Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	2,320				2,320				2,320	
Accounts										
Receivable	2,440				2,440				2,440	
Supplies	1,880		(a) 1,580		300				300	
Accounts Payable		1,120				1,120				1,120
Unearned Revenue		240	(b) 140			100				100
Lenny Briscoe,										
Capital		3,600				3,600				3,600
Service Revenue		2,400		(b) 140		2,540		2,540		
Salaries Expense	560		(c) 280		840		840			
Miscellaneous										
Expense	<u>160</u>				160		160			
Totals	<u>7,360</u>	<u>7,360</u>								
Supplies Expense			(a) 1,580		1,580		1,580			
Salaries Payable				(c) 280		280				280
Totals			<u>2,000</u>	<u>2,000</u>	<u>7,640</u>	<u>7,640</u>	2,580	2,540	5,060	5,100
Net Loss								40	40	
Totals							<u>2,580</u>	<u>2,580</u>	<u>5,100</u>	<u>5,100</u>

EXERCISE 4-2

GOODE COMPANY
(Partial) Worksheet
For the Month Ended April 30, 2010

Account Titles	Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	13,752				13,752	
Accounts Receivable	7,840				7,840	
Prepaid Rent	2,280				2,280	
Equipment	23,050				23,050	
Accum. Depreciation		4,921				4,921
Notes Payable		5,700				5,700
Accounts Payable		5,672				5,672
T. Goode, Capital		30,960				30,960
T. Goode, Drawing	3,650				3,650	
Service Revenue		15,590		15,590		
Salaries Expense	10,840		10,840			
Rent Expense	760		760			
Depreciation Expense	671		671			
Interest Expense	57		57			
Interest Payable		57				57
Totals	<u>62,900</u>	<u>62,900</u>	<u>12,328</u>	<u>15,590</u>	<u>50,572</u>	<u>47,310</u>
Net Income			<u>3,262</u>			<u>3,262</u>
Totals			<u>15,590</u>	<u>15,590</u>	<u>50,572</u>	<u>50,572</u>

EXERCISE 4-3

GOODE COMPANY
Income Statement
For the Month Ended April 30, 2010

Revenues		
Service revenue.....		\$15,590
Expenses		
Salaries expense.....	\$10,840	
Rent expense	760	
Depreciation expense.....	671	
Interest expense.....	57	
Total expenses.....		<u>12,328</u>
Net income		<u>\$ 3,262</u>

GOODE COMPANY
Owner's Equity Statement
For the Month Ended April 30, 2010

T. Goode, Capital, April 1	\$30,960
Add: Net income	<u>3,262</u>
	34,222
Less: Drawings.....	<u>3,650</u>
T. Goode, Capital, April 30.....	<u>\$30,572</u>

GOODE COMPANY
Balance Sheet
April 30, 2010

Assets		
Current assets		
Cash	\$13,752	
Accounts receivable	7,840	
Prepaid rent	<u>2,280</u>	
Total current assets		\$23,872
Property, plant, and equipment		
Equipment.....	23,050	
Less: Accumulated depreciation.....	<u>4,921</u>	<u>18,129</u>
Total assets.....		<u>\$42,001</u>

EXERCISE 4-3 (Continued)

GOODE COMPANY
Balance Sheet (Continued)
April 30, 2010

Liabilities and Owner's Equity			
Current liabilities			
Notes payable	\$5,700		
Accounts payable	5,672		
Interest payable	<u>57</u>		
Total current liabilities		\$11,429	
Owner's equity			
T. Goode, Capital		<u>30,572</u>	
Total liabilities and owner's equity		<u>\$42,001</u>	

EXERCISE 4-4

(a)	Apr. 30	Service Revenue	15,590	
		Income Summary		15,590
30		Income Summary	12,328	
		Salaries Expense		10,840
		Rent Expense		760
		Depreciation Expense		671
		Interest Expense		57
30		Income Summary	3,262	
		T. Goode, Capital		3,262
30		T. Goode, Capital	3,650	
		T. Goode, Drawing		3,650

(b)

Income Summary				T. Goode, Capital			
(2)	12,328	(1)	15,590	(4)	3,650	Bal.	30,960
(3)	3,262					(3)	3,262
	<u>15,590</u>		<u>15,590</u>			Bal.	<u>30,572</u>

EXERCISE 4-4 (Continued)**(c)**

GOODE COMPANY
Post-Closing Trial Balance
April 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$13,752	
Accounts Receivable	7,840	
Prepaid Rent	2,280	
Equipment	23,050	
Accumulated Depreciation		\$ 4,921
Notes Payable		5,700
Accounts Payable		5,672
Interest Payable		57
T. Goode, Capital		30,572
	<u>\$46,922</u>	<u>\$46,922</u>

EXERCISE 4-5

(a)	Accounts Receivable	600	
	Service Revenue		600
	Insurance Expense	400	
	Prepaid Insurance		400
	Depreciation Expense	900	
	Accumulated Depreciation		900
	Salaries Expense	500	
	Salaries Payable		500

EXERCISE 4-5 (Continued)

(b)	Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.
Accounts Receivable			X	
Prepaid Insurance			X	
Accum. Depreciation				X
Salaries Payable				X
Service Revenue		X		
Salaries Expense	X			
Insurance Expense	X			
Depreciation Expense	X			

EXERCISE 4-6

- (a) Accounts Receivable—\$25,000 (\$34,000 – \$9,000).
 Supplies—\$2,000 (\$7,000 – \$5,000).
 Accumulated Depreciation—\$22,000 (\$12,000 + \$10,000).
 Salaries Payable—\$0 No liability recorded until adjustments are made.
 Insurance Expense—\$6,000 (\$26,000 – \$20,000).
 Salaries Expense—\$44,000 (\$49,000 – \$5,000).

(b)	Accounts Receivable.....	9,000	
	Service Revenue		9,000
	Insurance Expense.....	6,000	
	Prepaid Insurance		6,000
	Supplies Expense.....	5,000	
	Supplies		5,000
	Depreciation Expense	10,000	
	Accumulated Depreciation		10,000
	Salaries Expense	5,000	
	Salaries Payable.....		5,000

EXERCISE 4-7

(a)	Service Revenue	4,064	
	Income Summary		4,064
	Income Summary	3,828	
	Salaries Expense		1,344
	Miscellaneous Expense		256
	Supplies Expense		2,228
	Income Summary	236	
	Emil Skoda, Capital		236
	Emil Skoda, Capital	300	
	Emil Skoda, Drawing		300

(b) **EMIL SKODA COMPANY**
Post-Closing Trial Balance
For the Month Ended June 30, 2010

<u>Account Titles</u>	<u>Debit</u>	<u>Credit</u>
Cash	\$3,712	
Accounts Receivable	3,904	
Supplies	480	
Accounts Payable		\$1,792
Salaries Payable		448
Unearned Revenue		160
Emil Skoda, Capital		5,696
	<u>\$8,096</u>	<u>\$8,096</u>

EXERCISE 4-8

(a)

General Journal				J15
Date	Account Titles	Ref.	Debit	Credit
July 31	Commission Revenue.....	404	65,000	
	Rent Revenue	429	6,500	
	Income Summary	350		71,500
31	Income Summary.....	350	74,600	
	Salaries Expense	720		55,700
	Utilities Expense	732		14,900
	Depreciation Expense	711		4,000
31	B. J. Apachi, Capital	301	3,100	
	Income Summary.....	350		3,100
31	B. J. Apachi, Capital	301	16,000	
	B. J. Apachi, Drawing.....	306		16,000

(b)

B. J. Apachi, Capital					No. 301
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Balance				45,200
31	Close net loss	J15	3,100		42,100
31	Close drawing	J15	16,000		26,100

Income Summary					No. 350
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Close revenue	J15		71,500	71,500
31	Close expenses	J15	74,600		(3,100)
31	Close net loss	J15		3,100	0

EXERCISE 4-8 (Continued)**(c)**

APACHI COMPANY
Post-Closing Trial Balance
July 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$14,840	
Accounts Receivable	8,780	
Equipment	15,900	
Accumulated Depreciation		\$ 7,400
Accounts Payable		4,220
Unearned Rent Revenue		1,800
B. J. Apachi, Capital		26,100
	<u>\$39,520</u>	<u>\$39,520</u>

EXERCISE 4-9**(a)**

APACHI COMPANY
Income Statement
For the Year Ended July 31, 2010

Revenues		
Commission revenue	\$65,000	
Rent revenue	<u>6,500</u>	
Total revenues		\$71,500
Expenses		
Salaries expense	55,700	
Utilities expense	14,900	
Depreciation expense	<u>4,000</u>	
Total expenses		<u>74,600</u>
Net loss		(<u>\$ 3,100</u>)

EXERCISE 4-9 (Continued)

APACHI COMPANY
Owner's Equity Statement
For the Year Ended July 31, 2010

B. J. Apachi, Capital, August 1, 2009.....		\$45,200
Less: Net loss	\$ 3,100	
Drawings	<u>16,000</u>	<u>19,100</u>
B. J. Apachi, Capital, July 31, 2010.....		<u>\$26,100</u>

(b)

APACHI COMPANY
Balance Sheet
July 31, 2010

Assets		
Current assets		
Cash	\$14,840	
Accounts receivable	<u>8,780</u>	
Total current assets		\$23,620
Property, plant, and equipment		
Equipment	15,900	
Less: Accumulated depreciation	<u>7,400</u>	<u>8,500</u>
Total assets		<u>\$32,120</u>
Liabilities and Owner's Equity		
Current liabilities		
Accounts payable	\$4,220	
Unearned rent revenue	<u>1,800</u>	
Total current liabilities		\$ 6,020
Owner's equity		
B. J. Apachi, Capital		<u>26,100</u>
Total liabilities and owner's equity		<u>\$32,120</u>

EXERCISE 4-10

1. False “*Analyze business transactions*” is the first step in the accounting cycle.
2. False. Reversing entries are an *optional* step in the accounting cycle.
3. True.
4. True.
5. True.
6. False. Steps 1–3 may occur daily in the accounting cycle. Steps 4–7 are performed on a periodic basis. Steps 8 and 9 are usually prepared only at the end of a company’s annual accounting period.
7. False. The step of “*journalize the transactions*” occurs before the step of “*post to the ledger accounts.*”
8. False. Closing entries are prepared *after* financial statements are prepared.

EXERCISE 4-11

(a)	June 30	Service Revenue.....	15,100	
		Income Summary		15,100
	30	Income Summary	13,100	
		Salaries Expense.....		8,800
		Supplies Expense		1,300
		Rent Expense		3,000
	30	Income Summary	2,000	
		Nina Cole, Capital.....		2,000
	30	Nina Cole, Capital	2,500	
		Nina Cole, Drawing		2,500

(b)

Income Summary			
June 30	13,100	June 30	15,100
June 30	2,000		
	15,100		15,100

EXERCISE 4-12

(a)	1.	Cash.....	600	
		Equipment.....		600
		Salaries Expense	600	
		Cash		600
	2.	Service Revenue.....	100	
		Cash		100
		Cash.....	1,000	
		Accounts Receivable.....		1,000
	3.	Accounts Payable	890	
		Equipment.....		890
(b)		Equipment	980	
		Accounts Payable.....		980
	1.	Salaries Expense.....	600	
		Equipment.....		600
	2.	Service Revenue.....	100	
		Cash.....	900	
		Accounts Receivable.....		1,000
	3.	Equipment	90	
		Accounts Payable.....		90

EXERCISE 4-13

1.	Accounts Payable (\$630 – \$360).....	270	
	Cash		270
2.	Supplies	560	
	Equipment		56
	Accounts Payable.....		504
3.	M. Mason, Drawing	400	
	Salaries Expense		400

EXERCISE 4-14

(a) **KARR BOWLING ALLEY**
Balance Sheet
December 31, 2010

Assets			
Current assets			
Cash		\$18,040	
Accounts receivable		14,520	
Prepaid insurance.....		<u>4,680</u>	
Total current assets			\$ 37,240
Property, plant, and equipment			
Land.....		64,000	
Building.....	\$128,800		
Less: Acc. depr.—building	<u>42,600</u>	86,200	
Equipment.....	62,400		
Less: Acc. depr.—equipment	<u>18,720</u>	<u>43,680</u>	<u>193,880</u>
Total assets.....			<u>\$231,120</u>

EXERCISE 4-14 (Continued)

KARR BOWLING ALLEY
Balance Sheet (Continued)
December 31, 2010

Liabilities and Owner's Equity		
Current liabilities		
Current portion of note payable	\$13,900	
Accounts payable	12,300	
Interest payable	<u>2,600</u>	
Total current liabilities		\$ 28,800
Long-term liabilities		
Note payable		<u>83,880</u>
Total liabilities		112,680
Owner's equity		
S. Karr, Capital (\$115,000 + \$3,440*)		<u>118,440</u>
Total liabilities and owner's equity		<u>\$231,120</u>

*Net income = \$14,180 – \$780 – \$7,360 – \$2,600 = \$3,440

- (b) Current assets exceed current liabilities by \$8,440 (\$37,240 – \$28,800). In addition, approximately 50% of current assets are in the form of cash. In sum, the company's liquidity appears to be reasonably good.

EXERCISE 4-15

<u>CL</u> Accounts payable	<u>CA</u> Inventories
<u>CA</u> Accounts receivable	<u>LTI</u> Investments
<u>PPE</u> Accumulated depreciation	<u>PPE</u> Land
<u>PPE</u> Buildings	<u>LTL</u> Long-term debt
<u>CA</u> Cash	<u>CA</u> Supplies
<u>OE</u> Roberts, Capital	<u>PPE</u> Office equipment
<u>IA</u> Patents	<u>CA</u> Prepaid expenses
<u>CL</u> Salaries payable	

R. STEVENS COMPANY
Balance Sheet
December 31, 2010
(in thousands)

Assets			
Current assets			
Cash	\$ 2,668		
Short-term investments	3,690		
Accounts receivable	1,696		
Inventories	1,256		
Prepaid expenses	<u>880</u>		
Total current assets			\$10,190
Long-term investments.....			264
Property, plant, and equipment			
Property, plant, and equipment	11,500		
Less: Accumulated depreciation.....	<u>(5,655)</u>		<u>5,845</u>
Total assets.....			<u>\$16,299</u>
Liabilities and Owner's Equity			
Current liabilities			
Notes payable in 2011	\$ 481		
Accounts payable	<u>1,444</u>		
Total current liabilities			\$ 1,925
Long-term liabilities			
Long-term debt	943		
Notes payable (after 2011)	<u>368</u>		
Total long-term liabilities			<u>1,311</u>
Total liabilities.....			3,236
Owner's equity			
R. Stevens, Capital			<u>13,063</u>
Total liabilities and owner's equity			<u>\$16,299</u>

EXERCISE 4-17**(a)**

B. SNYDER COMPANY
Income Statement
For the Year Ended July 31, 2010

Revenues		
Commission revenue	\$61,100	
Rent revenue	<u>8,500</u>	
Total revenues		\$69,600
Expenses		
Salaries expense.....	51,700	
Utilities expense.....	22,600	
Depreciation expense.....	<u>4,000</u>	
Total expense.....		<u>78,300</u>
Net loss		<u>\$ (8,700)</u>

B. SNYDER COMPANY
Owner's Equity Statement
For the Year Ended July 31, 2010

Owner's equity, August 1, 2009		\$51,200
Less: Net loss	\$8,700	
Drawings.....	<u>4,000</u>	<u>12,700</u>
Owner's equity, July 31, 2010.....		<u>\$38,500</u>

EXERCISE 4-17 (Continued)**(b)****B. SNYDER COMPANY
Balance Sheet
July 31, 2010**

Assets		
Current assets		
Cash	\$24,200	
Accounts receivable	<u>9,780</u>	
Total current assets		\$33,980
Property, plant, and equipment		
Equipment	18,500	
Less: Accumulated depreciation	<u>6,000</u>	<u>12,500</u>
Total assets		<u>\$46,480</u>
 Liabilities and Owner's Equity		
Current liabilities		
Accounts payable	\$4,100	
Salaries payable	<u>2,080</u>	
Total current liabilities		\$ 6,180
Long-term liabilities		
Note payable.....		<u>1,800</u>
Total liabilities.....		7,980
Owner's equity		
B. Snyder, Capital		<u>38,500</u>
Total liabilities and owner's equity		<u>\$46,480</u>

***EXERCISE 4-18**

(a)	Dec. 31	Salaries Expense (\$10,000 X 2/5)	4,000	
		Salaries Payable		4,000
	Jan. 6	Salaries Payable	4,000	
		Salaries Expense (\$10,000 X 3/5)	6,000	
		Cash.....		10,000
(b)	Dec. 31	Salaries Expense.....	4,000	
		Salaries Payable		4,000
	Jan. 1	Salaries Payable	4,000	
		Salaries Expense.....		4,000
	Jan. 6	Salaries Expense.....	10,000	
		Cash.....		10,000

***EXERCISE 4-19**

(a)	Dec. 31	Commission Revenue	92,000	
		Income Summary		92,000
	31	Income Summary	7,800	
		Interest Expense.....		7,800
(b)	Jan. 1	Commission Revenue	4,500	
		Accounts Receivable		4,500
	1	Interest Payable	1,500	
		Interest Expense.....		1,500

***EXERCISE 4-19 (Continued)**

(c) & (e)

Accounts Receivable			
Dec. 31	Balance	*19,500	
31	Adjusting	<u>4,500</u>	
		24,000	
			Jan. 1 Reversing 4,500

*($\$24,000 - \$4,500$)

Commission Revenue			
Dec. 31	Closing	92,000	Dec. 31 Balance 87,500*
		<u>92,000</u>	31 Adjusting <u>4,500</u>
			92,000
Jan. 1	Reversing	4,500	Jan. 10 4,500

*($\$92,000 - \$4,500$)

Interest Payable			
			Dec. 31 Adjusting 1,500
Jan. 1	Reversing	1,500	

Interest Expense			
Dec. 31	Balance	*6,300	Dec. 31 Closing 7,800
31	Adjusting	<u>1,500</u>	
		7,800	7,800
Jan. 15		2,500	Jan. 1 Reversing 1,500

*($\$7,800 - \$1,500$)

(d)		(1)		
Jan. 10	Cash.....		4,500	
	Commission Revenue.....			4,500
		(2)		
15	Interest Expense.....		2,500	
	Cash.....			2,500

SOLUTIONS TO PROBLEMS

PROBLEM 4-1A

(a)	THOMAS MAGNUM, P.I.									
	Worksheet									
	For the Quarter Ended March 31, 2010									
Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	11,400				11,400				11,400	
Accounts Receivable	5,620		(e) 530		6,150				6,150	
Supplies	1,050			(a) 670	380				380	
Prepaid Insurance	2,400			(d) 600	1,800				1,800	
Equipment	30,000				30,000				30,000	
Notes Payable		10,000				10,000				10,000
Accounts Payable		12,350				12,350				12,350
T. Magnum, Capital		20,000				20,000				20,000
T. Magnum, Drawing	600				600				600	
Service Revenue		13,620		(e) 530		14,150		14,150		
Salaries Expense	2,200				2,200		2,200			
Travel Expense	1,300				1,300		1,300			
Rent Expense	1,200				1,200		1,200			
Miscellaneous Expense	200				200		200			
Totals	<u>55,970</u>	<u>55,970</u>								
Supplies Expense			(a) 670		670		670			
Depreciation Expense			(b) 1,000		1,000		1,000			
Accumulated Depreciation				(b) 1,000		1,000				1,000
Interest Expense			(c) 300		300		300			
Interest Payable				(c) 300		300				300
Insurance Expense			(d) 600		600		600			
Totals			<u>3,100</u>	<u>3,100</u>	<u>57,800</u>	<u>57,800</u>		<u>14,150</u>	<u>50,330</u>	<u>43,650</u>
Net Income							7,470			6,680
Totals							<u>14,150</u>	<u>14,150</u>	<u>50,330</u>	<u>50,330</u>

Key: (a) Supplies Used; (b) Depreciation Expensed; (c) Accrued Interest on note; (d) Insurance Expired; (e) Service Revenue Earned but unbilled.

PROBLEM 4-1A (Continued)**(b)**

THOMAS MAGNUM, P.I.
Income Statement
For the Quarter Ended March 31, 2010

Revenues		
Service revenue.....		\$14,150
Expenses		
Salaries expense.....	\$2,200	
Travel expense.....	1,300	
Rent expense.....	1,200	
Depreciation expense.....	1,000	
Supplies expense	670	
Insurance expense	600	
Interest expense.....	300	
Miscellaneous expense	200	
Total expenses.....		<u>7,470</u>
Net income		<u>\$ 6,680</u>

THOMAS MAGNUM, P.I.
Owner's Equity Statement
For the Quarter Ended March 31, 2010

T. Magnum, Capital, January 1		\$ 0
Add: Investment by owner	\$20,000	
Net income	<u>6,680</u>	26,680
Less: Drawings.....		<u>600</u>
T. Magnum, Capital, March 31		<u>\$26,080</u>

PROBLEM 4-1A (Continued)

THOMAS MAGNUM, P.I.
Balance Sheet
March 31, 2010

Assets			
Current assets			
	Cash.....	\$11,400	
	Accounts receivable.....	6,150	
	Supplies.....	380	
	Prepaid insurance	<u>1,800</u>	
	Total current assets.....		\$19,730
Property, plant, and equipment			
	Equipment	30,000	
	Less: Accumulated depreciation	<u>1,000</u>	<u>29,000</u>
	Total assets		<u>\$48,730</u>
Liabilities and Owner's Equity			
Current liabilities			
	Notes payable.....	\$10,000	
	Accounts payable	12,350	
	Interest payable	<u>300</u>	
	Total current liabilities.....		\$22,650
Owner's equity			
	T. Magnum, Capital.....		<u>26,080</u>
	Total liabilities and owner's equity		<u>\$48,730</u>
(c)	Mar. 31	Supplies Expense	670
		Supplies	670
	31	Depreciation Expense	1,000
		Accumulated Depreciation	1,000
	31	Interest Expense	300
		Interest Payable	300
	31	Insurance Expense.....	600
		Prepaid Insurance.....	600

PROBLEM 4-1A (Continued)

Mar. 31	Accounts Receivable.....	530	
	Service Revenue		530
(d) Mar. 31	Service Revenue	14,150	
	Income Summary.....		14,150
31	Income Summary.....	7,470	
	Travel Expense.....		1,300
	Salaries Expense		2,200
	Rent Expense.....		1,200
	Insurance Expense.....		600
	Depreciation Expense		1,000
	Supplies Expense.....		670
	Interest Expense		300
	Miscellaneous Expense.....		200
31	Income Summary.....	6,680	
	T. Magnum, Capital		6,680
31	T. Magnum, Capital	600	
	T. Magnum, Drawing.....		600

PROBLEM 4-2A

(a) **PORTER COMPANY**
Partial Worksheet
For the Year Ended December 31, 2010

Account		Adjusted Trial Balance		Income Statement		Balance Sheet	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
101	Cash	18,800				18,800	
112	Accounts Receivable	16,200				16,200	
126	Supplies	2,300				2,300	
130	Prepaid Insurance	4,400				4,400	
151	Office Equipment	44,000				44,000	
152	Acc. Depr.—Off. Equip.		20,000				20,000
200	Notes Payable		20,000				20,000
201	Accounts Payable		8,000				8,000
212	Salaries Payable		2,600				2,600
230	Interest Payable		1,000				1,000
301	B. Porter, Capital		36,000				36,000
306	B. Porter, Drawing	12,000				12,000	
400	Service Revenue		77,800		77,800		
610	Advertising Expense	12,000		12,000			
631	Supplies Expense	3,700		3,700			
711	Depreciation Expense	8,000		8,000			
722	Insurance Expense	4,000		4,000			
726	Salaries Expense	39,000		39,000			
905	Interest Expense	1,000		1,000			
	Totals	<u>165,400</u>	<u>165,400</u>	<u>67,700</u>	<u>77,800</u>	<u>97,700</u>	<u>87,600</u>
	Net Income			<u>10,100</u>			<u>10,100</u>
	Totals			<u>77,800</u>	<u>77,800</u>	<u>97,700</u>	<u>97,700</u>

PROBLEM 4-2A (Continued)**(b)**

PORTER COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue.....		\$77,800
Expenses		
Salaries expense.....	\$39,000	
Advertising expense.....	12,000	
Depreciation expense.....	8,000	
Insurance expense.....	4,000	
Supplies expense.....	3,700	
Interest expense.....	1,000	
Total expenses.....		<u>67,700</u>
Net income		<u>\$10,100</u>

PORTER COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

B. Porter, Capital, January 1	\$36,000
Add: Net income	<u>10,100</u>
	46,100
Less: Drawings.....	<u>12,000</u>
B. Porter, Capital, December 31	<u>\$34,100</u>

PROBLEM 4-2A (Continued)

PORTER COMPANY
Balance Sheet
December 31, 2010

Assets		
Current assets		
Cash.....	\$18,800	
Accounts receivable.....	16,200	
Supplies.....	2,300	
Prepaid insurance	<u>4,400</u>	
Total current assets.....		\$41,700
Property, plant, and equipment		
Office equipment	44,000	
Less: Accumulated depreciation	<u>20,000</u>	<u>24,000</u>
Total assets		<u>\$65,700</u>
 Liabilities and Owner's Equity		
Current liabilities		
Notes payable.....	\$10,000	
Accounts payable	8,000	
Salaries payable	2,600	
Interest payable	<u>1,000</u>	
Total current liabilities.....		\$21,600
Long-term liabilities		
Notes payable.....		<u>10,000</u>
Total liabilities		31,600
Owner's equity		
B. Porter, Capital		<u>34,100</u>
Total liabilities and owner's equity		<u>\$65,700</u>

PROBLEM 4-2A (Continued)

(c)

General Journal				J14
Date	Account Titles and Explanation	Ref.	Debit	Credit
Dec. 31	Service Revenue	400	77,800	
	Income Summary	350		77,800
31	Income Summary	350	67,700	
	Advertising Expense	610		12,000
	Supplies Expense	631		3,700
	Depreciation Expense	711		8,000
	Insurance Expense	722		4,000
	Salaries Expense	726		39,000
	Interest Expense	905		1,000
31	Income Summary	350	10,100	
	B. Porter, Capital	301		10,100
31	B. Porter, Capital	301	12,000	
	B. Porter, Drawing	306		12,000

(d)

B. Porter, Capital					No. 301
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31	Balance	✓		36,000	36,000
Dec. 31	Closing entry	J14		10,100	46,100
31	Closing entry	J14	12,000		34,100

B. Porter, Drawing					No. 306
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	12,000		12,000
31	Closing entry	J14		12,000	0

PROBLEM 4-2A (Continued)**Income Summary****No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Closing entry	J14		77,800	77,800
31	Closing entry	J14	67,700		10,100
31	Closing entry	J14	10,100		0

Service Revenue**No. 400**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓		77,800	77,800
31	Closing entry	J14	77,800		0

Advertising Expense**No. 610**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	12,000		12,000
31	Closing entry	J14		12,000	0

Supplies Expense**No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	3,700		3,700
31	Closing entry	J14		3,700	0

Depreciation Expense**No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	8,000		8,000
31	Closing entry	J14		8,000	0

Insurance Expense**No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	4,000		4,000
31	Closing entry	J14		4,000	0

PROBLEM 4-2A (Continued)

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	39,000		39,000
31	Closing entry	J14		39,000	0

Interest Expense					No. 905
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	1,000		1,000
31	Closing entry	J14		1,000	0

(e)

PORTER COMPANY
Post-Closing Trial Balance
December 31, 2010

	Debit	Credit
Cash	\$18,800	
Accounts Receivable.....	16,200	
Supplies	2,300	
Prepaid Insurance	4,400	
Office Equipment	44,000	
Accumulated Depreciation—Office Equipment		\$20,000
Notes Payable		20,000
Accounts Payable.....		8,000
Salaries Payable.....		2,600
Interest Payable.....		1,000
B. Porter, Capital.....		34,100
	<u>\$85,700</u>	<u>\$85,700</u>

PROBLEM 4-3A

(a)

WOODS COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue		\$44,000
Expenses		
Salaries expense	\$35,200	
Repair expense	5,400	
Utilities expense	4,000	
Depreciation expense	2,800	
Insurance expense	1,200	
Total expenses		<u>48,600</u>
Net loss		<u>\$ (4,600)</u>

WOODS COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

S. Woods, Capital, January 1		\$30,000
Add: Additional investment by owner		<u>4,000</u>
		34,000
Less: Net loss	\$4,600	
Drawings	<u>7,200</u>	<u>11,800</u>
S. Woods, Capital, December 31		<u>\$22,200</u>

WOODS COMPANY
Balance Sheet
December 31, 2010

Assets		
Current assets		
Cash	\$8,200	
Accounts receivable	7,500	
Prepaid insurance	<u>1,800</u>	
Total current assets		\$17,500
Property, plant, and equipment		
Equipment	28,000	
Less: Accumulated depreciation	<u>8,600</u>	<u>19,400</u>
Total assets		<u>\$36,900</u>

PROBLEM 4-3A (Continued)

WOODS COMPANY
Balance Sheet (Continued)
December 31, 2010

Liabilities and Owner's Equity			
Current liabilities			
Accounts payable	\$11,700		
Salaries payable	<u>3,000</u>		
Total current liabilities			\$14,700
Owner's equity			
S. Woods, Capital			<u>22,200</u>
Total liabilities and owner's equity			<u>\$36,900</u>

(b)

General Journal				
Date	Account Titles	Ref.	Debit	Credit
Dec. 31	Service Revenue	400	44,000	
	Income Summary	350		44,000
31	Income Summary	350	48,600	
	Repair Expense	622		5,400
	Depreciation Expense	711		2,800
	Insurance Expense	722		1,200
	Salaries Expense	726		35,200
	Utilities Expense	732		4,000
31	S. Woods, Capital	301	4,600	
	Income Summary	350		4,600
31	S. Woods, Capital	301	7,200	
	S. Woods, Drawing	306		7,200

PROBLEM 4-3A (Continued)

(c)

S. Woods, Capital		No. 301
12/31	4,600	12/31 Bal. 34,000
12/31	7,200	
		12/31 Bal. 22,200

S. Woods, Drawing		No. 306
12/31 Bal.	7,200	12/31 7,200

Income Summary		No. 350
12/31	48,600	12/31 44,000
		12/31 4,600
	48,600	48,600

Service Revenue		No. 400
12/31	44,000	12/31 Bal. 44,000

Repair Expense		No. 622
12/31 Bal.	5,400	12/31 5,400

Depreciation Expense		No. 711
12/31 Bal.	2,800	12/31 2,800

Insurance Expense		No. 722
12/31 Bal.	1,200	12/31 1,200

Salaries Expense		No. 726
12/31 Bal.	35,200	12/31 35,200

Utilities Expense		No. 732
12/31 Bal.	4,000	12/31 4,000

(d)

WOODS COMPANY Post-Closing Trial Balance December 31, 2010

	Debit	Credit
Cash.....	\$ 8,200	
Accounts Receivable	7,500	
Prepaid Insurance	1,800	
Equipment	28,000	
Accumulated Depreciation.....		\$ 8,600
Accounts Payable		11,700
Salaries Payable		3,000
S. Woods, Capital.....		22,200
Totals	<u>\$45,500</u>	<u>\$45,500</u>

PROBLEM 4-4A

DISNEY AMUSEMENT PARK

Worksheet

For the Year Ended September 30, 2010

(a)

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	41,400				41,400				41,400	
Supplies	18,600		(a) 17,400		1,200				1,200	
Prepaid Insurance	31,900		(b) 23,000		8,900				8,900	
Land	80,000				80,000				80,000	
Equipment	120,000				120,000				120,000	
Accumulated Depreciation		36,200		(c) 6,000		42,200				42,200
Accounts Payable		14,600				14,600				14,600
Unearned Admissions Revenue		3,700	(d) 1,700			2,000				2,000
Mortgage Note Payable		50,000				50,000				50,000
L. Disney, Capital		109,700				109,700				109,700
L. Disney, Drawing	14,000				14,000				14,000	
Admissions Revenue		277,500		(d) 1,700		279,200				279,200
Salaries Expense	105,000				105,000		105,000			
Repair Expense	30,500				30,500		30,500			
Advertising Expense	9,400				9,400		9,400			
Utilities Expense	16,900				16,900		16,900			
Property Taxes Expense	18,000		(e) 3,000		21,000		21,000			
Interest Expense	6,000		(f) 4,000		10,000		10,000			
Totals	<u>491,700</u>	<u>491,700</u>								
Insurance Expense			(b) 23,000		23,000		23,000			
Supplies Expense			(a) 17,400		17,400		17,400			
Interest Payable				(f) 4,000		4,000				4,000
Depreciation Expense							6,000			
Property Taxes Payable				(e) 3,000		3,000				3,000
Totals			<u>55,100</u>	<u>55,100</u>	<u>504,700</u>	<u>504,700</u>	<u>239,200</u>	<u>279,200</u>	<u>265,500</u>	<u>225,500</u>
Net Income							<u>40,000</u>			<u>40,000</u>
Totals							<u>279,200</u>	<u>279,200</u>	<u>265,500</u>	<u>265,500</u>

Key: (a) Supplies Used; (b) Expired Insurance; (c) Depreciation Expensed; (d) Admissions Revenue Earned; (e) Accrued Property Taxes; (f) Accrued Interest Payable.

PROBLEM 4-4A (Continued)

(b)

DISNEY AMUSEMENT PARK
Balance Sheet
September 30, 2010

Assets			
Current assets			
Cash.....		\$41,400	
Supplies		1,200	
Prepaid insurance.....		<u>8,900</u>	
Total current assets			\$ 51,500
Property, plant, and equipment			
Land.....		80,000	
Equipment	\$120,000		
Less: Accum. depreciation.....	<u>42,200</u>	<u>77,800</u>	<u>157,800</u>
Total assets.....			<u>\$209,300</u>
Liabilities and Owner's Equity			
Current liabilities			
Current maturity of mortgage			
note payable.....		\$10,000	
Accounts payable		14,600	
Interest payable		4,000	
Property taxes payable		3,000	
Unearned admissions			
revenue		<u>2,000</u>	
Total current liabilities.....			\$ 33,600
Long-term liabilities			
Mortgage note payable.....		<u>40,000</u>	
Total liabilities			<u>73,600</u>
Owner's equity			
L. Disney, Capital			
(\$109,700 + \$40,000 – \$14,000)		<u>135,700</u>	
Total liabilities and			
owner's equity			<u>\$209,300</u>

PROBLEM 4-4A (Continued)

(c)	Sept. 30	Supplies Expense.....	17,400	
		Supplies		17,400
	30	Insurance Expense	23,000	
		Prepaid Insurance		23,000
	30	Depreciation Expense.....	6,000	
		Accumulated Depreciation		6,000
	30	Unearned Admissions Revenue	1,700	
		Admissions Revenue		1,700
	30	Property Taxes Expense	3,000	
		Property Taxes Payable.....		3,000
	30	Interest Expense	4,000	
		Interest Payable		4,000
(d)	Sept. 30	Admissions Revenue	279,200	
		Income Summary.....		279,200
	30	Income Summary.....	239,200	
		Salaries Expense		105,000
		Repair Expense		30,500
		Insurance Expense.....		23,000
		Property Taxes Expense		21,000
		Supplies Expense.....		17,400
		Utilities Expense		16,900
		Interest Expense		10,000
		Advertising Expense		9,400
		Depreciation Expense		6,000
	30	Income Summary.....	40,000	
		L. Disney, Capital.....		40,000
	30	L. Disney, Capital.....	14,000	
		L. Disney, Drawing		14,000

PROBLEM 4-4A (Continued)

(e) **DISNEY AMUSEMENT PARK**
Post-Closing Trial Balance
September 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 41,400	
Supplies	1,200	
Prepaid Insurance.....	8,900	
Land.....	80,000	
Equipment	120,000	
Accumulated Depreciation		\$ 42,200
Accounts Payable		14,600
Interest Payable		4,000
Property Taxes Payable		3,000
Unearned Admissions Revenue		2,000
Mortgage Note Payable		50,000
L. Disney, Capital		135,700
	<u>\$251,500</u>	<u>\$251,500</u>

PROBLEM 4-5A

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 1	Cash	101	10,000	
	L. Eddy, Capital	301		10,000
1	Equipment.....	157	6,000	
	Cash	101		3,000
	Accounts Payable	201		3,000
3	Cleaning Supplies	128	1,200	
	Accounts Payable	201		1,200
5	Prepaid Insurance	130	1,200	
	Cash	101		1,200
14	Accounts Receivable	112	4,800	
	Service Revenue	400		4,800
18	Accounts Payable	201	2,000	
	Cash	101		2,000
20	Salaries Expense	726	1,800	
	Cash	101		1,800
21	Cash	101	1,400	
	Accounts Receivable	112		1,400
28	Accounts Receivable	112	2,500	
	Service Revenue	400		2,500
31	Gas & Oil Expense	633	200	
	Cash	101		200
31	L. Eddy, Drawing.....	306	700	
	Cash	101		700

PROBLEM 4-5A (Continued)

EDDY'S CARPET CLEANERS

Worksheet

For the Month Ended March 31, 2010

(b)&(c)

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	2,500				2,500				2,500	
Accounts Receivable	5,900		(a) 700		6,600				6,600	
Cleaning Supplies	1,200			(d) 800	400				400	
Prepaid Insurance	1,200			(c) 100	1,100				1,100	
Equipment	6,000				6,000				6,000	
Accounts Payable		2,200				2,200				2,200
L. Eddy, Capital		10,000				10,000				10,000
L. Eddy, Drawing	700				700				700	
Service Revenue		7,300		(a) 700		8,000		8,000		
Gas & Oil Expense	200				200		200			
Salaries Expense	1,800		(e) 500		2,300		2,300			
Totals	<u>19,500</u>	<u>19,500</u>								
Depreciation Expense			(b) 250		250		250			
Accum. Depr.—Equipment				(b) 250		250				250
Insurance Expense			(c) 100		100		100			
Cleaning Supplies Expense			(d) 800		800		800			
Salaries Payable				(e) 500		500				500
Totals			<u>2,350</u>	<u>2,350</u>	<u>20,950</u>	<u>20,950</u>	<u>3,650</u>	<u>8,000</u>	<u>17,300</u>	<u>12,950</u>
Net Income							<u>4,350</u>			<u>4,350</u>
Totals							<u>8,000</u>	<u>8,000</u>	<u>17,300</u>	<u>17,300</u>

Key: (a) Service Revenue Earned; (b) Depreciation Expensed; (c) Insurance Expired; (d) Cleaning Supplies Used; (e) Unpaid Salaries.

PROBLEM 4-5A (Continued)**(a), (e) & (f)**

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1	10,000		10,000
1		J1		3,000	7,000
5		J1		1,200	5,800
18		J1		2,000	3,800
20		J1		1,800	2,000
21		J1	1,400		3,400
31		J1		200	3,200
31		J1		700	2,500

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 14		J1	4,800		4,800
21		J1		1,400	3,400
28		J1	2,500		5,900
31	Adjusting	J2	700		6,600

Cleaning Supplies					No. 128
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 3		J1	1,200		1,200
31	Adjusting	J2		800	400

Prepaid Insurance					No. 130
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 5		J1	1,200		1,200
31	Adjusting	J2		100	1,100

Equipment					No. 157
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1	6,000		6,000

PROBLEM 4-5A (Continued)**Accumulated Depreciation—Equipment****No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Adjusting	J2		250	250

Accounts Payable**No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1		3,000	3,000
3		J1		1,200	4,200
18		J1	2,000		2,200

Salaries Payable**No. 212**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Adjusting	J2		500	500

L. Eddy, Capital**No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1		10,000	10,000
31	Closing	J3		4,350	14,350
31	Closing	J3	700		13,650

L. Eddy, Drawing**No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31		J1	700		700
31	Closing	J3		700	0

Income Summary**No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Closing	J3		8,000	8,000
31	Closing	J3	3,650		4,350
31	Closing	J3	4,350		0

PROBLEM 4-5A (Continued)

Service Revenue					No. 400
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 14		J1		4,800	4,800
28		J1		2,500	7,300
31	Adjusting	J2		700	8,000
31	Closing	J3	8,000		0

Gas & Oil Expense					No. 633
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31		J1	200		200
31	Closing	J3		200	0

Cleaning Supplies Expense					No. 634
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Adjusting	J2	800		800
31	Closing	J3		800	0

Depreciation Expense					No. 711
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Adjusting	J2	250		250
31	Closing	J3		250	0

Insurance Expense					No. 722
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 31	Adjusting	J2	100		100
31	Closing	J3		100	0

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 20		J1	1,800		1,800
31	Adjusting	J2	500		2,300
31	Closing	J3		2,300	0

(d) EDDY'S CARPET CLEANERS
Income Statement
For the Month Ended March 31, 2010

Revenues		
Service revenue		\$8,000
Expenses		
Salaries expense	\$2,300	
Cleaning supplies expense.....	800	
Depreciation expense	250	
Gas & oil expense	200	
Insurance expense	100	
Total expenses		<u>3,650</u>
Net income		<u>\$4,350</u>

EDDY'S CARPET CLEANERS
Owner's Equity Statement
For the Month Ended March 31, 2010

L. Eddy, Capital, March 1		\$ 0
Add: Investments.....	\$10,000	
Net income	<u>4,350</u>	<u>14,350</u>
		14,350
Less: Drawings.....		<u>700</u>
L. Eddy, Capital, March 31		<u>\$13,650</u>

EDDY'S CARPET CLEANERS
Balance Sheet
March 31, 2010

Assets		
Current assets		
Cash.....	\$2,500	
Accounts receivable	6,600	
Cleaning supplies	400	
Prepaid insurance.....	<u>1,100</u>	
Total current assets		\$10,600

PROBLEM 4-5A (Continued)

EDDY'S CARPET CLEANERS
Balance Sheet (Continued)
March 31, 2010

Assets (Continued)			
Property, plant, and equipment			
Equipment	\$6,000		
Less: Accumulated depreciation	<u>250</u>	<u>5,750</u>	
Total assets			<u><u>\$16,350</u></u>
Liabilities and Owner's Equity			
Current liabilities			
Accounts payable	\$2,200		
Salaries payable	<u>500</u>		
Total current liabilities			\$ 2,700
Owner's equity			
L. Eddy, Capital			<u>13,650</u>
Total liabilities and owner's equity			<u><u>\$16,350</u></u>

(e)

General Journal				J2
Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 31	Accounts Receivable	112	700	
	Service Revenue	400		700
31	Depreciation Expense	711	250	
	Accumulated Depreciation— Equipment	158		250
31	Insurance Expense	722	100	
	Prepaid Insurance	130		100
31	Cleaning Supplies Expense	634	800	
	Cleaning Supplies	128		800
31	Salaries Expense	726	500	
	Salaries Payable	212		500

PROBLEM 4-5A (Continued)

(f)

General Journal				J3
Date	Account Titles and Explanation	Ref.	Debit	Credit
Mar. 31	Service Revenue	400	8,000	
	Income Summary	350		8,000
31	Income Summary	350	3,650	
	Salaries Expense	726		2,300
	Depreciation Expense	711		250
	Insurance Expense	722		100
	Cleaning Supplies Expense	634		800
	Gas & Oil Expense	633		200
31	Income Summary	350	4,350	
	L. Eddy, Capital	301		4,350
31	L. Eddy, Capital	301	700	
	L. Eddy, Drawing	306		700

(g) **EDDY'S CARPET CLEANERS**
Post-Closing Trial Balance
March 31, 2010

	Debit	Credit
Cash	\$ 2,500	
Accounts Receivable	6,600	
Cleaning Supplies	400	
Prepaid Insurance	1,100	
Equipment	6,000	
Accumulated Depreciation—Equipment		\$ 250
Accounts Payable		2,200
Salaries Payable		500
L. Eddy, Capital		13,650
	<u>\$16,600</u>	<u>\$16,600</u>

PROBLEM 4-6A

(a)

	(1) INCORRECT ENTRY	(2) CORRECT ENTRY	(3) CORRECTING ENTRY
1.	Cash Accts. Receivable 960	Cash Accts. Receivable 690	Accounts Receivable Cash..... 270
2.	Misc. Expense..... Cash..... 65	Advertising Expense..... Cash..... 65	Advertising Expense..... Misc. Expense 65
3.	Salaries Expense..... Cash..... 1,900	Salaries Expense Salaries Payable Cash..... 1,200 700 1,900	Salaries Payable Salaries Expense 700
4.	Supplies..... Accounts Payable..... 290	Equipment Accounts Payable..... 290	Equipment Supplies 290
5.	Equipment Cash..... 59	Repair Expense Cash..... 95	Repair Expense Cash..... Equipment..... 95 36 59

PROBLEM 4-6A (Continued)**(b)****FOX CABLE
Trial Balance
April 30, 2010**

	<u>Debit</u>	<u>Credit</u>
Cash (\$4,100 – \$270 – \$36).....	\$ 3,794	
Accounts Receivable (\$3,200 + \$270)	3,470	
Supplies (\$800 – \$290)	510	
Equipment (\$10,600 + \$290 – \$59)	10,831	
Accumulated Depreciation		\$ 1,350
Accounts Payable		2,100
Salaries Payable (\$700 – \$700)		0
Unearned Revenue		890
A. Manion, Capital		12,900
Service Revenue		5,450
Salaries Expense (\$3,300 – \$700)	2,600	
Advertising Expense (\$600 + \$65)	665	
Miscellaneous Expense (\$290 – \$65)	225	
Depreciation Expense	500	
Repair Expense.....	95	
	<u>\$22,690</u>	<u>\$22,690</u>

PROBLEM 4-1B

SASSE ROOFING Worksheet

For the Month Ended March 31, 2010

(a)

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	4,500				4,500				4,500	
Accounts Receivable	3,200				3,200				3,200	
Roofing Supplies	2,000			(a) 1,350	650				650	
Equipment	11,000				11,000				11,000	
Accumulated Depreciation		1,250		(b) 250		1,500				1,500
Accounts Payable		2,500				2,500				2,500
Unearned Revenue		550	(c) 380			170				170
J. Sasse, Capital		12,900				12,900				12,900
J. Sasse, Drawing	1,100				1,100				1,100	
Service Revenue		6,300		(c) 380		6,680		6,680		
Salaries Expense	1,300		(d) 600		1,900		1,900			
Miscellaneous Expense	400				400		400			
Totals	<u>23,500</u>	<u>23,500</u>								
Supplies Expense			(a) 1,350		1,350		1,350			
Depreciation Expense			(b) 250		250		250			
Salaries Payable				(d) 600		600				600
Totals			<u>2,580</u>	<u>2,580</u>	<u>24,350</u>	<u>24,350</u>	<u>3,900</u>	<u>6,680</u>	<u>20,450</u>	<u>17,670</u>
Net Income							<u>2,780</u>			<u>2,780</u>
Totals							<u>6,680</u>	<u>6,680</u>	<u>20,450</u>	<u>20,450</u>

Key: (a) Supplies Used; (b) Depreciation Expensed; (c) Service Revenue Earned; (d) Salaries Accrued.

PROBLEM 4-1B (Continued)

(b)

SASSE ROOFING
Income Statement
For the Month Ended March 31, 2010

Revenues	
Service revenue	\$6,680
Expenses	
Salaries expense	\$1,900
Supplies expense	1,350
Miscellaneous expense	400
Depreciation expense	<u>250</u>
Total expenses	<u>3,900</u>
Net income.....	<u><u>\$2,780</u></u>

SASSE ROOFING
Owner's Equity Statement
For the Month Ended March 31, 2010

J. Sasse, Capital, March 1	\$12,900
Add: Net income.....	<u>2,780</u>
	15,680
Less: Drawings	<u>1,100</u>
J. Sasse, Capital, March 31	<u><u>\$14,580</u></u>

SASSE ROOFING
Balance Sheet
March 31, 2010

Assets	
Current assets	
Cash.....	\$4,500
Accounts receivable.....	3,200
Roofing supplies	<u>650</u>
Total current assets.....	\$ 8,350
Property, plant, and equipment	
Equipment	11,000
Less: Accum. depreciation—equipment.....	<u>1,500</u> <u>9,500</u>
Total assets	<u><u>\$17,850</u></u>

SASSE ROOFING
Balance Sheet (Continued)
March 31, 2010

Liabilities and Owner's Equity			
Current liabilities			
	Accounts payable	\$2,500	
	Salaries payable	600	
	Unearned revenue	<u>170</u>	
	Total current liabilities		\$ 3,270
Owner's equity			
	J. Sasse, Capital		<u>14,580</u>
	Total liabilities and owner's equity		<u>\$17,850</u>
(c)	Mar. 31	Supplies Expense	1,350
		Roofing Supplies	1,350
	31	Depreciation Expense	250
		Accumulated Depreciation	250
	31	Unearned Revenue	380
		Service Revenue	380
	31	Salaries Expense	600
		Salaries Payable	600
(d)	Mar. 31	Service Revenue	6,680
		Income Summary	6,680
	31	Income Summary	3,900
		Salaries Expense	1,900
		Supplies Expense	1,350
		Depreciation Expense	250
		Miscellaneous Expense	400
	31	Income Summary	2,780
		J. Sasse, Capital	2,780
	31	J. Sasse, Capital	1,100
		J. Sasse, Drawing	1,100

PROBLEM 4-2B

(a)

RACHEL COMPANY
Partial Worksheet
For the Year Ended December 31, 2010

Account		Adjusted Trial Balance		Income Statement		Balance Sheet	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
101	Cash	8,100				8,100	
112	Accounts Receivable	10,800				10,800	
126	Supplies	1,500				1,500	
130	Prepaid Insurance	2,000				2,000	
151	Office Equipment	24,000				24,000	
152	Acc. Depr.—Off. Equip.		5,600				5,600
200	Notes Payable		15,000				15,000
201	Accounts Payable		6,100				6,100
212	Salaries Payable		2,400				2,400
230	Interest Payable		600				600
301	T. Rachel, Capital		15,800				15,800
306	T. Rachel, Drawing	7,000				7,000	
400	Service Revenue		61,000		61,000		
610	Advertising Expense	8,400		8,400			
631	Supplies Expense	4,000		4,000			
711	Depreciation Expense	5,600		5,600			
722	Insurance Expense	3,500		3,500			
726	Salaries Expense	31,000		31,000			
905	Interest Expense	600		600			
	Totals	<u>106,500</u>	<u>106,500</u>	<u>53,100</u>	<u>61,000</u>	<u>53,400</u>	<u>45,500</u>
	Net Income			<u>7,900</u>			<u>7,900</u>
	Totals			<u>61,000</u>	<u>61,000</u>	<u>53,400</u>	<u>53,400</u>

PROBLEM 4-2B (Continued)**(b)**

RACHEL COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue.....		\$61,000
Expenses		
Salaries expense.....	\$31,000	
Advertising expense.....	8,400	
Depreciation expense.....	5,600	
Supplies expense	4,000	
Insurance expense	3,500	
Interest expense.....	600	
Total expenses.....		<u>53,100</u>
Net income		<u>\$ 7,900</u>

RACHEL COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

T. Rachel, Capital, January 1	\$15,800
Add: Net income.....	<u>7,900</u>
	23,700
Less: Drawings.....	<u>7,000</u>
T. Rachel, Capital, December 31	<u>\$16,700</u>

RACHEL COMPANY
Balance Sheet
December 31, 2010

Assets		
Current assets		
Cash.....	\$ 8,100	
Accounts receivable.....	10,800	
Supplies.....	1,500	
Prepaid insurance	<u>2,000</u>	
Total current assets.....		\$22,400
Property, plant, and equipment		
Office equipment	24,000	
Less: Accumulated depreciation	<u>5,600</u>	<u>18,400</u>
Total assets		<u>\$40,800</u>
Liabilities and Owner's Equity		
Current liabilities		
Notes payable.....	\$9,000	
Accounts payable	6,100	
Salaries payable	2,400	
Interest payable	<u>600</u>	
Total current liabilities.....		\$18,100
Long-term liabilities		
Notes payable.....		<u>6,000</u>
Total liabilities		24,100
Owner's equity		
T. Rachel, Capital		<u>16,700</u>
Total liabilities and owner's equity		<u>\$40,800</u>

PROBLEM 4-2B (Continued)

(c)

General Journal				J14
Date	Account Titles and Explanation	Ref.	Debit	Credit
Dec. 31	Service Revenue	400	61,000	
	Income Summary	350		61,000
31	Income Summary	350	53,100	
	Advertising Expense	610		8,400
	Supplies Expense	631		4,000
	Depreciation Expense	711		5,600
	Insurance Expense	722		3,500
	Salaries Expense	726		31,000
	Interest Expense	905		600
31	Income Summary	350	7,900	
	T. Rachel, Capital	301		7,900
31	T. Rachel, Capital	301	7,000	
	T. Rachel, Drawing	306		7,000

(d)

T. Rachel, Capital					No. 301
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓		15,800	15,800
Dec. 31	Closing entry	J14		7,900	23,700
31	Closing entry	J14	7,000		16,700

T. Rachel, Drawing					No. 306
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	7,000		7,000
31	Closing entry	J14		7,000	0

PROBLEM 4-2B (Continued)**Income Summary****No. 350**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Closing entry	J14		61,000	61,000
	31	Closing entry	J14	53,100		7,900
	31	Closing entry	J14	7,900		0

Service Revenue**No. 400**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Balance	✓		61,000	61,000
	31	Closing entry	J14	61,000		0

Advertising Expense**No. 610**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Balance	✓	8,400		8,400
	31	Closing entry	J14		8,400	0

Supplies Expense**No. 631**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Balance	✓	4,000		4,000
	31	Closing entry	J14		4,000	0

Depreciation Expense**No. 711**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Balance	✓	5,600		5,600
	31	Closing entry	J14		5,600	0

Insurance Expense**No. 722**

Date		Explanation	Ref.	Debit	Credit	Balance
Dec.	31	Balance	✓	3,500		3,500
	31	Closing entry	J14		3,500	0

PROBLEM 4-2B (Continued)

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	31,000		31,000
	Closing entry	J14		31,000	0

Interest Expense					No. 905
Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 31	Balance	✓	600		600
31	Closing entry	J14		600	0

(e)

RACHEL COMPANY
Post-Closing Trial Balance
December 31, 2010

	Debit	Credit
Cash	\$ 8,100	
Accounts Receivable	10,800	
Supplies	1,500	
Prepaid Insurance	2,000	
Office Equipment	24,000	
Accumulated Depreciation—Office Equipment		\$ 5,600
Notes Payable		15,000
Accounts Payable		6,100
Salaries Payable		2,400
Interest Payable		600
T. Rachel, Capital		16,700
Totals	<u>\$46,400</u>	<u>\$46,400</u>

PROBLEM 4-3B

(a)

MUDDY COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues		
Service revenue		\$56,000
Expenses		
Salaries expense	\$30,000	
Depreciation expense	2,100	
Insurance expense.....	1,800	
Repair expense	1,600	
Utilities expense	1,400	
Total expenses		<u>36,900</u>
Net income.....		<u>\$19,100</u>

MUDDY COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

Melissa Muddy, Capital, January 1.....	\$28,500
Add: Net income.....	<u>19,100</u>
	47,600
Less: Drawings	<u>11,000</u>
Melissa Muddy, Capital, December 31	<u>\$36,600</u>

MUDDY COMPANY
Balance Sheet
December 31, 2010

Assets		
Current assets		
Cash.....	\$17,900	
Accounts receivable.....	10,800	
Prepaid insurance	2,800	
Total current assets.....		\$31,500
Property, plant, and equipment		
Equipment	21,000	
Less: Accumulated depreciation	<u>4,500</u>	<u>16,500</u>
Total assets		<u>\$48,000</u>

MUDDY COMPANY
Balance Sheet (Continued)
December 31, 2010

Liabilities and Owner's Equity			
Current liabilities			
Accounts payable	\$9,000		
Salaries payable	<u>2,400</u>		
Total current liabilities			\$11,400
Owner's equity			
Melissa Muddy, Capital			<u>36,600</u>
Total liabilities and owner's equity			<u>\$48,000</u>

(b)

General Journal				
Date	Account Titles and Explanation	Ref.	Debit	Credit
Dec. 31	Service Revenue	400	56,000	
	Income Summary	350		56,000
31	Income Summary	350	36,900	
	Repair Expense	622		1,600
	Depreciation Expense	711		2,100
	Insurance Expense	722		1,800
	Salaries Expense	726		30,000
	Utilities Expense	732		1,400
31	Income Summary	350	19,100	
	Melissa Muddy, Capital	301		19,100
31	Melissa Muddy, Capital	301	11,000	
	Melissa Muddy, Drawing	306		11,000

PROBLEM 4-3B (Continued)

(c)

Melissa Muddy, Capital No. 301	
12/31	11,000
1/1 Bal.	28,500
12/31	19,100
12/31 Bal.	36,600

Melissa Muddy, Drawing No. 306	
12/31 Bal.	11,000
12/31	11,000

Income Summary No. 350	
12/31	36,900
12/31	19,100
56,000	56,000

Service Revenue No. 400	
12/31	56,000
12/31 Bal.	56,000

Repair Expense No. 622	
12/31 Bal.	1,600
12/31	1,600

Depreciation Expense No. 711	
12/31 Bal.	2,100
12/31	2,100

Insurance Expense No. 722	
12/31 Bal.	1,800
12/31	1,800

Salaries Expense No. 726	
12/31 Bal.	30,000
12/31	30,000

Utilities Expense No. 732	
12/31 Bal.	1,400
12/31	1,400

(d)

MUDDY COMPANY Post-Closing Trial Balance December 31, 2010

	Debit	Credit
Cash.....	\$17,900	
Accounts Receivable	10,800	
Prepaid Insurance	2,800	
Equipment	21,000	
Accumulated Depreciation.....		\$ 4,500
Accounts Payable		9,000
Salaries Payable		2,400
Melissa Muddy, Capital		36,600
Totals.....	<u>\$52,500</u>	<u>\$52,500</u>

PROBLEM 4-4B

(a) **ROCKFORD MANAGEMENT SERVICES**
Worksheet
For the Year Ended December 31, 2010

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	13,800				13,800				13,800	
Accounts Receivable	28,300				28,300				28,300	
Prepaid Insurance	3,600			(a) 1,200	2,400				2,400	
Land	67,000				67,000				67,000	
Building	127,000				127,000				127,000	
Equipment	59,000				59,000				59,000	
Accounts Payable		12,500				12,500				12,500
Unearned Rent Revenue		6,000		(d) 4,000		2,000				2,000
Mortgage Note Payable		120,000				120,000				120,000
R. Neilsen, Capital		144,000				144,000				144,000
R. Neilsen, Drawing	22,000				22,000				22,000	
Service Revenue		90,700				90,700		90,700		
Rent Revenue		29,000		(d) 4,000		33,000		33,000		
Salaries Expense	42,000				42,000		42,000			
Advertising Expense	20,500				20,500		20,500			
Utilities Expense	19,000				19,000		19,000			
Totals	<u>402,200</u>	<u>402,200</u>								
Insurance Expense			(a) 1,200		1,200		1,200			
Depr. Expense—Building			(b) 3,000		3,000		3,000			
Accum. Depr.—Building				(b) 3,000		3,000				3,000
Depr. Expense—Equipment			(c) 4,700		4,700		4,700			
Accum. Depr.—Equipment				(c) 4,700		4,700				4,700
Interest Expense			(e) 11,000		11,000		11,000			
Interest Payable				(e) 11,000		11,000				11,000
Totals			<u>23,900</u>	<u>23,900</u>	<u>420,900</u>	<u>420,900</u>	<u>101,400</u>	<u>123,700</u>	<u>319,500</u>	<u>297,200</u>
Net Income							22,300			22,300
Totals							<u>123,700</u>	<u>123,700</u>	<u>319,500</u>	<u>319,500</u>

Key: (a) Expired Insurance; (b) Depreciation Expense—Building; (c) Depreciation Expense—Equipment; (d) Rent Revenue Earned; (e) Accrued Interest Payable.

PROBLEM 4-4B (Continued)

(b) ROCKFORD MANAGEMENT SERVICES
Balance Sheet
December 31, 2010

Assets			
Current assets			
Cash.....		\$13,800	
Accounts receivable.....		28,300	
Prepaid insurance		<u>2,400</u>	
Total current assets.....			\$ 44,500
Property, plant, and equipment			
Land		67,000	
Building	\$127,000		
Less: Accumulated depreciation—building	<u>3,000</u>	124,000	
Equipment	59,000		
Less: Accumulated depreciation—equipment.....	<u>4,700</u>	<u>54,300</u>	<u>245,300</u>
Total assets			<u>\$289,800</u>
Liabilities and Owner's Equity			
Current liabilities			
Current maturity of mortgage note payable		\$20,000	
Accounts payable		12,500	
Interest payable		11,000	
Unearned rent revenue.....		<u>2,000</u>	
Total current liabilities.....			\$ 45,500
Long-term liabilities			
Mortgage note payable.....		<u>100,000</u>	
Total liabilities			145,500
Owner's equity			
R. Neillsen, Capital			
(\$144,000 + \$22,300 – \$22,000).....			<u>144,300</u>
Total liabilities and owner's equity.....			<u>\$289,800</u>

PROBLEM 4-4B (Continued)

(c)	Dec. 31	Insurance Expense	1,200	
		Prepaid Insurance		1,200
	31	Depreciation Expense—Building	3,000	
		Accumulated Depreciation— Building		3,000
	31	Depreciation Expense—Equipment	4,700	
		Accumulated Depreciation— Equipment		4,700
	31	Unearned Rent Revenue	4,000	
		Rent Revenue		4,000
	31	Interest Expense	11,000	
		Interest Payable		11,000
(d)	Dec. 31	Service Revenue	90,700	
		Rent Revenue	33,000	
		Income Summary		123,700
	31	Income Summary	101,400	
		Salaries Expense		42,000
		Advertising Expense		20,500
		Interest Expense		11,000
		Utilities Expense		19,000
		Depreciation Expense— Equipment		4,700
		Depreciation Expense— Building		3,000
		Insurance Expense		1,200
	31	Income Summary	22,300	
		R. Neillsen, Capital		22,300
	31	R. Neillsen, Capital	22,000	
		R. Neillsen, Drawing		22,000

(e) **ROCKFORD MANAGEMENT SERVICES**
Post-Closing Trial Balance
December 31, 2010

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PROBLEM 4-5B

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
July 1	Cash.....	101	20,000	
	Lee Chang, Capital	301		20,000
1	Equipment	157	9,000	
	Cash	101		4,000
	Accounts Payable.....	201		5,000
3	Cleaning Supplies.....	128	2,100	
	Accounts Payable.....	201		2,100
5	Prepaid Insurance.....	130	1,800	
	Cash	101		1,800
12	Accounts Receivable	112	4,500	
	Service Revenue	400		4,500
18	Accounts Payable	201	2,900	
	Cash	101		2,900
20	Salaries Expense.....	726	2,000	
	Cash	101		2,000
21	Cash.....	101	3,400	
	Accounts Receivable.....	112		3,400
25	Accounts Receivable	112	9,000	
	Service Revenue	400		9,000
31	Gas & Oil Expense	633	350	
	Cash	101		350
31	Lee Chang, Drawing	306	1,600	
	Cash	101		1,600

(b) & (c) **CHANG'S CLEANING SERVICES**
Worksheet
For the Month Ended July 31, 2010

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	10,750				10,750				10,750	
Accounts Receivable	10,100		(a) 2,700		12,800				12,800	
Cleaning Supplies	2,100			(d) 1,400	700				700	
Prepaid Insurance	1,800			(c) 150	1,650				1,650	
Equipment	9,000				9,000				9,000	
Accounts Payable		4,200				4,200				4,200
Lee Chang, Capital		20,000				20,000				20,000
Lee Chang, Drawing	1,600				1,600				1,600	
Service Revenue		13,500		(a) 2,700		16,200				16,200
Gas & Oil Expense	350				350		350			
Salaries Expense	2,000		(e) 1,000		3,000		3,000			
Totals	<u>37,700</u>	<u>37,700</u>								
Depreciation Expense			(b) 500		500		500			
Accum. Depr.—Equipment				(b) 500		500				500
Insurance Expense			(c) 150		150		150			
Cleaning Supplies Expense			(d) 1,400		1,400		1,400			
Salaries Payable				(e) 1,000		1,000				1,000
Totals			<u>5,750</u>	<u>5,750</u>	<u>41,900</u>	<u>41,900</u>	<u>5,400</u>	<u>16,200</u>	<u>36,500</u>	<u>25,700</u>
Net Income							<u>10,800</u>			<u>10,800</u>
Totals							<u>16,200</u>	<u>16,200</u>	<u>36,500</u>	<u>36,500</u>

Key: (a) Service Revenue Earned; (b) Depreciation Expense; (c) Insurance Expired; (d) Cleaning Supplies Used; (e) Unpaid Salaries.

PROBLEM 4-5B (Continued)**(a), (e) & (f)**

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1	20,000		20,000
1		J1		4,000	16,000
5		J1		1,800	14,200
18		J1		2,900	11,300
20		J1		2,000	9,300
21		J1	3,400		12,700
31		J1		350	12,350
31		J1		1,600	10,750

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
July 12		J1	4,500		4,500
21		J1		3,400	1,100
25		J1	9,000		10,100
31	Adjusting	J2	2,700		12,800

Cleaning Supplies					No. 128
Date	Explanation	Ref.	Debit	Credit	Balance
July 3		J1	2,100		2,100
31	Adjusting	J2		1,400	700

Prepaid Insurance					No. 130
Date	Explanation	Ref.	Debit	Credit	Balance
July 5		J1	1,800		1,800
31	Adjusting	J2		150	1,650

Equipment					No. 157
Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1	9,000		9,000

PROBLEM 4-5B (Continued)**Accumulated Depreciation—Equipment****No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2		500	500

Accounts Payable**No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1		5,000	5,000
3		J1		2,100	7,100
18		J1	2,900		4,200

Salaries Payable**No. 212**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2		1,000	1,000

Lee Chang, Capital**No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1		20,000	20,000
31	Closing	J3		10,800	30,800
31	Closing	J3	1,600		29,200

Lee Chang, Drawing**No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		J1	1,600		1,600
31	Closing	J3		1,600	0

Income Summary**No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Closing	J3		16,200	16,200
31	Closing	J3	5,400		10,800
31	Closing	J3	10,800		0

PROBLEM 4-5B (Continued)

Service Revenue					No. 400
Date	Explanation	Ref.	Debit	Credit	Balance
July 12		J1		4,500	4,500
25		J1		9,000	13,500
31	Adjusting	J2		2,700	16,200
31	Closing	J3	16,200		0

Gas & Oil Expense					No. 633
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		J1	350		350
31	Closing	J3		350	0

Cleaning Supplies Expense					No. 634
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	1,400		1,400
31	Closing	J3		1,400	0

Depreciation Expense					No. 711
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	500		500
31	Closing	J3		500	0

Insurance Expense					No. 722
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	150		150
31	Closing	J3		150	0

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
July 20		J1	2,000		2,000
31	Adjusting	J2	1,000		3,000
31	Closing	J3		3,000	0

(d) CHANG'S CLEANING SERVICE
Income Statement
For the Month Ended July 31, 2010

Revenues		
Service revenue.....		\$16,200
Expenses		
Salaries expense.....	\$3,000	
Cleaning supplies expense	1,400	
Depreciation expense.....	500	
Gas & oil expense.....	350	
Insurance expense	150	
Total expenses		<u>5,400</u>
Net income		<u>\$10,800</u>

CHANG'S CLEANING SERVICE
Owner's Equity Statement
For the Month Ended July 31, 2010

Lee Chang, Capital, July 1		\$ 0
Add: Investments	\$20,000	
Net income.....	<u>10,800</u>	<u>30,800</u>
		30,800
Less: Drawings		<u>1,600</u>
Lee Chang, Capital, July 31.....		<u>\$29,200</u>

CHANG'S CLEANING SERVICE
Balance Sheet
July 31, 2010

Assets		
Current assets		
Cash	\$10,750	
Accounts receivable	12,800	
Cleaning supplies.....	700	
Prepaid insurance	<u>1,650</u>	
Total current assets		\$25,900

CHANG'S CLEANING SERVICE
Balance Sheet (Continued)
July 31, 2010

Assets (Continued)			
Property, plant, and equipment			
Equipment	\$9,000		
Less: Accumulated depreciation	<u>500</u>	<u>8,500</u>	
Total assets			<u>\$34,400</u>
Liabilities and Owner's Equity			
Current liabilities			
Accounts payable	\$4,200		
Salaries payable	<u>1,000</u>		
Total current liabilities			\$ 5,200
Owner's equity			
Lee Chang, Capital			<u>29,200</u>
Total liabilities and owner's equity			<u>\$34,400</u>

(e)

General Journal				J2
Date	Account Titles and Explanation	Ref.	Debit	Credit
July 31	Accounts Receivable.....	112	2,700	
	Service Revenue.....	400		2,700
31	Depreciation Expense	711	500	
	Accumulated Depreciation— Equipment.....	158		500
31	Insurance Expense.....	722	150	
	Prepaid Insurance.....	130		150
31	Cleaning Supplies Expense	634	1,400	
	Cleaning Supplies.....	128		1,400
31	Salaries Expense	726	1,000	
	Salaries Payable	212		1,000

PROBLEM 4-5B (Continued)

(f) General Journal

J3

Date	Account Titles and Explanation	Ref.	Debit	Credit
July 31	Service Revenue	400	16,200	
	Income Summary	350		16,200
31	Income Summary	350	5,400	
	Salaries Expense	726		3,000
	Depreciation Expense	711		500
	Insurance Expense	722		150
	Cleaning Supplies Expense	634		1,400
	Gas & Oil Expense	633		350
31	Income Summary	350	10,800	
	Lee Chang, Capital	301		10,800
31	Lee Chang, Capital	301	1,600	
	Lee Chang, Drawing	306		1,600

(g) CHANG'S CLEANING SERVICE
Post-Closing Trial Balance
July 31, 2010

	Debit	Credit
Cash	\$10,750	
Accounts Receivable	12,800	
Cleaning Supplies	700	
Prepaid Insurance	1,650	
Equipment	9,000	
Accumulated Depreciation—Equipment		\$ 500
Accounts Payable		4,200
Salaries Payable		1,000
Lee Chang, Capital		29,200
	<u>\$34,900</u>	<u>\$34,900</u>

COMPREHENSIVE PROBLEM: CHAPTERS 2 TO 4

(a)

General Journal					J1
Date	Account Titles and Explanation	Ref.	Debit	Credit	
July 1	Cash	101	14,000		
	Julie Molony, Capital	301		14,000	
1	Equipment.....	157	10,000		
	Cash	101		3,000	
	Accounts Payable	201		7,000	
3	Cleaning Supplies	128	800		
	Accounts Payable	201		800	
5	Prepaid Insurance	130	1,800		
	Cash	101		1,800	
12	Accounts Receivable.....	112	3,800		
	Service Revenue	400		3,800	
18	Accounts Payable.....	201	1,400		
	Cash	101		1,400	
20	Salaries Expense	726	1,600		
	Cash	101		1,600	
21	Cash	101	1,400		
	Accounts Receivable.....	112		1,400	
25	Accounts Receivable.....	112	1,500		
	Service Revenue	400		1,500	
31	Gas & Oil Expense	633	400		
	Cash	101		400	
31	Julie Molony, Drawing.....	306	600		
	Cash	101		600	

COMPREHENSIVE PROBLEM (Continued)

(b) & (c) **JULIE'S MAIDS CLEANING SERVICE**
Worksheet
For the Month Ended July 31, 2010

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	6,600				6,600				6,600	
Accounts Receivable	3,900		(a) 1,300		5,200				5,200	
Cleaning Supplies	800			(d) 700	100				100	
Prepaid Insurance	1,800			(c) 150	1,650				1,650	
Equipment	10,000				10,000				10,000	
Accounts Payable		6,400				6,400				6,400
Julie Molony, Capital		14,000				14,000				14,000
Julie Molony, Drawing	600				600				600	
Service Revenue		5,300		(a) 1,300		6,600		6,600		
Gas & Oil Expense	400				400		400			
Salaries Expense	1,600		(e) 500		2,100		2,100			
Total	<u>25,700</u>	<u>25,700</u>								
Depreciation Expense			(b) 200		200		200			
Accum. Depr.—Equipment				(b) 200		200				200
Insurance Expense			(c) 150		150		150			
Cleaning Supplies Expense			(d) 700		700		700			
Salaries Payable				(e) 500		500				500
Totals			<u>2,850</u>	<u>2,850</u>	<u>27,700</u>	<u>27,700</u>	<u>3,550</u>	<u>6,600</u>	<u>24,150</u>	<u>21,100</u>
Net Income							<u>3,050</u>			<u>3,050</u>
Totals							<u>6,600</u>	<u>6,600</u>	<u>24,150</u>	<u>24,150</u>

Key: (a) Service Revenue; (b) Depreciation Expense; (c) Insurance Expired; (d) Cleaning Supplies Used; (e) Unpaid Salaries.

COMPREHENSIVE PROBLEM (Continued)

(a), (e) & (f)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1	14,000		14,000
1		J1		3,000	11,000
5		J1		1,800	9,200
18		J1		1,400	7,800
20		J1		1,600	6,200
21		J1	1,400		7,600
31		J1		400	7,200
31		J1		600	6,600

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
July 12		J1	3,800		3,800
21		J1		1,400	2,400
25		J1	1,500		3,900
31	Adjusting	J2	1,300		5,200

Cleaning Supplies					No. 128
Date	Explanation	Ref.	Debit	Credit	Balance
July 3		J1	800		800
31	Adjusting	J2		700	100

Prepaid Insurance					No. 130
Date	Explanation	Ref.	Debit	Credit	Balance
July 5		J1	1,800		1,800
31	Adjusting	J2		150	1,650

Equipment					No. 157
Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1	10,000		10,000

COMPREHENSIVE PROBLEM (Continued)

Accumulated Depreciation—Equipment

No. 158

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2		200	200

Accounts Payable

No. 201

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1		7,000	7,000
3		J1		800	7,800
18		J1	1,400		6,400

Salaries Payable

No. 212

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2		500	500

Julie Molony, Capital

No. 301

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		J1		14,000	14,000
31	Closing	J3		3,050	17,050
31	Closing	J3	600		16,450

Julie Molony, Drawing

No. 306

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		J1	600		600
31	Closing	J3		600	0

Income Summary

No. 350

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Closing	J3		6,600	6,600
31	Closing	J3	3,550		3,050
31	Closing	J3	3,050		0

COMPREHENSIVE PROBLEM (Continued)

Service Revenue					No. 400
Date	Explanation	Ref.	Debit	Credit	Balance
July 12		J1		3,800	3,800
25		J1		1,500	5,300
31	Adjusting	J2		1,300	6,600
31	Closing	J3	6,600		0

Gas & Oil Expense					No. 633
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		J1	400		400
31	Closing	J3		400	0

Cleaning Supplies Expense					No. 634
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	700		700
31	Closing	J3		700	0

Depreciation Expense					No. 711
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	200		200
31	Closing	J3		200	0

Insurance Expense					No. 722
Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting	J2	150		150
31	Closing	J3		150	0

Salaries Expense					No. 726
Date	Explanation	Ref.	Debit	Credit	Balance
July 20		J1	1,600		1,600
31	Adjusting	J2	500		2,100
31	Closing	J3		2,100	0

COMPREHENSIVE PROBLEM (Continued)

(d) JULIE'S MAIDS CLEANING SERVICE
Income Statement
For the Month Ended July 31, 2010

Revenues		
Service revenue.....		\$6,600
Expenses		
Salaries expense.....	\$2,100	
Cleaning supplies expense	700	
Gas & oil expense.....	400	
Depreciation expense.....	200	
Insurance expense	150	
Total expenses		<u>3,550</u>
Net income.....		<u>\$3,050</u>

JULIE'S MAIDS CLEANING SERVICE
Statement of Owner's Equity
For the Month Ended July 31, 2010

Julie Molony, Capital, July 1		\$ 0
Add: Investments	\$14,000	
Net income.....	<u>3,050</u>	<u>17,050</u>
		17,050
Less: Drawings		<u>600</u>
Julie Molony, Capital, July 31.....		<u>\$16,450</u>

COMPREHENSIVE PROBLEM (Continued)**JULIE'S MAIDS CLEANING SERVICE****Balance Sheet****July 31, 2010**

Assets			
Current assets			
Cash.....	\$6,600		
Accounts receivable.....	5,200		
Cleaning supplies	100		
Prepaid insurance	<u>1,650</u>		
Total current assets.....			\$13,550
Capital assets			
Equipment.....	10,000		
Less: Accumulated depreciation	<u>200</u>	<u>9,800</u>	
Total assets			<u>\$23,350</u>
Liabilities and Owner's Equity			
Current liabilities			
Accounts payable	\$6,400		
Salaries payable	<u>500</u>		
Total current liabilities.....			\$ 6,900
Owner's equity			
Julie Molony, Capital.....		<u>16,450</u>	
Total liabilities and owner's equity			<u>\$23,350</u>

COMPREHENSIVE PROBLEM (Continued)**(e)**

General Journal				J2
Date	Account Titles and Explanation	Ref.	Debit	Credit
July 31	Accounts Receivable	112	1,300	
	 Service Revenue	400		1,300
31	Depreciation Expense	711	200	
	 Accumulated Depreciation—			
	 Equipment	158		200
31	Insurance Expense	722	150	
	 Prepaid Insurance	130		150
31	Cleaning Supplies Expense	634	700	
	 Cleaning Supplies	128		700
31	Salaries Expense	726	500	
	 Salaries Payable	212		500

(f)

General Journal				J3
Date	Account Titles and Explanation	Ref.	Debit	Credit
July 31	Service Revenue	400	6,600	
	 Income Summary	350		6,600
31	Income Summary	350	3,550	
	 Salaries Expense	726		2,100
	 Depreciation Expense	711		200
	 Insurance Expense	722		150
	 Cleaning Supplies Expense	634		700
	 Gas & Oil Expense	633		400
31	Income Summary	350	3,050	
	 Julie Molony, Capital	301		3,050
31	Julie Molony, Capital	301	600	
	 Julie Molony, Drawing	306		600

COMPREHENSIVE PROBLEM (Continued)**(g)****JULIE'S MAIDS CLEANING SERVICE
Post-Closing Trial Balance
July 31, 2010**

	Debit	Credit
Cash.....	\$ 6,600	
Accounts Receivable	5,200	
Cleaning Supplies	100	
Prepaid Insurance	1,650	
Equipment	10,000	
Accumulated Depreciation—Equipment		\$ 200
Accounts Payable		6,400
Salaries Payable		500
Julie Molony, Capital.....		16,450
	<u>\$23,550</u>	<u>\$23,550</u>

- (a) **Total current assets were \$10,151 million at December 29, 2007, and \$9,130 million at December 30, 2006.**
- (b) **Current assets are properly listed in the order of liquidity. As you will learn in the next chapter, inventory is considered to be less liquid than receivables. Thus, it is listed below receivables and before prepaid expenses and other current assets.**
- (c) **The asset classifications are similar to the text: (1) current assets, (2) property, plant, and equipment, (3) intangible assets, and (4) investments.**
- (d) **Cash equivalents are investments with original maturities of 3 months or less that PepsiCo does not intend to rollover beyond three months.**
- (e) **Total current liabilities were \$7,753 million at December 29, 2007, and \$6,860 million at December 30, 2006.**

(a)	(in millions)	PepsiCo	Coca-Cola
1.	Total current assets	10,151	12,105
2.	Net property, plant & equipment	11,228	8,493
3.	Total current liabilities	7,753	13,225
4.	Total stockholders' (shareholders') equity	17,234	21,744

- (b) Current assets are cash and other resources that are reasonably expected to be realized in cash or sold or consumed within one year or the company's operating cycle, whichever is longer. Current liabilities are obligations that are reasonably expected to be paid from existing current assets or through the creation of other current liabilities.

PepsiCo's current assets were 31% greater than its current liabilities, but Coca-Cola's current assets were 8% less than its current liabilities. From this information, it appears that PepsiCo is in a better liquidity position than Coca-Cola.

Coca-Cola's stockholders' equity represents a slightly larger percentage of total assets 50.3% $\left(\frac{\$21,744}{\$43,269}\right)$ than PepsiCo's 49.8% $\left(\frac{\$17,234}{\$34,628}\right)$. As a result, Coca-Cola has less debt relative to its total assets than PepsiCo. It therefore appears that Coca-Cola is less likely to default on a debt obligation.

The solution is dependent upon the companies chosen by the student.

(a)

WHITEGLOVES JANITORIAL SERVICE**Balance Sheet****December 31, 2010**

Assets			
Current assets			
Cash.....		\$ 6,500	
Accounts receivable (\$9,000 + \$3,700)		12,700	
Janitorial supplies (\$5,200 – \$2,700)		2,500	
Prepaid insurance (\$4,800 X 2/3).....		<u>3,200</u>	
Total current assets.....			\$24,900
Property, plant, and equipment			
Cleaning equipment (\$22,000 + \$4,000).....	\$26,000		
Less: Accum. depreciation— cleaning equipment (\$4,000 + \$2,000).....	<u>6,000</u>	\$20,000	
Delivery trucks (\$34,000 + \$5,000).....	39,000		
Less: Accum. depreciation— delivery trucks (\$5,000 + \$5,000).....	<u>10,000</u>	<u>29,000</u>	<u>49,000</u>
Total assets			<u>\$73,900</u>
Liabilities and Owner's Equity			
Current liabilities			
Notes payable due within one year		\$10,000	
Accounts payable (\$2,500 + \$500)		3,000	
Interest payable (\$25,000 X 10% X 6/12)		<u>1,250</u>	
Total current liabilities.....			\$14,250
Long-term liabilities			
Notes payable, due July 1, 2012.....		<u>15,000</u>	
Total liabilities			<u>29,250</u>
Owner's equity			
Nancy Kohl, Capital		<u>44,650*</u>	
Total liabilities and owner's equity.....			<u>\$73,900</u>

WHITEGLOVES JANITORIAL SERVICE
Balance Sheet (Continued)
December 31, 2010

*Capital balance as reported.....		\$54,000
Add: Earned but unbilled fees.....		<u>3,700</u>
		57,700
Less: Janitorial supplies used	\$2,700	
Insurance expired (\$4,800 X 1/3).....	1,600	
Depreciation (\$2,000 + \$5,000)	7,000	
Expenses incurred but unpaid	500	
Interest accrued.....	<u>1,250</u>	
Total.....		<u>13,050</u>
Capital balance as adjusted		<u>\$44,650</u>

- (b) Whitegloves Janitorial Service met the terms of the bank loan because current assets exceed current liabilities by \$10,650 (\$24,900 – \$14,250) at December 31, 2010.

MEMO

To: Accounting Instructor

From: Student

Re: Accounting Cycle

The required steps in the accounting cycle, in the order in which they should be completed, are:

- 1. Analyze business transactions.**
- 2. Journalize the transactions.**
- 3. Post to ledger accounts.**
- 4. Prepare a trial balance.**
- 5. Journalize and post adjusting entries.**
- 6. Prepare an adjusted trial balance.**
- 7. Prepare financial statements.**
- 8. Journalize and post closing entries.**
- 9. Prepare a post-closing trial balance.**

The optional steps in the accounting cycle include preparing a worksheet and preparing reversing entries. If a worksheet is prepared, it is done after step 3 above, and it includes steps 4 and 6. The worksheet is a form used to make it easier to prepare adjusting entries and financial statements. If reversing entries are prepared, they are journalized and posted after step 9, at the beginning of the next accounting period. A reversing entry is the exact opposite of a previously recorded adjusting entry and simplifies the recording of subsequent transactions.

- (a) The stakeholders in this case are:
- ▶ You, as controller.
 - ▶ Jerry McNabb, president.
 - ▶ Users of the company's financial statements.
- (b) The ethical issue is the continued circulation of significantly misstated financial statements. As controller, you have just issued misleading financial statements. You have acted ethically by telling the company's president. The president has reacted unethically by allowing the misleading financial statements to continue to circulate.
- (c) As controller, you should impress upon the president the consequences of having those misleading financial statements be detected by some user or the SEC (if you are a public company). Also stress upon him that you have a professional obligation to correct the statements or to resign.

The following is a personal balance sheet using the classified presentation. Note that the earnings from the part-time job as well as the tuition costs are not listed since neither of those items is an asset, liability, or equity item.

Assets

Current assets

Cash.....	\$1,200	
Money market account.....	1,800	
Certificate of deposit.....	3,000	
Accounts receivable from brother.....	<u>300</u>	
Total current assets.....		\$ 6,300

Property, plant, and equipment

Automobile	7,000	
Video and stereo equipment	1,250	
Home computer	<u>800</u>	<u>9,050</u>
Total assets		<u>\$15,350</u>

Liabilities and Owner's Equity

Current liabilities

Current portion of automobile loan	\$1,500	
Current portion of credit card payable.....	<u>150</u>	
Total current liabilities.....		\$ 1,650

Long-term liabilities

Automobile loan	4,000	
Student loan.....	5,000	
Credit card payable	<u>1,650</u>	
Total long-term liabilities		<u>10,650</u>
Total liabilities		12,300

Owner's equity

M. Y. Own, Capital (\$15,350 – \$12,300)	<u>3,050</u>	
Total liabilities and owner's equity		<u>\$15,350</u>

CHAPTER 5

Accounting for Merchandising Operations

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the differences between service and merchandising companies.	2, 3, 4	1	2	1		
2. Explain the recording of purchases under a perpetual inventory system.	5, 6, 7, 8	2, 4	3	2, 3, 4, 11	1A, 2A, 4A	1B, 2B, 4B
3. Explain the recording of sales revenues under a perpetual inventory system.	9, 10, 11	2, 3	4	3, 4, 5, 11	1A, 2A, 4A	1B, 2B, 4B
4. Explain the steps in the accounting cycle for a merchandising company.	1, 12, 13, 14	5, 6	5	6, 7, 8	3A, 4A, 8A	3B, 4B
5. Distinguish between a multiple-step and a single-step income statement.	18, 20	7, 8, 9		6, 9, 10, 12, 13, 14	2A, 3A, 8A	2B, 3B
6. Explain the computation and importance of gross profit.	15, 16, 17, 20	9, 11		9, 12, 13	2A, 5A, 6A, 8A	2B, 5B, 6B
*7. Explain the recording of purchases and sales of inventory under a periodic inventory system.	21, 22	10, 11, 12		15, 16, 17, 18, 19	5A, 6A, 7A	5B, 6B, 7B
*8. Prepare a worksheet for a merchandising company.	23	13		20, 21	8A	

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendices to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Journalize purchase and sales transactions under a perpetual inventory system.	Simple	20–30
2A	Journalize, post, and prepare a partial income statement.	Simple	30–40
3A	Prepare financial statements and adjusting and closing entries.	Moderate	40–50
4A	Journalize, post, and prepare a trial balance.	Simple	30–40
*5A	Determine cost of goods sold and gross profit under periodic approach.	Moderate	40–50
*6A	Calculate missing amounts and assess profitability.	Moderate	20–30
*7A	Journalize, post, and prepare trial balance and partial income statement using periodic approach.	Simple	30–40
*8A	Complete accounting cycle beginning with a worksheet.	Moderate	50–60
1B	Journalize purchase and sales transactions under a perpetual inventory system.	Simple	20–30
2B	Journalize, post, and prepare a partial income statement.	Simple	30–40
3B	Prepare financial statements and adjusting and closing entries.	Moderate	40–50
4B	Journalize, post, and prepare a trial balance.	Simple	30–40
*5B	Determine cost of goods sold and gross profit under periodic approach.	Moderate	40–50
*6B	Calculate missing amounts and assess profitability.	Moderate	20–30
*7B	Journalize, post, and prepare trial balance and partial income statement using periodic approach.	Simple	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 5
ACCOUNTING FOR MERCHANDISING OPERATIONS

Number	SO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	4–6
BE2	2, 3	AP	Simple	2–4
BE3	3	AP	Simple	6–8
BE4	2	AP	Simple	6–8
BE5	4	AP	Simple	1–2
BE6	4	AP	Simple	2–4
BE7	5	AP	Simple	2–4
BE8	5	C	Simple	4–6
BE9	5, 6	AP	Simple	4–6
BE10	7	AP	Simple	4–6
BE11	6, 7	AP	Simple	4–6
BE12	7	AP	Simple	3–5
BE13	8	K	Simple	2–4
DI1	2	AP	Simple	2–4
DI2	3	AP	Simple	4–6
DI3	4	AP	Simple	4–6
DI4	5	AP	Simple	10–12
EX1	1	C	Simple	3–5
EX2	2	AP	Simple	8–10
EX3	2, 3	AP	Simple	8–10
EX4	2, 3	AP	Simple	8–10
EX5	3	AP	Simple	8–10
EX6	4, 5	AP	Simple	6–8
EX7	4	AP	Simple	6–8
EX8	4	AP	Simple	8–10
EX9	5, 6	AP	Simple	8–10
EX10	5	AP	Simple	8–10
EX11	2, 3	AN	Moderate	6–8
EX12	5, 6	AP	Simple	8–10
EX13	5, 6	AN	Simple	6–8

ACCOUNTING FOR MERCHANDISING OPERATIONS (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX14	5	AN	Moderate	8–10
EX15	7	AP	Simple	6–8
EX16	7	AP	Simple	8–10
EX17	7	AN	Moderate	10–12
EX18	7	AP	Simple	8–10
EX19	7	AP	Simple	8–10
EX20	8	AP	Simple	2–4
EX21	8	AP	Simple	8–10
P1A	2, 3	AP	Simple	20–30
P2A	2, 3, 5, 6	AP	Simple	30–40
P3A	4, 5	AN	Moderate	40–50
P4A	2–4	AP	Simple	30–40
P5A	6, 7	AP	Moderate	40–50
P6A	6, 7	AN	Moderate	20–30
P7A	7	AP	Simple	30–40
P8A	4–6, 8	AP	Moderate	50–60
P1B	2, 3	AP	Simple	20–30
P2B	2, 3, 5, 6	AP	Simple	30–40
P3B	4, 5	AN	Moderate	40–50
P4B	2–4	AP	Simple	30–40
P5B	6, 7	AP	Moderate	40–50
P6B	6, 7	AN	Moderate	20–30
P7B	7	AP	Simple	30–40
BYP1	6	AN, E	Simple	10–15
BYP2	5, 6	AN, E	Simple	15–20
BYP3	—	AP	Simple	10–15
BYP4	5, 6	AN, S, E	Moderate	20–30
BYP5	3	C	Simple	10–15
BYP6	2	E	Simple	10–15
BYP7	—	E	Simple	5–10

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the differences between service and merchandising companies.	Q5-2	Q5-3 Q5-4	BE5-1			
2. Explain the recording of purchases under a perpetual inventory system.	Q5-5	Q5-6 Q5-7	Q5-8 BE5-2 BE5-4 DI5-1 E5-2 P5-1B	E5-3 E5-4 P5-1A P5-2A P5-4B	E5-11	
3. Explain the recording of sales revenues under a perpetual inventory system.	Q5-10		Q5-11 BE5-2 BE5-3 DI5-2 E5-3 P5-4A	E5-4 E5-5 P5-1A P5-2A P5-4B	Q5-9 E5-11	
4. Explain the steps in the accounting cycle for a merchandising company.		Q5-1 Q5-12 Q5-14	Q5-13 BE5-5 BE5-6 DI5-3 P5-4A	E5-6 E5-7 E5-8 P5-4A	P5-8A P5-4B P5-3B	
5. Distinguish between a multiple-step and a single-step income statement.	Q5-18	Q5-19 BE5-8 DI5-4	BE5-7 BE5-9 E5-6 E5-9 P5-2A	E5-10 E5-12 E5-13 P5-2A	E5-14 P5-8A P5-3A P5-3B	
6. Explain the computation and importance of gross profit.		Q5-17	Q5-15 Q5-16 Q5-20 BE5-9 BE5-11 P5-2B	E5-9 E5-12 E5-13 P5-2A P5-2B	P5-5A P5-5B P5-8A P5-6A P5-6B	
7. Explain the recording of purchases and sales under a periodic inventory system.	Q5-21		Q5-22 BE5-10 BE5-11 BE5-12	E5-15 E5-17 E5-18 E5-19	P5-5A P5-5B P5-7A P5-7B	E5-16 P5-6A P5-6B
8. Prepare a worksheet for a merchandising company.	Q5-23 BE5-13		E5-20 E5-21	P5-8A		
Broadening Your Perspective		Communication	Exploring the Web	Financial Reporting Comparative Analysis Decision Making Across the Organization	Decision Making Across the Organization	All About You Comparative Analysis Financial Reporting Decision Making Across the Organization Ethics Case

ANSWERS TO QUESTIONS

1. (a) Disagree. The steps in the accounting cycle are the same for both a merchandising company and a service company.
 (b) The measurement of income is conceptually the same. In both types of companies, net income (or loss) results from the matching of expenses with revenues.
2. The normal operating cycle for a merchandising company is likely to be longer than in a service company because inventory must first be purchased and sold, and then the receivables must be collected.
3. (a) The components of revenues and expenses differ as follows:

	Merchandising	Service
Revenues	Sales	Fees, Rents, etc.
Expenses	Cost of Goods Sold and Operating	Operating (only)

- (b) The income measurement process is as follows:



4. Income measurement for a merchandising company differs from a service company as follows:
 (a) sales are the primary source of revenue and (b) expenses are divided into two main categories: cost of goods sold and operating expenses.
5. In a perpetual inventory system, cost of goods sold is determined each time a sale occurs.
6. The letters FOB mean Free on Board. FOB shipping point means that goods are placed free on board the carrier by the seller. The buyer then pays the freight and debits Merchandise Inventory. FOB destination means that the goods are placed free on board to the buyer's place of business. Thus, the seller pays the freight and debits Freight-out.
7. Credit terms of 2/10, n/30 mean that a 2% cash discount may be taken if payment is made within 10 days of the invoice date; otherwise, the invoice price, less any returns, is due 30 days from the invoice date.
8.

8.	July 24	Accounts Payable (\$2,000 – \$200)	1,800
		Merchandise Inventory (\$1,800 X 2%)	36
		Cash (\$1,800 – \$36)	1,764
9. Agree. In accordance with the revenue recognition principle, sales revenues are generally considered to be earned when the goods are transferred from the seller to the buyer; that is, when the exchange transaction occurs. The earning of revenue is not dependent on the collection of credit sales.
10. (a) The primary source documents are: (1) cash sales—cash register tapes and (2) credit sales—sales invoice.

(b) The entries are:

		<u>Debit</u>	<u>Credit</u>
Cash sales—	Cash.....	XX	
	Sales.....		XX
	Cost of Goods Sold.....	XX	
	Merchandise Inventory.....		XX
Credit sales—	Accounts Receivable	XX	
	Sales.....		XX
	Cost of Goods Sold.....	XX	
	Merchandise Inventory.....		XX
11.	July 19 Cash (\$800 – \$16)	784	
	Sales Discounts (\$800 X 2%)	16	
	Accounts Receivable (\$900 – \$100)		800
12.	The perpetual inventory records for merchandise inventory may be incorrect due to a variety of causes such as recording errors, theft, or waste.		
13.	Two closing entries are required:		
	(1) Sales.....	200,000	
	Income Summary		200,000
	(2) Income Summary	145,000	
	Cost of Goods Sold		145,000
14.	Of the merchandising accounts, only Merchandise Inventory will appear in the post-closing trial balance.		
15.	Sales revenues.....		\$105,000
	Cost of goods sold		70,000
	Gross profit		<u>\$ 35,000</u>
	Gross profit rate: $\$35,000 \div \$105,000 = 33.3\%$		
16.	Gross profit.....		\$370,000
	Less: Net income		240,000
	Operating expenses		<u>\$130,000</u>
17.	There are three distinguishing features in the income statement of a merchandising company: (1) a sales revenues section, (2) a cost of goods sold section, and (3) gross profit.		

Questions Chapter 5 (Continued)

18. (a) The operating activities part of the income statement has three sections: sales revenues, cost of goods sold, and operating expenses.
- (b) The nonoperating activities part consists of two sections: other revenues and gains, and other expenses and losses.
19. The single-step income statement differs from the multiple-step income statement in that: (1) all data are classified into two categories: revenues and expenses, and (2) only one step, subtracting total expenses from total revenues, is required in determining net income (or net loss).
20. PepsiCo's gross profit rate for 2007 was 54.3% $[(\$39,474 - \$18,038) \div \$39,474]$. Its gross profit rate in 2006 was 55.1% $[(\$35,137 - \$15,762) \div \$35,137]$ so the rate decreased from 2006 to 2007.

21.

<u>Accounts</u>	<u>Added/Deducted</u>
Purchase Returns and Allowances	Deducted
Purchase Discounts	Deducted
Freight-in	Added

*22.	July 24	Accounts Payable (\$3,000 – \$200).....	2,800	
		Purchase Discounts (\$2,800 X 2%).....		56
		Cash (\$2,800 – \$56)		2,744

- *23. The columns are:
- (a) Merchandise Inventory—Trial Balance (Dr.), Adjusted Trial Balance (Dr.), and Balance Sheet (Dr.).
- (b) Cost of Goods Sold—Trial Balance (Dr.), Adjusted Trial Balance (Dr.), and Income Statement (Dr.).

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 5-1

- (a) Cost of goods sold = \$45,000 (\$75,000 – \$30,000).
Operating expenses = \$19,200 (\$30,000 – \$10,800).
- (b) Gross profit = \$38,000 (\$108,000 – \$70,000).
Operating expenses = \$8,500 (\$38,000 – \$29,500).
- (c) Sales = \$151,500 (\$71,900 + \$79,600).
Net income = \$40,100 (\$79,600 – \$39,500).

BRIEF EXERCISE 5-2

Hollins Company

Merchandise Inventory	780	
Accounts Payable		780

Gordon Company

Accounts Receivable	780	
Sales		780
Cost of Goods Sold	520	
Merchandise Inventory		520

BRIEF EXERCISE 5-3

(a) Accounts Receivable	900,000	
Sales		900,000
Cost of Goods Sold	620,000	
Merchandise Inventory		620,000
(b) Sales Returns and Allowances	120,000	
Accounts Receivable		120,000
Merchandise Inventory	90,000	
Cost of Goods Sold		90,000

BRIEF EXERCISE 5-3 (Continued)

(c) Cash (\$780,000 – \$15,600)	764,400	
Sales Discounts (\$780,000 X 2%)	15,600	
Accounts Receivable.....		780,000
(\$900,000 – \$120,000)		

BRIEF EXERCISE 5-4

(a) Merchandise Inventory	900,000	
Accounts Payable.....		900,000
(b) Accounts Payable.....	120,000	
Merchandise Inventory		120,000
(c) Accounts Payable (\$900,000 – \$120,000).....	780,000	
Merchandise Inventory		
(\$780,000 X 2%).....		15,600
Cash (\$780,000 – \$15,600)		764,400

BRIEF EXERCISE 5-5

Cost of Goods Sold.....	1,500	
Merchandise Inventory		1,500

BRIEF EXERCISE 5-6

Sales	195,000	
Income Summary.....		195,000
Income Summary.....	107,000	
Cost of Goods Sold.....		105,000
Sales Discounts		2,000

BRIEF EXERCISE 5-7

MAULDER COMPANY
Income Statement (Partial)
For the Month Ended October 31, 2010

Sales revenues		
Sales (\$280,000 + \$100,000).....		\$380,000
Less: Sales returns and allowances.....	\$11,000	
Sales discounts	<u>13,000</u>	<u>24,000</u>
Net sales.....		<u><u>\$356,000</u></u>

BRIEF EXERCISE 5-8

As the name suggests, numerous steps are required in determining net income in a multiple-step income statement. In contrast, only one step is required to compute net income in a single-step income statement. A multiple-step statement has five sections whereas a single-step statement has only two sections. The multiple-step statement provides more detail than a single-step statement, but net income is the same under both statements.

Some of the differences in presentation can be seen from the comparative information presented below.

(1) Multiple-Step Income Statement

	<u>Item</u>	<u>Section</u>
a.	Gain on sale of equipment	Other revenues and gains
b.	Interest expense	Other expenses and losses
c.	Casualty loss from vandalism	Other expenses and losses
d.	Cost of goods sold	Cost of goods sold

(2) Single-Step Income Statement

	<u>Item</u>	<u>Section</u>
a.	Gain on sale of equipment	Revenues
b.	Interest expense	Expenses
c.	Casualty loss from vandalism	Expenses
d.	Cost of goods sold	Expenses

BRIEF EXERCISE 5-9

- (a) Net sales = \$510,000 – \$15,000 = \$495,000.
- (b) Gross profit = \$495,000 – \$350,000 = \$145,000.
- (c) Income from operations = \$145,000 – \$110,000 = \$35,000.
- (d) Gross profit rate = \$145,000 ÷ \$495,000 = 29.3%.

*BRIEF EXERCISE 5-10

Purchases		\$450,000
Less: Purchase returns and allowances	\$11,000	
Purchase discounts	<u>8,000</u>	<u>19,000</u>
Net purchases		<u>\$431,000</u>
Net purchases		\$431,000
Add: Freight-in		<u>16,000</u>
Cost of goods purchased		<u>\$447,000</u>

*BRIEF EXERCISE 5-11

Net sales		\$630,000
Beginning inventory	\$ 60,000	
Add: Cost of goods purchased*	<u>447,000</u>	
Cost of goods available for sale	507,000	
Ending inventory	<u>90,000</u>	
Cost of goods sold		<u>417,000</u>
Gross profit		<u>\$213,000</u>

*Information taken from Brief Exercise 5-10.

*BRIEF EXERCISE 5-12

(a)	Purchases	1,000,000	
	Accounts Payable		1,000,000
(b)	Accounts Payable	130,000	
	Purchase Returns and Allowances		130,000
(c)	Accounts Payable (\$1,000,000 – \$130,000)	870,000	
	Purchase Discounts (\$870,000 X 2%)		17,400
	Cash (\$870,000 – \$17,400)		852,600

*BRIEF EXERCISE 5-13

- (a) Cash: Trial balance debit column; Adjusted trial balance debit column; Balance sheet debit column.
- (b) Merchandise inventory: Trial balance debit column; Adjusted trial balance debit column; Balance sheet debit column.
- (c) Sales: Trial balance credit column; Adjusted trial balance credit column, Income statement credit column.
- (d) Cost of goods sold: Trial balance debit column, Adjusted trial balance debit column, Income statement debit column.

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 5-1

Oct. 5	Merchandise Inventory	5,000	
	Accounts Payable		5,000
	(To record goods purchased on account)		
Oct. 8	Accounts Payable	700	
	Merchandise Inventory		700
	(To record return of defective goods)		

DO IT! 5-2

Oct. 5	Accounts Receivable	5,000	
	Sales		5,000
	(To record credit sales)		
	Cost of Goods Sold	3,000	
	Merchandise Inventory		3,000
	(To record cost of goods sold on account)		
Oct. 8	Sales Returns and Allowances	700	
	Accounts Receivable		700
	(To record credit granted for receipt of returned goods)		
	Merchandise Inventory	250	
	Cost of Goods Sold		250
	(To record scrap value of goods returned)		

DO IT! 5-3

Dec. 31	Sales	136,000	
	Interest Revenue	5,000	
	Income Summary		141,000
	(To close accounts with credit balances)		
	Income Summary	126,800	
	Cost of Goods Sold		92,400
	Sales Returns and Allowances		4,000
	Sales Discounts		3,000
	Freight-out		1,500
	Utilities Expense		7,400
	Salaries Expense		18,500
	(To close accounts with credit balances)		

<u>Account</u>	<u>Financial Statement</u>	<u>Classification</u>
Accounts Payable	Balance sheet	Current liabilities
Accounts Receivable	Balance sheet	Current assets
Accumulated Depreciation— Office Building	Balance sheet	Property, plant, and equipment
Cash	Balance sheet	Current assets
Casualty Loss from Vandalism	Income statement	Other expenses and losses
Cost of Goods Sold	Income statement	Cost of goods sold
Delivery Equipment	Balance sheet	Property, plant, and equipment
Depreciation Expense	Income statement	Operating expenses
E. Smith, Capital	Statement of owner's equity	Beginning balance
E. Smith, Drawing	Statement of owner's equity	Deduction section
Freight-out	Income statement	Operating expenses
Insurance Expense	Income statement	Operating expenses
Interest Payable	Balance sheet	Current liabilities
Land	Balance sheet	Property, plant, and equipment
Merchandise Inventory	Balance sheet	Current assets
Notes Payable (due in 5 years)	Balance sheet	Long-term liabilities
Property Tax Payable	Balance sheet	Current liabilities
Salaries Expense	Income statement	Operating expenses
Salaries Payable	Balance sheet	Current liabilities
Sales Returns and Allowances	Income statement	Sales revenues
Sales Revenues	Income statement	Sales revenues
Unearned Rent	Balance sheet	Current liability
Utilities Expense	Income statement	Operating expenses
Warehouse	Balance sheet	Property, plant, and equipment

SOLUTIONS TO EXERCISES

EXERCISE 5-1

1. True.
2. False. For a merchandising company, sales less *cost of goods sold* is called gross profit.
3. True.
4. True.
5. False. The operating cycle of a merchandising company *differs* from that of a service company. The operating cycle of a merchandising company is ordinarily longer.
6. False. In a *periodic* inventory system, no detailed inventory records of goods on hand are maintained.
7. True.
8. False. A perpetual inventory system provides better control over inventories than a periodic system.

EXERCISE 5-2

(a)	(1)	April 5	Merchandise Inventory	25,000	
			Accounts Payable.....		25,000
	(2)	April 6	Merchandise Inventory	900	
			Cash		900
	(3)	April 7	Equipment.....	26,000	
			Accounts Payable.....		26,000
	(4)	April 8	Accounts Payable.....	4,000	
			Merchandise Inventory		4,000
	(5)	April 15	Accounts Payable.....	21,000	
			(\$25,000 – \$4,000)		
			Merchandise Inventory		
			[((\$25,000 – \$4,000) X 2%)]		420
			Cash (\$21,000 – \$420)		20,580
(b)	May 4		Accounts Payable	21,000	
			Cash.....		21,000

EXERCISE 5-3

Sept. 6	Merchandise Inventory (80 X \$20)	1,600	
	Cash		1,600
9	Merchandise Inventory	80	
	Cash		80
10	Accounts Payable (2 X \$21)	42	
	Merchandise Inventory		42
12	Accounts Receivable (26 X \$31)	806	
	Sales		806
	Cost of Goods Sold (26 X \$21)	546	
	Merchandise Inventory		546
14	Sales Returns and Allowances	31	
	Accounts Receivable		31
	Merchandise Inventory	21	
	Cost of Goods Sold		21
20	Accounts Receivable (30 X \$31)	930	
	Sales		930
	Cost of Goods Sold (30 X \$21)	630	
	Merchandise Inventory		630

EXERCISE 5-4

(a) June 10	Merchandise Inventory	8,000	
	Accounts Payable		8,000
11	Merchandise Inventory	400	
	Cash		400
12	Accounts Payable	300	
	Merchandise Inventory		300
19	Accounts Payable (\$8,000 – \$300)	7,700	
	Merchandise Inventory		
	(\$7,700 X 2%)		154
	Cash (\$7,700 – \$154)		7,546

EXERCISE 5-4 (Continued)

(b) June 10	Accounts Receivable	8,000	
	Sales		8,000
	Cost of Goods Sold	5,000	
	Merchandise Inventory		5,000
12	Sales Returns and Allowances	300	
	Accounts Receivable		300
	Merchandise Inventory	150	
	Cost of Goods Sold		150
19	Cash (\$7,700 – \$154)	7,546	
	Sales Discounts (\$7,700 X 2%)	154	
	Accounts Receivable		
	(\$8,000 – \$300)		7,700

EXERCISE 5-5

(a) 1. Dec. 3	Accounts Receivable	500,000	
	Sales		500,000
	Cost of Goods Sold	350,000	
	Merchandise Inventory		350,000
2. Dec. 8	Sales Returns and Allowances	27,000	
	Accounts Receivable		27,000
3. Dec. 13	Cash (\$473,000 – \$9,460)	463,540	
	Sales Discounts		
	[((\$500,000 – \$27,000) X 2%)	9,460	
	Accounts Receivable		
	(\$500,000 – \$27,000)		473,000
(b)	Cash	473,000	
	Accounts Receivable		
	(\$500,000 – \$27,000)		473,000

EXERCISE 5-6**(a)**

ZAMBRANA COMPANY
Income Statement (Partial)
For the Year Ended October 31, 2010

Sales revenues		
Sales		\$800,000
Less: Sales returns and allowances	\$25,000	
Sales discounts	15,000	40,000
Net sales		<u>\$760,000</u>

Note: Freight-out is a selling expense.

(b) (1) Oct. 31	Sales	800,000	
	Income Summary		800,000
(2) 31	Income Summary	40,000	
	Sales Returns and		
	Allowances		25,000
	Sales Discounts		15,000

EXERCISE 5-7

(a)	Cost of Goods Sold	900	
	Merchandise Inventory		900
(b)	Sales	108,000	
	Income Summary		108,000
	Income Summary	92,800	
	Cost of Goods Sold (\$60,000 + \$900)		60,900
	Operating Expenses		29,000
	Sales Returns and Allowances		1,700
	Sales Discounts		1,200
	Income Summary (\$108,000 – \$92,800)	15,200	
	Peter Kalle, Capital		15,200

EXERCISE 5-8

(a)	Cost of Goods Sold.....	600	
	Merchandise Inventory		600
(b)	Sales	350,000	
	Income Summary		350,000
	Income Summary	341,600	
	Cost of goods sold (\$218,000 + \$600).....		218,600
	Freight-out		7,000
	Insurance expense		12,000
	Rent expense		20,000
	Salary expense		61,000
	Sales discounts		10,000
	Sales returns and allowances		13,000
	Income Summary (\$350,000 – \$341,600).....	8,400	
	Rogers, Capital		8,400

EXERCISE 5-9

(a)

OBLEY COMPANY
Income Statement
For the Month Ended March 31, 2010

Sales revenues			
Sales			\$370,000
Less: Sales returns and allowances.....	\$13,000		
Sales discounts.....	<u>8,000</u>	<u>21,000</u>	
Net sales			349,000
Cost of goods sold		<u>212,000</u>	
Gross profit.....			137,000
Operating expenses			
Salary expense.....	58,000		
Rent expense.....	32,000		
Insurance expense	12,000		
Freight-out.....	<u>7,000</u>		
Total operating expenses			<u>109,000</u>
Net income			<u>\$ 28,000</u>

(b) Gross profit rate = $\$137,000 \div \$349,000 = 39.26\%$.

EXERCISE 5-10**(a)**

PELE COMPANY
Income Statement
For the Year Ended December 31, 2010

Net sales.....			\$2,312,000
Cost of goods sold			<u>1,289,000</u>
Gross profit			1,023,000
Operating expenses			<u>925,000</u>
Income from operations.....			98,000
Other revenues and gains			
Interest revenue	28,000		
Other expenses and losses			
Interest expense	\$70,000		
Loss on sale of equipment.....	<u>10,000</u>	<u>80,000</u>	<u>52,000</u>
Net income.....			<u><u>\$ 46,000</u></u>

(b)

PELE COMPANY
Income Statement
For the Year Ended December 31, 2010

Revenues			
Net sales.....			\$2,312,000
Interest revenue			<u>28,000</u>
Total revenues.....			2,340,000
Expenses			
Cost of goods sold	\$1,289,000		
Operating expenses	925,000		
Interest expense	70,000		
Loss on sale of equipment.....	<u>10,000</u>		
Total expenses			<u>2,294,000</u>
Net income.....			<u><u>\$ 46,000</u></u>

EXERCISE 5-11

1.	Sales Returns and Allowances	175	
	Sales.....		175
2.	Supplies	180	
	Cash	180	
	Accounts Payable.....		180
	Merchandise Inventory		180
3.	Sales Discounts	110	
	Sales.....		110
4.	Merchandise Inventory	20	
	Cash	180	
	Freight-out		200

EXERCISE 5-12

- (a) $\$900,000 - \$540,000 = \$360,000$.
- (b) $\$360,000/\$900,000 = 40\%$. The gross profit rate is generally considered to be more useful than the gross profit amount. The rate expresses a more meaningful (qualitative) relationship between net sales and gross profit. The gross profit rate tells how many cents of each sales dollar go to gross profit. The trend of the gross profit rate is closely watched by financial statement users, and is compared with rates of competitors and with industry averages. Such comparisons provide information about the effectiveness of a company's purchasing function and the soundness of its pricing policies.
- (c) Income from operations is \$130,000 ($\$360,000 - \$230,000$), and net income is \$119,000 ($\$130,000 - \$11,000$).
- (d) The amount shown for net income is the same in a multiple-step income statement and a single-step income statement. Both income statements report the same revenues and expenses, but in different order. Therefore, net income in Payton's single-step income statement is also \$119,000.
- (e) Merchandise inventory is reported as a current asset immediately below accounts receivable.

EXERCISE 5-13

(a) (*missing amount)

a.	Sales	\$ 90,000
	*Sales returns	<u>(6,000)</u>
	Net sales	<u>\$ 84,000</u>
b.	Net sales	\$ 84,000
	Cost of goods sold	<u>(56,000)</u>
	*Gross profit	<u>\$ 28,000</u>
c.	Gross profit	\$ 28,000
	Operating expenses	<u>(15,000)</u>
	*Net income	<u>\$ 13,000</u>
d.	*Sales	\$105,000
	Sales returns	<u>(5,000)</u>
	Net sales	<u>\$100,000</u>
e.	Net sales	\$100,000
	*Cost of goods sold	<u>58,500</u>
	Gross profit	<u>\$ 41,500</u>
f.	Gross profit	\$ 41,500
	*Operating expenses	<u>26,500</u>
	Net income	<u>\$ 15,000</u>

(b) Nam Company

$$\text{Gross profit} \div \text{Net sales} = \$28,000 \div \$84,000 = 33.33\%$$

Mayo Company

$$\text{Gross profit} \div \text{Net sales} = \$41,500 \div \$100,000 = 41.5\%$$

EXERCISE 5-14

(*Missing amount)

(a)	Sales.....	\$ 90,000
	Sales returns and allowances	<u>9,000*</u>
	Net sales	<u>\$ 81,000</u>
(b)	Net sales	\$ 81,000
	Cost of goods sold.....	<u>56,000</u>
	Gross profit.....	<u>\$ 25,000*</u>
(c) and (d)	Gross profit.....	\$ 25,000
	Operating expenses.....	<u>15,000</u>
	Income from operations (c).....	\$ 10,000*
	Other expenses and losses.....	<u>4,000</u>
	Net income (d).....	<u>\$ 6,000*</u>
(e)	Sales.....	\$100,000*
	Sales returns and allowances	<u>5,000</u>
	Net sales	<u>\$ 95,000</u>
(f)	Net sales	\$ 95,000
	Cost of goods sold.....	<u>57,000*</u>
	Gross profit.....	<u>\$ 38,000</u>
(g) and (h)	Gross profit.....	\$ 38,000
	Operating expenses (g)	<u>20,000*</u>
	Income from operations (h).....	\$ 18,000*
	Other expenses and losses.....	<u>7,000</u>
	Net income	<u>\$ 11,000</u>
(i)	Sales.....	\$144,000
	Sales returns and allowances	<u>12,000</u>
	Net sales	<u>\$132,000*</u>
(j)	Net sales	\$132,000
	Cost of goods sold.....	<u>108,000*</u>
	Gross profit.....	<u>\$ 24,000</u>

EXERCISE 5-14 (Continued)

(k) and (l)

Gross profit	\$24,000
Operating expenses	<u>18,000</u>
Income from operations (k).....	\$ 6,000*
Other expenses and losses (l)	<u>1,000*</u>
Net income.....	<u>\$ 5,000</u>

EXERCISE 5-15

Inventory, September 1, 2009		\$ 17,200
Purchases.....	\$149,000	
Less: Purchase returns and allowances.....	<u>2,000</u>	
Net Purchases	147,000	
Add: Freight-in	<u>4,000</u>	
Cost of goods purchased.....		<u>151,000</u>
Cost of goods available for sale		168,200
Inventory, August 31, 2010		<u>25,000</u>
Cost of goods sold.....		<u>\$143,200</u>

EXERCISE 5-16

(a) Sales		\$800,000
Less: Sales returns and allowances.....	\$ 10,000	
Sales discounts	<u>5,000</u>	<u>15,000</u>
Net sales		785,000
Cost of goods sold		
Inventory, January 1	50,000	
Purchases	\$500,000	
Less: Purch. rets. and alls.	<u>2,000</u>	
Purch. discounts	<u>6,000</u>	
Net purchases.....	492,000	
Add: Freight-in.....	<u>4,000</u>	
Cost of goods available for sale	546,000	
Inventory, December 31	<u>60,000</u>	
Cost of goods sold.....		<u>486,000</u>
Gross profit.....		<u>\$299,000</u>

- (b) Gross profit \$299,000 – Operating expenses = Net income \$130,000.
Operating expenses = \$169,000.

EXERCISE 5-17

(a)	\$1,560	(\$1,600 – \$40)	(g)	\$6,500	(\$290 + \$6,210)
(b)	\$1,670	(\$1,560 + \$110)	(h)	\$1,730	(\$7,940 – \$6,210)
(c)	\$1,510	(\$1,820 – \$310)	(i)	\$8,940	(\$1,000 + \$7,940)
(d)	\$50	(\$1,080 – \$1,030)	(j)	\$6,200	(\$49,530 – \$43,330 from (l))
(e)	\$250	(\$1,280 – \$1,030)	(k)	\$2,500	(\$43,590 – \$41,090)
(f)	\$120	(\$1,350 – \$1,230)	(l)	\$43,330	(\$41,090 + \$2,240)

*EXERCISE 5-18

(a)	1.	April 5	Purchases	20,000	
			Accounts Payable		20,000
	2.	April 6	Freight-in	900	
			Cash		900
	3.	April 7	Equipment	26,000	
			Accounts Payable		26,000
	4.	April 8	Accounts Payable	2,800	
			Purchase Returns and Allowances		2,800
	5.	April 15	Accounts Payable		
			(\$20,000 – \$2,800)	17,200	
			Purchase Discounts		
			[((\$20,000 – \$2,800) X 2%)]		344
			Cash (\$17,200 – \$344)		16,856
(b)	May 4		Accounts Payable		
			(\$20,000 – \$2,800)	17,200	
			Cash		17,200

***EXERCISE 5-19**

(a)	1.	April 5	Purchases.....	22,000	
			Accounts Payable.....		22,000
	2.	April 5	Freight-in.....	800	
			Cash		800
	3.	April 7	Equipment	26,000	
			Accounts Payable.....		26,000
	4.	April 8	Accounts Payable	4,000	
			Purchase Returns and		
			Allowances		4,000
	5.	April 15	Accounts Payable	18,000	
			(\$22,000 – \$4,000)		
			Purchase Discounts		
			[((\$22,000 – \$4,000) X 2%)]		360
			Cash (\$18,000 – \$360)		17,640
(b)	May 4		Accounts Payable		
			(\$22,000 – \$4,000).....	18,000	
			Cash		18,000

***EXERCISE 5-20**

Accounts	Adjusted Trial Balance		Income Statement		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash	9,000				9,000	
Merchandise Inventory	76,000				76,000	
Sales		450,000		450,000		
Sales Returns and Allowances	10,000		10,000			
Sales Discounts	9,000		9,000			
Cost of Goods Sold	300,000		300,000			

***EXERCISE 5-21**

GREEN COMPANY
Worksheet
For the Month Ended June 30, 2010

<u>Account Titles</u>	<u>Trial Balance</u>		<u>Adjustments</u>		<u>Adj. Trial Balance</u>		<u>Income Statement</u>		<u>Balance Sheet</u>	
	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>
Cash	2,320				2,320				2,320	
Accounts Receivable	2,440				2,440				2,440	
Merchandise Inventory	11,640				11,640				11,640	
Accounts Payable		1,120		1,500		2,620				2,620
Ed Green, Capital		3,600				3,600				3,600
Sales		42,400				42,400	42,400			
Cost of Goods Sold	20,560				20,560		20,560			
Operating Expenses	10,160		1,500		11,660		11,660			
Totals	<u>47,120</u>	<u>47,120</u>	<u>1,500</u>	<u>1,500</u>	<u>48,620</u>	<u>48,620</u>	<u>32,220</u>	<u>42,400</u>	<u>16,400</u>	<u>6,220</u>
Net Income							10,180			10,180
Totals							<u>42,400</u>	<u>42,400</u>	<u>16,400</u>	<u>16,400</u>

SOLUTIONS TO PROBLEMS

PROBLEM 5-1A

(a)	July	1	Merchandise Inventory.....	1,800	
			Accounts Payable		1,800
		3	Accounts Receivable	2,000	
			Sales		2,000
			Cost of Goods Sold	1,200	
			Merchandise Inventory.....		1,200
		9	Accounts Payable	1,800	
			Merchandise Inventory		
			(\$1,800 X .02).....		36
			Cash.....		1,764
		12	Cash	1,980	
			Sales Discounts.....	20	
			Accounts Receivable		2,000
		17	Accounts Receivable	1,500	
			Sales		1,500
			Cost of Goods Sold	900	
			Merchandise Inventory.....		900
		18	Merchandise Inventory.....	1,700	
			Accounts Payable		1,700
			Merchandise Inventory.....	100	
			Cash.....		100
		20	Accounts Payable	300	
			Merchandise Inventory.....		300
		21	Cash	1,485	
			Sales Discounts.....	15	
			Accounts Receivable		1,500

PROBLEM 5-1A (Continued)

July 22	Accounts Receivable	2,250	
	Sales		2,250
	Cost of Goods Sold	1,350	
	Merchandise Inventory		1,350
30	Accounts Payable	1,400	
	Cash		1,400
31	Sales Returns and Allowances	200	
	Accounts Receivable		200
	Merchandise Inventory	120	
	Cost of Goods Sold		120

PROBLEM 5-2A

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 2	Merchandise Inventory.....	120	6,900	
	Accounts Payable	201		6,900
4	Accounts Receivable	112	5,500	
	Sales	401		5,500
	Cost of Goods Sold	505	4,100	
	Merchandise Inventory.....	120		4,100
5	Freight-out.....	644	240	
	Cash.....	101		240
6	Accounts Payable	201	500	
	Merchandise Inventory.....	120		500
11	Accounts Payable (\$6,900 – \$500)	201	6,400	
	Merchandise Inventory.....	120		64
	(\$6,400 X 1%)			
	Cash.....	101		6,336
13	Cash	101	5,445	
	Sales Discounts (\$5,500 X 1%)	414	55	
	Accounts Receivable	112		5,500
14	Merchandise Inventory.....	120	3,800	
	Cash.....	101		3,800
16	Cash	101	500	
	Merchandise Inventory.....	120		500
18	Merchandise Inventory.....	120	4,500	
	Accounts Payable	201		4,500
20	Merchandise Inventory.....	120	100	
	Cash.....	101		100

PROBLEM 5-2A (Continued)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 23	Cash	101	6,400	
	Sales	401		6,400
	Cost of Goods Sold	505	5,120	
	Merchandise Inventory	120		5,120
26	Merchandise Inventory	120	2,300	
	Cash	101		2,300
27	Accounts Payable	201	4,500	
	Merchandise Inventory	120		90
	(\$4,500 X 2%)			
	Cash	101		4,410
29	Sales Returns and Allowances	412	90	
	Cash	101		90
	Merchandise Inventory	120	30	
	Cost of Goods Sold	505		30
30	Accounts Receivable	112	3,700	
	Sales	401		3,700
	Cost of Goods Sold	505	2,800	
	Merchandise Inventory	120		2,800

PROBLEM 5-2A (Continued)**(b)**

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			9,000
5		J1		240	8,760
11		J1		6,336	2,424
13		J1	5,445		7,869
14		J1		3,800	4,069
16		J1	500		4,569
20		J1		100	4,469
23		J1	6,400		10,869
26		J1		2,300	8,569
27		J1		4,410	4,159
29		J1		90	4,069

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 4		J1	5,500		5,500
13		J1		5,500	0
30		J1	3,700		3,700

Merchandise Inventory					No. 120
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 2		J1	6,900		6,900
4		J1		4,100	2,800
6		J1		500	2,300
11		J1		64	2,236
14		J1	3,800		6,036
16		J1		500	5,536
18		J1	4,500		10,036
20		J1	100		10,136
23		J1		5,120	5,016
26		J1	2,300		7,316
27		J1		90	7,226
29		J1	30		7,256
30		J1		2,800	4,456

PROBLEM 5-2A (Continued)**Accounts Payable** **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 2		J1		6,900	6,900
6		J1	500		6,400
11		J1	6,400		0
18		J1		4,500	4,500
27		J1	4,500		0

M. Olaf, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			9,000

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 4		J1		5,500	5,500
23		J1		6,400	11,900
30		J1		3,700	15,600

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 29		J1	90		90

Sales Discounts **No. 414**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 13		J1	55		55

Cost of Goods Sold **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 4		J1	4,100		4,100
23		J1	5,120		9,220
29		J1		30	9,190
30		J1	2,800		11,990

PROBLEM 5-2A (Continued)**Freight-out****No. 644**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 5		J1	240		240

(c)

OLAF DISTRIBUTING COMPANY
Income Statement (Partial)
For the Month Ended April 30, 2010

Sales revenues

Sales		\$15,600
Less: Sales returns and allowances.....	\$90	
Sales discounts	55	145
Net sales.....		15,455
Cost of goods sold		11,990
Gross profit		<u>\$ 3,465</u>

PROBLEM 5-3A

(a) **MAINE DEPARTMENT STORE**
Income Statement
For the Year Ended December 31, 2010

Sales revenues		
Sales		\$628,000
Less: Sales returns and allowances.....		<u>8,000</u>
Net sales		620,000
Cost of goods sold.....		<u>412,700</u>
Gross profit		207,300
Operating expenses		
Sales salaries expense	\$76,000	
Office salaries expense	32,000	
Sales commissions expense	14,500	
Depr. expense—equipment.....	13,300	
Utilities expense	12,000	
Depr. expense—building.....	10,400	
Insurance expense	7,200	
Property tax expense	<u>4,800</u>	
Total operating expenses		<u>170,200</u>
Income from operations		37,100
Other revenues and gains		
Interest revenue	4,000	
Other expenses and losses		
Interest expense	<u>11,000</u>	<u>7,000</u>
Net income.....		<u>\$ 30,100</u>

**MAINE DEPARTMENT STORE
Owner's Equity Statement
For the Year Ended December 31, 2010**

B. Maine, Capital, January 1	\$176,600
Add: Net income.....	<u>30,100</u>
	206,700
Less: Drawings.....	<u>28,000</u>
B. Maine, Capital, December 31.....	<u><u>\$178,700</u></u>

**MAINE DEPARTMENT STORE
Balance Sheet
December 31, 2010**

Assets			
Current assets			
Cash.....		\$ 23,800	
Accounts receivable.....		50,300	
Merchandise inventory.....		75,000	
Prepaid insurance		<u>2,400</u>	
Total current assets.....			\$151,500
Property, plant, and equipment			
Building	\$190,000		
Less: Accumulated depreciation— building	<u>52,500</u>	137,500	
Equipment	110,000		
Less: Accumulated depreciation— equipment.....	<u>42,900</u>	<u>67,100</u>	<u>204,600</u>
Total assets.....			<u><u>\$356,100</u></u>

PROBLEM 5-3A (Continued)

MAINE DEPARTMENT STORE
Balance Sheet (Continued)
December 31, 2010

Liabilities and Owner's Equity		
Current liabilities		
Accounts payable	\$ 79,300	
Mortgage payable due next year	20,000	
Interest payable	8,000	
Property taxes payable	4,800	
Sales commissions payable	4,300	
Utilities expense payable	<u>1,000</u>	
Total current liabilities		\$117,400
Long-term liabilities		
Mortgage payable		<u>60,000</u>
Total liabilities		177,400
Owner's equity		
B. Maine, Capital		<u>178,700</u>
Total liabilities and owner's equity		<u>\$356,100</u>

(b)	Dec. 31	Depreciation Expense—Building	10,400	
		Accumulated Depreciation— Building		10,400
	31	Depreciation Expense—Equipment	13,300	
		Accumulated Depreciation— Equipment		13,300
	31	Insurance Expense	7,200	
		Prepaid Insurance		7,200
	31	Interest Expense	8,000	
		Interest Payable		8,000
	31	Property Tax Expense	4,800	
		Property Taxes Payable		4,800

PROBLEM 5-3A (Continued)

31	Sales Commissions Expense	4,300	
	Sales Commissions Payable		4,300
31	Utilities Expense	1,000	
	Utilities Expense Payable		1,000
(c) Dec. 31	Sales	628,000	
	Interest Revenue	4,000	
	Income Summary		632,000
31	Income Summary	601,900	
	Sales Returns and Allowances		8,000
	Cost of Goods Sold		412,700
	Office Salaries Expense		32,000
	Sales Salaries Expense		76,000
	Sales Commissions Expense		14,500
	Property Tax Expense		4,800
	Utilities Expense		12,000
	Depreciation Expense—		
	Building		10,400
	Depreciation Expense—		
	Equipment		13,300
	Insurance Expense		7,200
	Interest Expense		11,000
31	Income Summary	30,100	
	B. Maine, Capital		30,100
31	B. Maine, Capital	28,000	
	B. Maine, Drawing		28,000

PROBLEM 5-4A

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 4	Merchandise Inventory	120	840	
	Accounts Payable	201		840
6	Merchandise Inventory	120	40	
	Cash	101		40
8	Accounts Receivable	112	1,150	
	Sales	401		1,150
	Cost of Goods Sold	505	790	
	Merchandise Inventory	120		790
10	Accounts Payable	201	40	
	Merchandise Inventory	120		40
11	Merchandise Inventory	120	420	
	Cash	101		420
13	Accounts Payable (\$840 – \$40)	201	800	
	Merchandise Inventory	120		16
	(\$800 X 2%)			
	Cash	101		784
14	Merchandise Inventory	120	900	
	Accounts Payable	201		900
15	Cash	101	50	
	Merchandise Inventory	120		50
17	Merchandise Inventory	120	30	
	Cash	101		30
18	Accounts Receivable	112	810	
	Sales	401		810
	Cost of Goods Sold	505	530	
	Merchandise Inventory	120		530

PROBLEM 5-4A (Continued)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 20	Cash.....	101	500	
	Accounts Receivable	112		500
21	Accounts Payable	201	900	
	Merchandise Inventory.....	120		27
	(\$900 X 3%)			
	Cash.....	101		873
27	Sales Returns and Allowances.....	412	30	
	Accounts Receivable	112		30
30	Cash.....	101	660	
	Accounts Receivable	112		660

(b)

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			2,500
6		J1		40	2,460
11		J1		420	2,040
13		J1		784	1,256
15		J1	50		1,306
17		J1		30	1,276
20		J1	500		1,776
21		J1		873	903
30		J1	660		1,563

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 8		J1	1,150		1,150
18		J1	810		1,960
20		J1		500	1,460
27		J1		30	1,430
30		J1		660	770

PROBLEM 5-4A (Continued)**Merchandise Inventory** **No. 120**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			1,700
4		J1	840		2,540
6		J1	40		2,580
8		J1		790	1,790
10		J1		40	1,750
11		J1	420		2,170
13		J1		16	2,154
14		J1	900		3,054
15		J1		50	3,004
17		J1	30		3,034
18		J1		530	2,504
21		J1		27	2,477

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 4		J1		840	840
10		J1	40		800
13		J1	800		0
14		J1		900	900
21		J1	900		0

J. Hafner, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			4,200

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 8		J1		1,150	1,150
18		J1		810	1,960

PROBLEM 5-4A (Continued)

Sales Returns and Allowances

No. 412

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 27		J1	30		30

Cost of Goods Sold

No. 505

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 8		J1	790		790
18		J1	530		1,320

(c)

HAFNER'S TENNIS SHOP Trial Balance April 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$1,563	
Accounts Receivable	770	
Merchandise Inventory	2,477	
J. Hafner, Capital		\$4,200
Sales		1,960
Sales Returns and Allowances	30	
Cost of Goods Sold	1,320	
	<u>\$6,160</u>	<u>\$6,160</u>

***PROBLEM 5-5A**

GORDMAN DEPARTMENT STORE
Income Statement (Partial)
For the Year Ended December 31, 2010

Sales revenues			
Sales			\$718,000
Less: Sales returns and allowances.....			<u>8,000</u>
Net sales			710,000
Cost of goods sold			
Inventory, January 1		\$ 40,500	
Purchases	\$447,000		
Less: Purchase returns and allowances	\$ 6,400		
Purchase discounts	<u>12,000</u>	<u>18,400</u>	
Net purchases.....		428,600	
Add: Freight-in		<u>5,600</u>	
Cost of goods purchased.....		<u>434,200</u>	
Cost of goods available for sale		474,700	
Inventory, December 31		<u>75,000</u>	
Cost of goods sold.....			<u>399,700</u>
Gross profit			<u>\$310,300</u>

***PROBLEM 5-6A**

(a)

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Cost of goods sold:			
Beginning inventory	\$ 13,000	\$ 11,300	\$ 14,700
Plus: Purchases	<u>146,000</u>	<u>145,000</u>	<u>129,000</u>
Cost of goods available	159,000	156,300	143,700
Less: Ending inventory	<u>(11,300)</u>	<u>(14,700)</u>	<u>(12,200)</u>
Cost of goods sold	<u>\$147,700</u>	<u>\$141,600</u>	<u>\$131,500</u>

(b)

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Sales	\$225,700	\$227,600	\$219,500
Less: CGS	<u>147,700</u>	<u>141,600</u>	<u>131,500</u>
Gross profit	<u>\$ 78,000</u>	<u>\$ 86,000</u>	<u>\$ 88,000</u>

(c)

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Beginning accounts payable	\$ 20,000	\$ 31,000	\$ 15,000
Plus: Purchases	146,000	145,000	129,000
Less: Payments to suppliers	<u>135,000</u>	<u>161,000</u>	<u>127,000</u>
Ending accounts payable	<u>\$ 31,000</u>	<u>\$ 15,000</u>	<u>\$ 17,000</u>

(d) Gross profit rate

¹ 34.6%	² 37.8%	³ 40.1%
¹ \$78,000 ÷ \$225,700	² \$86,000 ÷ \$227,600	³ \$88,000 ÷ \$219,500

No. Even though sales declined in 2010 from each of the two prior years, the gross profit rate increased. This means that cost of goods sold declined more than sales did, reflecting better purchasing power or control of costs. Therefore, in spite of declining sales, profitability, as measured by the gross profit rate, actually improved.

***PROBLEM 5-7A**

(a)

General Journal

Date	Account Titles and Explanation	Debit	Credit
Apr. 4	Purchases.....	740	
	 Accounts Payable		740
6	Freight-in.....	60	
	 Cash.....		60
8	Accounts Receivable	900	
	 Sales		900
10	Accounts Payable	40	
	 Purchase Returns and Allowances		40
11	Purchases.....	300	
	 Cash.....		300
13	Accounts Payable (\$740 – \$40)	700	
	 Purchase Discount (\$700 X 3%).....		21
	 Cash.....		679
14	Purchases.....	600	
	 Accounts Payable		600
15	Cash.....	50	
	 Purchase Returns and Allowances.....		50
17	Freight-in.....	30	
	 Cash.....		30
18	Accounts Receivable	1,000	
	 Sales		1,000
20	Cash.....	500	
	 Accounts Receivable		500
21	Accounts Payable	600	
	 Purchase Discounts (\$600 X 2%).....		12
	 Cash.....		588

***PROBLEM 5-7A (Continued)**

Date	Account Titles and Explanation	Debit	Credit
Apr. 27	Sales Returns and Allowances.....	30	
	Accounts Receivable		30
30	Cash	500	
	Accounts Receivable		500

(b)

Cash			
4/1 Bal.	2,500	4/6	60
4/15	50	4/11	300
4/20	500	4/13	679
4/30	500	4/17	30
		4/21	588
4/30 Bal.	1,893		

Accounts Receivable			
4/8	900	4/20	500
4/18	1,000	4/27	30
		4/30	500
4/30 Bal.	870		

Merchandise Inventory			
4/1 Bal.	1,700		
4/30 Bal.	1,700		

Sales Returns and Allowances			
4/27	30		
4/30 Bal.	30		

Purchases			
4/4	740		
4/11	300		
4/14	600		
4/30 Bal.	1,640		

Purchase Returns and Allowances			
		4/10	40
		4/15	50
		4/30 Bal.	90

Accounts Payable			
4/10	40	4/4	740
4/13	700	4/14	600
4/21	600		
		4/30 Bal.	0

Angie Wilbert, Capital			
		4/1 Bal.	4,200
		4/30 Bal.	4,200

Sales			
		4/8	900
		4/18	1,000
		4/30 Bal.	1,900

Purchase Discounts			
		4/13	21
		4/21	12
		4/30 Bal.	33

Freight-in			
4/6	60		
4/17	30		
4/30 Bal.	90		

***PROBLEM 5-7A (Continued)**

(c) VILLAGE TENNIS SHOP
Trial Balance
April 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$1,893	
Accounts Receivable.....	870	
Merchandise Inventory	1,700	
Angie Wilbert, Capital		\$4,200
Sales		1,900
Sales Returns and Allowances	30	
Purchases	1,640	
Purchase Returns and Allowances		90
Purchase Discounts		33
Freight-in	90	
	<u>\$6,223</u>	<u>\$6,223</u>

VILLAGE TENNIS SHOP
Income Statement (Partial)
For the Month Ended April 30, 2010

Sales revenues			
Sales			\$1,900
Less: Sales returns and allowances.....			<u>30</u>
Net sales			1,870
Cost of goods sold			
Inventory, April 1		\$1,700	
Purchases	\$1,640		
Less: Purchase returns and allowances	\$90		
Purchase discounts	<u>33</u>	123	
Net purchases.....		1,517	
Add: Freight-in		<u>90</u>	
Cost of goods purchased		<u>1,607</u>	
Cost of goods available for sale		3,307	
Inventory, April 30		<u>2,296</u>	
Cost of goods sold.....			<u>1,011</u>
Gross profit			<u>\$ 859</u>

***PROBLEM 5-8A**

TERRY MANNING FASHION CENTER											
Worksheet											
For the Year Ended November 30, 2010											
(a)	Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
	Cash	28,700				28,700				28,700	
	Accounts Receivable	30,700				30,700				30,700	
	Merchandise Inventory	44,700				44,400				44,400	
	Store Supplies	6,200		(e)	300	2,500				2,500	
	Store Equipment	85,000		(a)	3,700	85,000				85,000	
	Accum. Depreciation—Store Equipment		22,000	(b)	9,000		31,000				31,000
	Delivery Equipment	48,000				48,000				48,000	
	Accum. Depreciation—Delivery Equipment		6,000	(c)	5,000		11,000				11,000
	Notes Payable		51,000				51,000				51,000
	Accounts Payable		48,500				48,500				48,500
	T. Manning, Capital		110,000				110,000				110,000
	T. Manning, Drawing	12,000				12,000			755,200	12,000	
	Sales		755,200				755,200				
	Sales Returns and Allowances	8,800				8,800		8,800			
	Cost of Goods Sold	497,400		(e)	300	497,700		497,700			
	Salaries Expense	140,000				140,000		140,000			
	Advertising Expense	24,400				24,400		24,400			
	Utilities Expense	14,000				14,000		14,000			
	Repair Expense	12,100				12,100		12,100			
	Delivery Expense	16,700				16,700		16,700			
	Rent Expense	24,000				24,000		24,000			
	Totals	<u>992,700</u>	<u>992,700</u>								
	Store Supplies Expense			(a)	3,700	3,700		3,700			
	Depreciation Expense—Store Equipment			(b)	9,000	9,000		9,000			
	Depreciation Expense—Delivery Equipment			(c)	5,000	5,000		5,000			
	Interest Expense			(d)	4,080	4,080		4,080			
	Interest Payable				(d)	4,080		4,080			4,080
	Totals		<u>22,080</u>	<u>22,080</u>		<u>1,010,780</u>	<u>1,010,780</u>	<u>759,480</u>	<u>755,200</u>	<u>251,300</u>	<u>255,580</u>
	Net Loss							<u>4,280</u>		<u>4,280</u>	
	Totals							<u>759,480</u>	<u>759,480</u>	<u>255,580</u>	<u>255,580</u>

Key: (a) Store supplies used, (b) Depreciation expense—store equipment, (c) Depreciation expense—delivery equipment, (d) Accrued interest payable, (e) Adjustment of inventory.

***PROBLEM 5-8A (Continued)**

(b) TERRY MANNING FASHION CENTER
Income Statement
For the Year Ended November 30, 2010

Sales revenues		
Sales		\$755,200
Less: Sales returns and allowances.....		<u>8,800</u>
Net sales		746,400
Cost of goods sold.....		<u>497,700</u>
Gross profit		248,700
Operating expenses		
Salaries expense	\$140,000	
Advertising expense.....	24,400	
Rent expense	24,000	
Delivery expense	16,700	
Utilities expense	14,000	
Repair expense	12,100	
Depreciation expense— store equipment	9,000	
Depreciation expense— delivery equipment.....	5,000	
Store supplies expense.....	<u>3,700</u>	
Total operating expenses		<u>248,900</u>
Loss from operations.....		(200)
Other expenses and losses		
Interest expense		<u>4,080</u>
Net loss		<u><u>\$ (4,280)</u></u>

TERRY MANNING FASHION CENTER
Owner's Equity Statement
For the Year Ended November 30, 2010

T. Manning, Capital, December 1, 2009.....		\$110,000
Less: Net loss.....	\$ 4,280	
Drawings.....	12,000	16,280
T. Manning, Capital, November 30, 2010.....		<u>\$ 93,720</u>

TERRY MANNING FASHION CENTER
Balance Sheet
November 30, 2010

Assets			
Current assets			
Cash.....		\$28,700	
Accounts receivable.....		30,700	
Merchandise inventory.....		44,400	
Store supplies		<u>2,500</u>	
Total current assets.....			\$106,300
Property, plant, and equipment			
Store equipment.....	\$85,000		
Accumulated depreciation—			
store equipment	<u>31,000</u>	54,000	
Delivery equipment.....	48,000		
Accumulated depreciation—			
delivery equipment.....	<u>11,000</u>	<u>37,000</u>	<u>91,000</u>
Total assets.....			<u>\$197,300</u>

***PROBLEM 5-8A (Continued)**

TERRY MANNING FASHION CENTER
Balance Sheet (Continued)
November 30, 2010

Liabilities and Owner's Equity		
Current liabilities		
Notes payable due next year	\$30,000	
Accounts payable.....	48,500	
Interest payable.....	<u>4,080</u>	
Total current liabilities		\$ 82,580
Long-term liabilities		
Notes payable	<u>21,000</u>	
Total liabilities.....		103,580
Owner's equity		
T. Manning, Capital	<u>93,720</u>	
Total liabilities and owner's equity		<u>\$197,300</u>

(c)	Nov. 30	Store Supplies Expense.....	3,700	
		Store Supplies.....		3,700
	30	Depreciation Expense—Store Equipment.....	9,000	
		Accumulated Depreciation— Store Equipment		9,000
	30	Depreciation Expense—Delivery Equipment.....	5,000	
		Accumulated Depreciation— Delivery Equipment.....		5,000
	30	Interest Expense.....	4,080	
		Interest Payable		4,080
	30	Cost of Goods Sold	300	
		Merchandise Inventory.....		300

***PROBLEM 5-8A (Continued)**

(d)	Nov. 30	Sales	755,200	
		Income Summary		755,200
	30	Income Summary	759,480	
		Sales Returns and Allowances		8,800
		Cost of Goods Sold		497,700
		Salaries Expense		140,000
		Advertising Expense		24,400
		Utilities Expense		14,000
		Repair Expense		12,100
		Delivery Expense		16,700
		Rent Expense		24,000
		Store Supplies Expense		3,700
		Depreciation Expense—Store Equipment		9,000
		Depreciation Expense—Delivery Equipment		5,000
		Interest Expense		4,080
	30	T. Manning, Capital	4,280	
		Income Summary		4,280
	30	T. Manning, Capital	12,000	
		T. Manning, Drawing		12,000

***PROBLEM 5-8A (Continued)**

(e) TERRY MANNING FASHION CENTER
Post-Closing Trial Balance
November 30, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 28,700	
Accounts Receivable.....	30,700	
Merchandise Inventory	44,400	
Store Supplies	2,500	
Store Equipment	85,000	
Accumulated Depreciation—Store Equipment		\$ 31,000
Delivery Equipment.....	48,000	
Accumulated Depreciation—Delivery Equipment		11,000
Notes Payable		51,000
Accounts Payable.....		48,500
Interest Payable		4,080
T. Manning, Capital		93,720
	<u>\$239,300</u>	<u>\$239,300</u>

PROBLEM 5-1B

(a)	June	1	Merchandise Inventory.....	1,200	
			Accounts Payable		1,200
		3	Accounts Receivable	2,400	
			Sales		2,400
			Cost of Goods Sold	1,440	
			Merchandise Inventory.....		1,440
		6	Accounts Payable	100	
			Merchandise Inventory.....		100
		9	Accounts Payable (\$1200 – \$100).....	1,000	
			Merchandise Inventory		
			(\$1,000 X .02)		22
			Cash.....		1,078
		15	Cash.....	2,400	
			Accounts Receivable		2,400
		17	Accounts Receivable	1,800	
			Sales		1,800
			Cost of Goods Sold	1,080	
			Merchandise Inventory.....		1,080
		20	Merchandise Inventory.....	1,500	
			Accounts Payable		1,500
		24	Cash.....	1,764	
			Sales Discounts (\$1,800 X .02)	36	
			Accounts Receivable		1,800
		26	Accounts Payable	1,500	
			Merchandise Inventory		
			(\$1,500 X .02)		30
			Cash.....		1,470

PROBLEM 5-1B (Continued)

June 28	Accounts Receivable.....	1,300	
	Sales.....		1,300
	Cost of Goods Sold.....	780	
	Merchandise Inventory		780
30	Sales Returns and Allowances	120	
	Accounts Receivable.....		120
	Merchandise Inventory	72	
	Cost of Goods Sold.....		72

PROBLEM 5-2B

(a)

General Journal					J1
Date	Account Titles and Explanation	Ref.	Debit	Credit	
May 1	Merchandise Inventory	120	4,200		
	Accounts Payable.....	201		4,200	
2	Accounts Receivable.....	112	2,100		
	Sales.....	401		2,100	
	Cost of Goods Sold.....	505	1,300		
	Merchandise Inventory	120		1,300	
5	Accounts Payable.....	201	300		
	Merchandise Inventory	120		300	
9	Cash (\$2,100 – \$21)	101	2,079		
	Sales Discounts (\$2,100 X 1%).....	414	21		
	Accounts Receivable.....	112		2,100	
10	Accounts Payable (\$4,200 – \$300).....	201	3,900		
	Merchandise Inventory				
	(\$3,900 X 2%)	120		78	
	Cash	101		3,822	
11	Supplies	126	400		
	Cash	101		400	
12	Merchandise Inventory	120	1,400		
	Cash	101		1,400	
15	Cash	101	150		
	Merchandise Inventory	120		150	
17	Merchandise Inventory	120	1,300		
	Accounts Payable.....	201		1,300	
19	Merchandise Inventory	120	130		
	Cash	101		130	

PROBLEM 5-2B (Continued)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
May 24	Cash	101	3,200	
	Sales	401		3,200
	Cost of Goods Sold	505	2,000	
	Merchandise Inventory	120		2,000
25	Merchandise Inventory	120	550	
	Accounts Payable	201		550
27	Accounts Payable	201	1,300	
	Merchandise Inventory			
	(\$1,300 X 2%)	120		26
	Cash	101		1,274
29	Sales Returns and Allowances	412	60	
	Cash	101		60
	Merchandise Inventory	120	10	
	Cost of Goods Sold	505		10
31	Accounts Receivable	112	900	
	Sales	401		900
	Cost of Goods Sold	505	560	
	Merchandise Inventory	120		560

PROBLEM 5-2B (Continued)**(b)**

Cash					No. 101	
Date		Explanation	Ref.	Debit	Credit	Balance
May	1	Balance	✓			5,000
	9		J1	2,079		7,079
	10		J1		3,822	3,257
	11		J1		400	2,857
	12		J1		1,400	1,457
	15		J1	150		1,607
	19		J1		130	1,477
	24		J1	3,200		4,677
	27		J1		1,274	3,403
	29		J1		60	3,343

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
May 2		J1	2,100		2,100
9		J1		2,100	0
31		J1	900		900

Merchandise Inventory					No. 120
Date	Explanation	Ref.	Debit	Credit	Balance
May 1		J1	4,200		4,200
2		J1		1,300	2,900
5		J1		300	2,600
10		J1		78	2,522
12		J1	1,400		3,922
15		J1		150	3,772
17		J1	1,300		5,072
19		J1	130		5,202
24		J1		2,000	3,202
25		J1	550		3,752
27		J1		26	3,726
29		J1	10		3,736
31		J1		560	3,176

PROBLEM 5-2B (Continued)**Supplies** **No. 126**

Date	Explanation	Ref.	Debit	Credit	Balance
May 11		J1	400		400

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
May 1		J1		4,200	4,200
5		J1	300		3,900
10		J1	3,900		0
17		J1		1,300	1,300
25		J1		550	1,850
27		J1	1,300		550

Newman, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
May 1	Balance	✓			5,000

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
May 2		J1		2,100	2,100
24		J1		3,200	5,300
31		J1		900	6,200

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
May 29		J1	60		60

Sales Discounts **No. 414**

Date	Explanation	Ref.	Debit	Credit	Balance
May 9		J1	21		21

PROBLEM 5-2B (Continued)**Cost of Goods Sold****No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
May 2		J1	1,300		1,300
24		J1	2,000		3,300
29		J1		10	3,290
31		J1	560		3,850

(c)

NEWMAN HARDWARE STORE
Income Statement (Partial)
For the Month Ended May 31, 2010

Sales revenues

Sales		\$6,200
Less: Sales returns and allowances.....	\$60	
Sales discounts	<u>21</u>	<u>81</u>
Net sales.....		6,119
Cost of goods sold		<u>3,850</u>
Gross profit		<u>\$2,269</u>

PROBLEM 5-3B

(a) **TARP DEPARTMENT STORE**
Income Statement
For the Year Ended November 30, 2010

Sales revenues		
Sales		\$680,000
Less: Sales returns & allowances		<u>8,000</u>
Net sales		672,000
Cost of goods sold.....		<u>507,000</u>
Gross profit		165,000
Operating expenses		
Salaries expense	\$96,000	
Rent expense	15,000	
Sales commissions expense	11,200	
Utilities expense	8,500	
Depreciation expense—store equipment.....	8,000	
Insurance expense.....	7,000	
Delivery expense	6,500	
Depreciation expense—delivery equipment.....	5,000	
Property tax expense	<u>2,800</u>	
Total oper. expenses.....		<u>160,000</u>
Income from operations		5,000
Other revenues and gains		
Interest revenue	8,000	
Other expenses and losses		
Interest expense	<u>6,400</u>	<u>1,600</u>
Net income.....		<u>\$ 6,600</u>

**TARP DEPARTMENT STORE
Owner's Equity Statement
For the Year Ended November 30, 2010**

J. Tarp, Capital, December 1, 2009.....	\$101,700
Add: Net income.....	<u>6,600</u>
	108,300
Less: Drawings.....	<u>10,000</u>
J. Tarp, Capital, November 30, 2010	<u><u>\$ 98,300</u></u>

**TARP DEPARTMENT STORE
Balance Sheet
November 30, 2010**

Assets			
Current assets			
Cash.....		\$ 6,000	
Accounts receivable.....		30,500	
Merchandise inventory.....		29,000	
Prepaid insurance		<u>3,500</u>	
Total current assets.....			\$ 69,000
Property, plant, and equipment			
Store equipment	\$100,000		
Less: Accumulated depreciation— store equipment	<u>32,000</u>	68,000	
Delivery equipment.....	46,000		
Less: Accumulated depreciation— delivery equipment.....	<u>15,000</u>	<u>31,000</u>	<u>99,000</u>
Total assets.....			<u><u>\$168,000</u></u>

PROBLEM 5-3B (Continued)

TARP DEPARTMENT STORE
Balance Sheet (Continued)
November 30, 2010

Liabilities and Owner's Equity		
Current liabilities		
Accounts payable	\$25,200	
Sales commissions payable	4,700	
Property taxes payable	<u>2,800</u>	
Total current liabilities		\$ 32,700
Long-term liabilities		
Notes payable due 2013		<u>37,000</u>
Total liabilities		69,700
Owner's equity		
J. Tarp, Capital		<u>98,300</u>
Total liabilities and owner's equity		<u><u>\$168,000</u></u>

(b) Nov. 30	Depr. Expense—Delivery Equip.	5,000	
	Accumulated Depreciation— Delivery Equipment		5,000
	Depr. Expense—Store Equip.	8,000	
	Accumulated Depreciation— Store Equipment		8,000
	Insurance Expense	7,000	
	Prepaid Insurance		7,000
	Property Tax Expense	2,800	
	Property Taxes Payable		2,800
	Sales Commissions Expense	4,700	
	Sales Commissions Payable		4,700

PROBLEM 5-3B (Continued)

(c)	Nov. 30	Sales	680,000	
		Interest Revenue	8,000	
		Income Summary		688,000
	30	Income Summary	681,400	
		Sales Returns and Allowances		8,000
		Cost of Goods Sold		507,000
		Salaries Expense		96,000
		Depreciation Expense—		
		Delivery Equipment		5,000
		Delivery Expense		6,500
		Sales Commissions Expense		11,200
		Depreciation Expense—		
		Store Equipment		8,000
		Insurance Expense		7,000
		Rent Expense		15,000
		Property Tax Expense		2,800
		Utilities Expense		8,500
		Interest Expense		6,400
	30	Income Summary	6,600	
		J. Tarp, Capital		6,600
	30	J. Tarp, Capital	10,000	
		J. Tarp, Drawing		10,000

PROBLEM 5-4B

(a)

General Journal				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 5	Merchandise Inventory	120	1,200	
	Accounts Payable	201		1,200
7	Merchandise Inventory	120	50	
	Cash	101		50
9	Accounts Payable	201	100	
	Merchandise Inventory	120		100
10	Accounts Receivable	112	900	
	Sales	401		900
	Cost of Goods Sold	505	540	
	Merchandise Inventory	120		540
12	Merchandise Inventory	120	670	
	Accounts Payable	201		670
14	Accounts Payable (\$1,200 – \$100)	201	1,100	
	Merchandise Inventory			
	(\$1,100 X 2%)	120		22
	Cash	101		1,078
17	Accounts Payable	201	70	
	Merchandise Inventory	120		70
20	Accounts Receivable	112	560	
	Sales	401		560
	Cost of Goods Sold	505	340	
	Merchandise Inventory	120		340
21	Accounts Payable (\$670 – \$70)	201	600	
	Merchandise Inventory			
	(\$600 X 1%)	120		6
	Cash	101		594

PROBLEM 5-4B (Continued)

				J1
Date	Account Titles and Explanation	Ref.	Debit	Credit
Apr. 27	Sales Returns and Allowances	412	30	
	Accounts Receivable.....	112		30
30	Cash	101	800	
	Accounts Receivable.....	112		800

(b)

Cash	No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			1,800
7		J1		50	1,750
14		J1		1,078	672
21		J1		594	78
30		J1	800		878

Accounts Receivable	No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 10		J1	900		900
20		J1	560		1,460
27		J1		30	1,430
30		J1		800	630

Merchandise Inventory	No. 120

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			2,500
5		J1	1,200		3,700
7		J1	50		3,750
9		J1		100	3,650
10		J1		540	3,110
12		J1	670		3,780
14		J1		22	3,758
17		J1		70	3,688
20		J1		340	3,348
21		J1		6	3,342

PROBLEM 5-4B (Continued)**Accounts Payable** **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 5		J1		1,200	1,200
9		J1	100		1,100
12		J1		670	1,770
14		J1	1,100		670
17		J1	70		600
21		J1	600		0

C. Borke, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			4,300

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 10		J1		900	900
20		J1		560	1,460

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 27		J1	30		30

Cost of Goods Sold **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 10		J1	540		540
20		J1	340		880

PROBLEM 5-4B (Continued)**(c)****CALEB'S DISCORAMA
Trial Balance
April 30, 2010**

	Debit	Credit
Cash.....	\$ 878	
Accounts Receivable	630	
Merchandise Inventory	3,342	
C. Borke, Capital.....		\$4,300
Sales		1,460
Sales Returns and Allowances.....	30	
Cost of Goods Sold	880	
	<u>\$5,760</u>	<u>\$5,760</u>

DUCKWORTH DEPARTMENT STORE
Income Statement (Partial)
For the Year Ended November 30, 2010

Sales revenues			
Sales			\$810,000
Less: Sales returns and allowances			<u>18,000</u>
Net sales			792,000
Cost of goods sold			
Inventory, Dec. 1, 2009		\$ 40,000	
Purchases	\$585,000		
Less: Purchase returns and allowances	\$2,700		
Purchase discounts	<u>6,300</u>	<u>9,000</u>	
Net purchases		576,000	
Add: Freight-in		<u>4,500</u>	
Cost of goods purchased			<u>580,500</u>
Cost of goods available for sale			620,500
Inventory, Nov. 30, 2010			<u>32,600</u>
Cost of goods sold			<u>587,900</u>
Gross profit			<u>\$204,100</u>

- (1) (a) **Cost of goods sold = Sales – Gross profit**
= \$53,300 – \$38,300 = \$15,000
- (b) **Net income = Gross profit – Operating expenses**
= \$38,300 – \$34,900 = \$3,400
- (c) **Merchandise inventory = 2007 Inventory + Purchases – CGS**
= \$7,200 + \$14,200 – \$15,000 = \$6,400
- (d) **Cash payments to suppliers = 2007 Accounts payable +**
Purchases – 2008 Accounts payable
= \$3,200 + \$14,200 – \$3,600 = \$13,800
- (e) **Sales = Cost of goods sold + Gross profit**
= \$13,800 + \$33,800 = \$47,600
- (f) **Operating expenses = Gross profit – Net income**
= \$33,800 – \$2,500 = \$31,300
- (g) **2008 Inventory + Purchases – 2009 Inventory = CGS**
Purchases = CGS – 2008 Inventory + 2009 Inventory
= \$13,800 – \$6,400 [from (c)] + \$8,100
= \$15,500
- (h) **Cash payments to suppliers = 2008 Accounts payable +**
Purchases – 2009 Accounts Payable
= \$3,600 + \$15,500 [from (g)] – \$2,500
= \$16,600
- (i) **Gross profit = Sales – CGS**
= \$45,200 – \$14,300 = \$30,900
- (j) **Net income = Gross profit – Operating expenses**
= \$30,900 [from (i)] – \$28,600 = \$2,300
- (k) **2009 Inventory + Purchases – 2010 Inventory = CGS**
Merchandise inventory = 2009 Inventory + Purchases – CGS
= \$8,100 + \$13,200 – \$14,300 = \$7,000
- (l) **Accounts payable = 2009 Accounts payable +**
Purchases – Cash payments
= \$2,500 + \$13,200 – \$13,600 = \$2,100

***PROBLEM 5-6B (Continued)**

- (2) A decline in sales does not necessarily mean that profitability declined. Profitability is affected by sales, cost of goods sold, and operating expenses. If cost of goods sold or operating expenses decline more than sales, profitability can increase even when sales decline. However, in this particular case, sales declined with insufficient offsetting cost savings to improve profitability. Therefore, profitability declined for Letterman, Inc.

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Gross profit rate	$\$38,300 \div \$53,300$ = 72%	$\$33,800 \div \$47,600$ = 71%	$\$30,900 \div \$45,200$ = 68%
Profit margin ratio	$\$3,400 \div \$53,300$ = 6.4%	$\$2,500 \div \$47,600$ = 5.3%	$\$2,300 \div \$45,200$ = 5.1%

***PROBLEM 5-7B**

(a)

General Journal			
Date	Account Titles and Explanation	Debit	Credit
Apr. 5	Purchases.....	1,200	
	Accounts Payable		1,200
7	Freight-in.....	50	
	Cash.....		50
9	Accounts Payable	100	
	Purchase Returns and Allowances.....		100
10	Accounts Receivable	600	
	Sales		600
12	Purchases.....	340	
	Accounts Payable		340
14	Accounts Payable (\$1,200 – \$100).....	1,100	
	Purchase Discounts (\$1,100 X 2%)		22
	Cash (\$1,100 – \$22)		1,078
17	Accounts Payable	40	
	Purchase Returns and Allowances.....		40
20	Accounts Receivable	600	
	Sales		600
21	Accounts Payable (\$340 – \$40)	300	
	Purchase Discounts (\$300 X 1%).....		3
	Cash (\$300 – \$3)		297
27	Sales Returns and Allowances.....	35	
	Accounts Receivable		35
30	Cash	650	
	Accounts Receivable		650

PROBLEM 5-7B (Continued)*(b)****Cash**

4/1 Bal.	3,000	4/7	50
4/30	650	4/14	1,078
		4/21	297
4/30 Bal.	2,225		

Accounts Receivable

4/10	600	4/27	35
4/20	600	4/30	650
4/30 Bal.	515		

Merchandise Inventory

4/1 Bal.	4,000		
4/30 Bal.	4,000		

Accounts Payable

4/9	100	4/5	1,200
4/14	1,100	4/12	340
4/17	40		
4/21	300		
		4/30 Bal.	0

**Purchase
Returns and Allowances**

	4/9	100
	4/17	40
	4/30 Bal.	140

Purchase Discounts

	4/14	22
	4/21	3
	4/30 Bal.	25

Irene Tiger, Capital

	4/1 Bal.	7,000
	4/30 Bal.	7,000

Sales

	4/10	600
	4/20	600
	4/30 Bal.	1,200

Sales Returns and Allowances

4/27	35	
4/30 Bal.	35	

Purchases

4/5	1,200	
4/12	340	
4/30 Bal.	1,540	

Freight-in

4/7	50	
4/30 Bal.	50	

***PROBLEM 5-7B (Continued)**

(c)

FIVE PINES PRO SHOP

Trial Balance

April 30, 2010

	Debit	Credit
Cash	\$2,225	
Accounts Receivable	515	
Merchandise Inventory	4,000	
Irene Tiger, Capital		\$7,000
Sales		1,200
Sales Returns and Allowances	35	
Purchases	1,540	
Purchase Returns and Allowances		140
Purchase Discounts		25
Freight-in	50	
	<u>\$8,365</u>	<u>\$8,365</u>

(d)

FIVE PINES PRO SHOP

Income Statement (Partial)

For the Month Ended April 30, 2010

Sales revenues			
Sales			\$1,200
Less: Sales returns and allowances			<u>35</u>
Net sales			1,165
Cost of goods sold			
Inventory, April 1		\$4,000	
Purchases	\$1,540		
Less: Purchase returns and allowances	\$140		
Purchase discounts	<u>25</u>	<u>165</u>	
Net purchases		1,375	
Add: Freight-in		<u>50</u>	
Cost of goods purchased		<u>1,425</u>	
Cost of goods available for sale		5,425	
Inventory, April 30		<u>4,726</u>	
Cost of goods sold			<u>699</u>
Gross profit			<u>\$ 466</u>

	<u>2006</u>	<u>2007</u>
(a) (1) Percentage change in sales:		
$(\$35,137 - \$32,562) \div \$32,562$	7.9% increase	
$(\$39,474 - \$35,137) \div \$35,137$		12.3% increase
(2) Percentage change in net income:		
$(\$5,642 - \$4,078) \div \$4,078$	38.4% increase	
$(\$5,658 - \$5,642) \div \$5,642$		0.3% increase
(b) Gross profit rate:		
2005 $(\$32,562 - \$14,176) \div \$32,562$	56.5%	
2006 $(\$35,137 - \$15,762) \div \$35,137$	55.1%	
2007 $(\$39,474 - \$18,038) \div \$39,474$	54.3%	
(c) Percentage of net income to sales:		
2005 $(\$4,078 \div \$32,562)$	12.5%	
2006 $(\$5,642 \div \$35,137)$	16.1%	
2007 $(\$5,658 \div \$39,474)$	14.3%	

Comment

The percentage of net income to sales increased 29% from 2005 to 2006 (12.5% to 16.1%) but declined 11% from 2006 to 2007 (16.1% to 14.3%). The gross profit rate has remained relatively steady during this time. The primary reason for the decrease in the 2007 percentage was the increase in income tax expense.

	<u>PepsiCo</u>	<u>Coca-Cola</u>
(a) (1) 2007 Gross profit	\$21,436 ¹	\$18,451 ²
(2) 2007 Gross profit rate	54.3% ³	63.9% ⁴
(3) 2007 Operating income	\$7,170	\$7,252
(4) Percent change in operating income, 2006 to 2007	10.3% ⁵ increase	15.0% ⁶ increase

¹\$39,474 – \$18,038

²(\$28,857 – \$10,406) ³\$21,436 ÷ \$39,474

⁴\$18,451 ÷ \$28,857

⁵(\$7,170 – \$6,502) ÷ \$6,502

⁶(\$7,252 – \$6,308) ÷ \$6,308

- (b) PepsiCo has a higher gross profit but a lower gross profit rate than Coca-Cola. This can be explained by PepsiCo's higher sales.

Coca-Cola had a larger operating income because its selling, general, and administrative expenses were much smaller than PepsiCo's.

The answers to this assignment will be dependent upon the articles selected from the Internet by the student.

(a) (1)

FEDCO DEPARTMENT STORE
Income Statement
For the Year Ended December 31, 2010

Net sales [\$700,000 + (\$700,000 X 6%)]		\$742,000
Cost of goods sold (\$742,000 X 76%)*		<u>563,920</u>
Gross profit (\$742,000 X 24%)		178,080
Operating expenses		
Selling expenses	\$100,000	
Administrative expenses	<u>20,000</u>	
Total operating expenses		<u>120,000</u>
Net income		<u>\$ 58,080</u>

*Alternatively: Net sales, \$742,000 – gross profit, \$178,080.

(2)

FEDCO DEPARTMENT STORE
Income Statement
For the Year Ended December 31, 2010

Net sales		\$700,000
Cost of goods sold		<u>553,000</u>
Gross profit		147,000
Operating expenses		
Selling expenses	\$72,000*	
Administrative expenses	<u>20,000</u>	<u>92,000</u>
Net income		<u>\$ 55,000</u>

*\$100,000 – \$30,000 + (\$700,000 X 2%) – (\$30,000 X 40%) = \$72,000.

- (b) Carrie's proposed changes will increase net income by \$31,080. Luke's proposed changes will reduce operating expenses by \$28,000 and result in a corresponding increase in net income. Thus, if the choice is between Carrie's plan and Luke's plan, Carrie's plan should be adopted. While Luke's plan will increase net income, it may also have an adverse effect on sales personnel. Under Luke's plan, sales personnel will be taking a cut of \$16,000 in compensation [\$60,000 – (\$30,000 + \$14,000)].

(c) **FEDCO DEPARTMENT STORE**
Income Statement
For the Year Ended December 31, 2010

Net sales		\$742,000
Cost of goods sold		<u>563,920</u>
Gross profit		178,080
Operating expenses		
Selling expenses	\$72,840*	
Administrative expenses	<u>20,000</u>	
Total operating expenses		<u>92,840</u>
Net income		<u>\$ 85,240</u>

***\$72,000 + [2% X (\$742,000 – \$700,000)] = \$72,840.**

If both plans are implemented, net income will be \$58,240 (\$85,240 – \$27,000) higher than the 2009 results. This is an increase of over 200%. Given the size of the increase, Luke's plan to compensate sales personnel might be modified so that they would not have to take a pay cut. For example, if sales commissions were 3%, the compensation cut would be reduced to \$8,580 [\$16,000 (from (b)) – \$742,000 X (3% – 2%)].

(a), (b)

**President
Surfing USA Co.**

Dear Sir:

As you know, the financial statements for Surfing USA Co. are prepared in accordance with generally accepted accounting principles. One of these principles is the revenue recognition principle, which provides that revenues should be recognized when they are earned.

Typically, sales revenues are earned when the goods are transferred to the buyer from the seller. At this point, the sales transaction is completed and the sales price is established. Thus, in the typical situation, revenue on the surfboard ordered by Flutie is earned at event No. 8, when Flutie picks up the surfboard.

The circumstances pertaining to this sale may seem to you to be atypical because Flutie has ordered a specific kind of surfboard. From an accounting standpoint, this would be true only if you could not reasonably expect to sell this surfboard to another customer. In such case, it would be proper under generally accepted accounting principles to recognize sales revenue when you have completed the surfboard for Flutie.

Whether Flutie makes a down payment with the purchase order is irrelevant in recognizing sales revenue because at this time, you have not done anything to earn the revenue. A down payment may be an indication of Flutie's "good faith." However, its effect on your financial statements is limited entirely to recognizing the down payment as unearned revenue.

If you have further questions about the accounting for this sale, please let me know.

Sincerely,

- (a) Laura McAntee, as a new employee, is placed in a position of responsibility and is pressured by her supervisor to continue an unethical practice previously performed by him. The unethical practice is taking undeserved cash discounts. Her dilemma is either follow her boss's unethical instructions or offend her boss and maybe lose the job she just assumed.
- (b) The stakeholders (affected parties) are:
- ▶ Laura McAntee, the assistant treasurer.
 - ▶ Danny Feeney, the treasurer.
 - ▶ Dorchester Stores, the company.
 - ▶ Creditors of Dorchester Stores (suppliers).
 - ▶ Mail room employees (those assigned the blame).
- (c) Laura's alternatives:
1. Tell the treasurer (her boss) that she will attempt to take every allowable cash discount by preparing and mailing checks within the discount period—the ethical thing to do. This will offend her boss and may jeopardize her continued employment.
 2. Join the team and continue the unethical practice of taking undeserved cash discounts.
 3. Go over her boss's head and take the chance of receiving just and reasonable treatment from an officer superior to Danny. The company may not condone this practice. Laura definitely has a choice, but probably not without consequence. To continue the practice is definitely unethical. If Laura submits to this request, she may be asked to perform other unethical tasks. If Laura stands her ground and refuses to participate in this unethical practice, she probably won't be asked to do other unethical things—if she isn't fired. Maybe nobody has ever challenged Danny's unethical behavior and his reaction may be one of respect rather than anger and retribution. Being ethically compromised is no way to start a new job.

In order for revenue to be recognized it must be earned. In this case Atlantis has an obligation to provide goods with a value equal to the gift card. That obligation is not fulfilled until one of two things happens: Either the customer redeems the card for goods, or the card expires. Until either of those events occurs Atlantis cannot record revenue.

CHAPTER 6

Inventories

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Describe the steps in determining inventory quantities.	1, 2, 3, 4, 5, 6	1	1	1, 2	1A	1B
2. Explain the accounting for inventories and apply the inventory cost flow methods.	7, 8, 9, 10, 19	2, 3, 4	2	3, 4, 5, 6, 7, 8	2A, 3A, 4A, 5A, 6A, 7A	2B, 3B, 4B, 5B, 6B, 7B
3. Explain the financial effects of the inventory cost flow assumptions.	11, 12	5, 6	5	3, 6, 7, 8	2A, 3A, 4A, 5A, 6A, 7A	2B, 3B, 4B, 5B, 6B, 7B
4. Explain the lower-of-cost-or-market basis of accounting for inventories.	13, 14, 15	7	6	9, 10		
5. Indicate the effects of inventory errors on the financial statements.	16	8		11, 12		
6. Compute and interpret the inventory turnover ratio.	17, 18	9		13, 14		
*7. Apply the inventory cost flow methods to perpetual inventory records.	20, 21	10		15, 16, 17	8A, 9A	8B, 9B
*8. Describe the two methods of estimating inventories.	22, 23, 24, 25	11, 12		18, 19, 20	10A, 11A	10B, 11B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendices to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Determine items and amounts to be recorded in inventory.	Moderate	15–20
2A	Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost with analysis.	Simple	30–40
3A	Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost with analysis.	Simple	30–40
4A	Compute ending inventory, prepare income statements, and answer questions using FIFO and LIFO.	Moderate	30–40
5A	Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results.	Moderate	30–40
6A	Compare specific identification, FIFO, and LIFO under periodic method; use cost flow assumption to influence earnings.	Moderate	20–30
7A	Compute ending inventory, prepare income statements, and answer questions using FIFO and LIFO.	Moderate	30–40
*8A	Calculate cost of goods sold and ending inventory for FIFO, moving-average cost, and LIFO, under the perpetual system; compare gross profit under each assumption.	Moderate	30–40
*9A	Determine ending inventory under a perpetual inventory system.	Moderate	40–50
*10A	Estimate inventory loss using gross profit method.	Moderate	30–40
*11A	Compute ending inventory using retail method.	Moderate	20–30
1B	Determine items and amounts to be recorded in inventory.	Moderate	15–20
2B	Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost with analysis.	Simple	30–40
3B	Determine cost of goods sold and ending inventory using FIFO, LIFO, and average-cost with analysis.	Simple	30–40
4B	Compute ending inventory, prepare income statements, and answer questions using FIFO and LIFO.	Moderate	30–40
5B	Calculate ending inventory, cost of goods sold, gross profit, and gross profit rate under periodic method; compare results.	Moderate	30–40
6B	Compare specific identification, FIFO, and LIFO under periodic method; use cost flow assumption to justify price increase.	Moderate	20–30

ASSIGNMENT CHARACTERISTICS TABLE (Continued)

Problem Number	Description	Difficulty Level	Time Allotted (min.)
7B	Compute ending inventory, prepare income statements, and answer questions using FIFO and LIFO.	Moderate	30–40
*8B	Calculate cost of goods sold and ending inventory under LIFO, FIFO, and moving-average cost, under the perpetual system; compare gross profit under each assumption.	Moderate	30–40
*9B	Determine ending inventory under a perpetual inventory system.	Moderate	40–50
*10B	Compute gross profit rate and inventory loss using gross profit method.	Moderate	30–40
*11B	Compute ending inventory using retail method.	Moderate	20–30

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CHAPTER 6
INVENTORIES

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	4–6
BE2	2	K	Simple	2–4
BE3	2	AP	Simple	4–6
BE4	2	AP	Simple	2–4
BE5	3	AP	Simple	2–4
BE6	3	AP	Moderate	6–8
BE7	4	AP	Simple	4–6
BE8	5	AN	Simple	4–6
BE9	6	AP	Simple	4–6
BE10	7	AP	Simple	8–10
BE11	8	AP	Simple	4–6
BE12	8	AP	Simple	4–6
DI1	1	AN	Simple	4–6
DI2	2	AP	Simple	6–8
DI3	5	AP	Simple	6–8
DI4	6	AP	Simple	4–6
EX1	1	AN	Simple	4–6
EX2	1	AN	Simple	6–8
EX3	2, 3	AN, E	Moderate	6–8
EX4	2	AN, E	Simple	8–10
EX5	2	AP	Simple	6–8
EX6	2, 3	AP	Simple	8–10
EX7	2, 3	AP	Simple	8–10
EX8	2, 3	AP	Simple	6–8
EX9	4	AP	Simple	6–8
EX10	4	AP	Simple	4–6
EX11	5	AN	Simple	6–8
EX12	5	AN	Simple	10–12
EX13	6	AP	Simple	10–12
EX14	6	AP	Simple	8–10
EX15	7	AP	Simple	8–10
EX16	7	AP, E	Moderate	12–15

INVENTORIES (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX17	7	AP, E	Moderate	12–15
EX18	8	AP	Simple	8–10
EX19	8	AP	Simple	10–12
EX20	8	AP	Moderate	10–12
P1A	1	AN	Moderate	15–20
P2A	2, 3	AP	Simple	30–40
P3A	2, 3	AP	Simple	30–40
P4A	2, 3	AN	Moderate	30–40
P5A	2, 3	AP, E	Moderate	30–40
P6A	2, 3	AP, E	Moderate	20–30
P7A	2, 3	AN	Moderate	30–40
P8A	7	AP, E	Moderate	30–40
P9A	7	AP	Moderate	40–50
P10A	8	AP	Moderate	30–40
P11A	8	AP	Moderate	20–30
P1B	1	AN	Moderate	15–20
P2B	2, 3	AP	Simple	30–40
P3B	2, 3	AP	Simple	30–40
P4B	2, 3	AN	Moderate	30–40
P5B	2, 3	AP, E	Moderate	30–40
P6B	2, 3	AP, E	Moderate	20–30
P7B	2, 3	AN	Moderate	30–40
P8B	7	AP, E	Moderate	30–40
P9B	7	AP	Moderate	40–50
P10B	8	AP	Moderate	30–40
P11B	8	AP	Moderate	20–30
BYP1	2, 6	AP	Simple	10–15
BYP2	6	E	Simple	10–15
BYP3	2, 6	AN	Simple	10–15
BYP4	8	AP	Moderate	20–25
BYP5	5	AN	Simple	10–15
BYP6	3	E	Simple	10–15
BYP7	5	E	Simple	10–15

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Describe the steps in determining inventory quantities.	Q6-2 Q6-6	Q6-1 Q6-3	Q6-5 E6-1	D16-1 E6-1 E6-2	P6-1A P6-1B	
2. Explain the accounting for inventories and apply the inventory cost flow methods.	Q6-8 Q6-10 Q6-19 BE6-2 BE6-5	Q6-7 Q6-9	BE6-3 BE6-4 D16-2 E6-5 E6-6	E6-7 P6-3B E6-3 P6-5A E6-4 P6-4A P6-6A P6-4B P6-6B P6-7A	P6-7B	E6-3 E6-4 P6-5A P6-5B
3. Explain the financial effects of the inventory cost flow assumptions.		Q6-11 Q6-12	BE6-5 BE6-6 E6-6 E6-7 E6-8	P6-2A P6-2B P6-3A P6-3B P6-5A	E6-3 P6-6A P6-6B P6-7A P6-7B	E6-3 P6-5A P6-5B P6-6A P6-6B
4. Explain the lower-of-cost-or-market basis of accounting for inventories.		Q6-13	BE6-7 E6-9 E6-10	Q6-14 Q6-15		
5. Indicate the effects of inventory errors on the financial statements.			D16-3	Q6-16 BE6-8	E6-11 E6-12	
6. Compute and interpret the inventory turnover ratio.		Q6-17	BE6-9 D16-4	Q6-13 Q6-18 E6-14 BE6-9		
*7. Apply the inventory cost flow methods to perpetual inventory records.		Q6-20 Q6-21	BE6-10 E6-15 E6-16 E6-17	P6-8A P6-8B P6-9A P6-9B		E6-16 E6-17 P6-8A P6-8B
*8. Describe the two methods of estimating inventories.		Q6-22 Q6-23	Q6-24 Q6-25 BE6-11 BE6-12	E6-18 E6-19 E6-20 P6-10A	P6-11A P6-10B P6-11B	
Broadening Your Perspective			Financial Reporting Decision Making Across the Organization	Exploring the Web Communication		Comp. Analysis All About You Ethics Case

ANSWERS TO QUESTIONS

1. Agree. Effective inventory management is frequently the key to successful business operations. Management attempts to maintain sufficient quantities and types of goods to meet expected customer demand. It also seeks to avoid the cost of carrying inventories that are clearly in excess of anticipated sales.
2. Inventory items have two common characteristics: (1) they are owned by the company and (2) they are in a form ready for sale in the ordinary course of business.
3. Taking a physical inventory involves actually counting, weighing or measuring each kind of inventory on hand. Retailers, such as a hardware store, generally have thousands of different items to count. This is normally done when the store is closed.
4. (a) (1) The goods will be included in Reeves Company's inventory if the terms of sale are FOB destination.
(2) They will be included in Cox Company's inventory if the terms of sale are FOB shipping point.
(b) Reeves Company should include goods shipped to another company on consignment in its inventory. Goods held by Reeves Company on consignment should not be included in inventory.
5. Inventoriable costs are \$3,020 (invoice cost \$3,000 + freight charges \$50 – purchase discounts \$30). The amount paid to negotiate the purchase is a buying cost that normally is not included in the cost of inventory because of the difficulty of allocating these costs. Buying costs are expensed in the year incurred.
6. FOB shipping point means that ownership of goods in transit passes to the buyer when the public carrier accepts the goods from the seller. FOB destination means that ownership of goods in transit remains with the seller until the goods reach the buyer.
7. Actual physical flow may be impractical because many items are indistinguishable from one another. Actual physical flow may be inappropriate because management may be able to manipulate net income through specific identification of items sold.
8. The major advantage of the specific identification method is that it tracks the actual physical flow of the goods available for sale. The major disadvantage is that management could manipulate net income.
9. No. Selection of an inventory costing method is a management decision. However, once a method has been chosen, it should be used consistently from one accounting period to another.
10. (a) FIFO.
(b) Average-cost.
(c) LIFO.
11. Plato Company is using the FIFO method of inventory costing, and Cecil Company is using the LIFO method. Under FIFO, the latest goods purchased remain in inventory. Thus, the inventory on the balance sheet should be close to current costs. The reverse is true of the LIFO method. Plato Company will have the higher gross profit because cost of goods sold will include a higher proportion of goods purchased at earlier (lower) costs.

Questions Chapter 6 (Continued)

12. Casey Company may experience severe cash shortages if this policy continues. All of its net income is being paid out as dividends, yet some of the earnings must be reinvested in inventory to maintain inventory levels. Some earnings must be reinvested because net income is computed with cost of goods sold based on older, lower costs while the inventory must be replaced at current, higher costs. Because of this factor, net income under FIFO is sometimes referred to as “phantom profits.”
13. Peter should know the following:
 - (a) A departure from the cost basis of accounting for inventories is justified when the value of the goods is lower than its cost. The writedown to market should be recognized in the period in which the price decline occurs.
 - (b) Market means current replacement cost, not selling price. For a merchandising company, market is the cost at the present time from the usual suppliers in the usual quantities.
14. Garitson Music Center should report the CD players at \$380 each for a total of \$1,900. \$380 is the current replacement cost under the lower-of-cost-or-market basis of accounting for inventories. A decline in replacement cost usually leads to a decline in the selling price of the item. Valuation at LCM is conservative.
15. Ruthie Stores should report the toasters at \$27 each for a total of \$540. The \$27 is the lower of cost or market. It is used because it is the lower of the inventory's cost and current replacement cost.
16. (a) Mintz Company's 2009 net income will be understated \$7,000; (b) 2010 net income will be overstated \$7,000; and (c) the combined net income for the two years will be correct.
17. Willingham Company should disclose: (1) the major inventory classifications, (2) the basis of accounting (cost or lower of cost or market), and (3) the costing method (FIFO, LIFO, or average).
18. An inventory turnover that is too high may indicate that the company is losing sales opportunities because of inventory shortages. Inventory outages may also cause customer ill will and result in lost future sales.
19. PepsiCo uses the average, first-in, first-out or last-in, first-out methods for its inventories.
- *20. Disagree. The results under the FIFO method are the same but the results under the LIFO method are different. The reason is that the pool of inventoriable costs (cost of goods available for sale) is not the same. Under a periodic system, the pool of costs is the goods available for sale for the entire period, whereas under a perpetual system, the pool is the goods available for sale up to the date of sale.
- *21. In a periodic system, the average is a weighted average based on total goods available for sale for the period. In a perpetual system, the average is a moving average of goods available for sale after each purchase.
- *22. Inventories must be estimated when: (1) management wants monthly or quarterly financial statements but a physical inventory is only taken annually and (2) a fire or other type of casualty makes it impossible to take a physical inventory.

Questions Chapter 6 (Continued)

- *23.** In the gross profit method, the average is the gross profit rate, which is gross profit divided by net sales. The rate is often based on last year's actual rate. The gross profit rate is applied to net sales in using the gross profit method.

In the retail inventory method, the average is the cost-to-retail ratio, which is the goods available for sale at cost divided by the goods available for sale at retail. The ratio is based on current year data and is applied to the ending inventory at retail.

- *24.** The estimated cost of the ending inventory is \$40,000:

Net sales	\$400,000
Less: Gross profit (\$400,000 X 35%)	<u>140,000</u>
Estimated cost of goods sold.....	<u>\$260,000</u>
 Cost of goods available for sale	\$300,000
Less: Cost of goods sold	<u>260,000</u>
Estimated cost of ending inventory.....	<u>\$ 40,000</u>

- *25.** The estimated cost of the ending inventory is \$28,000:

Ending inventory at retail: $\$40,000 = (\$120,000 - \$80,000)$

Cost-to-retail ratio: $70\% = \left(\frac{\$84,000}{\$120,000} \right)$

Ending inventory at cost: $\$28,000 = (\$40,000 \times 70\%)$

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 6-1

- (a) Ownership of the goods belongs to Smart. Thus, these goods should be included in Smart's inventory.**
- (b) The goods in transit should not be included in the inventory count because ownership by Smart does not occur until the goods reach the buyer.**
- (c) The goods being held belong to the customer. They should not be included in Smart's inventory.**
- (d) Ownership of these goods rests with the other company. Thus, these goods should not be included in the physical inventory.**

BRIEF EXERCISE 6-2

The items that should be included in inventoriable costs are:

- (a) Freight-in**
- (b) Purchase Returns and Allowances**
- (c) Purchases**
- (d) Purchase Discounts**

BRIEF EXERCISE 6-3

- (a) The ending inventory under FIFO consists of 200 units at \$8 + 160 units at \$7 for a total allocation of \$2,720 or (\$1,600 + \$1,120).**
- (b) The ending inventory under LIFO consists of 300 units at \$6 + 60 units at \$7 for a total allocation of \$2,220 or (\$1,800 + \$420).**

BRIEF EXERCISE 6-4

Average unit cost is \$6.89 computed as follows:

300 X \$6 =	\$1,800
400 X \$7 =	2,800
200 X \$8 =	<u>1,600</u>
<u>900</u>	<u>\$6,200</u>

$\$6,200 \div 900 = \$6.89$ (rounded).

The cost of the ending inventory is \$2,480 or $(360 \times \$6.89)$.

BRIEF EXERCISE 6-5

- (a) FIFO would result in the highest net income.
- (b) FIFO would result in the highest ending inventory.
- (c) LIFO would result in the lowest income tax expense (because it would result in the lowest net income).
- (d) Average-cost would result in the most stable income over a number of years because it averages out any big changes in the cost of inventory.

BRIEF EXERCISE 6-6

Cost of good sold under:

	<u>LIFO</u>	<u>FIFO</u>
Purchases	\$6 X 100	\$6 X 100
	\$7 X 200	\$7 X 200
	<u>\$8 X 150</u>	<u>\$8 X 150</u>
Cost of goods available for sale	\$ 3,200	\$ 3,200
Less: Ending inventory	<u>\$ 1,160</u>	<u>\$ 1,410</u>
Cost of goods sold	<u>\$ 2,040</u>	<u>\$ 1,790</u>

Since the cost of goods sold is \$250 less under FIFO (\$2,040 – \$1,790) that is the amount of the phantom profit. It is referred to as “phantom profit” because FIFO matches current selling prices with old inventory costs. To replace the units sold, the company will have to pay the current price of \$8 per unit, rather than the \$6 per unit which some of the units were priced at under FIFO. Therefore, profit under LIFO is more representative of what the company can expect to earn in future periods.

BRIEF EXERCISE 6-7

<u>Inventory Categories</u>	<u>Cost</u>	<u>Market</u>	<u>LCM</u>
Cameras	\$12,000	\$12,100	\$12,000
Camcorders	9,500	9,700	9,500
DVD players	14,000	12,800	12,800
Total valuation			<u>\$34,300</u>

BRIEF EXERCISE 6-8

The understatement of ending inventory caused cost of goods sold to be overstated \$10,000 and net income to be understated \$10,000. The correct net income for 2010 is \$100,000 or (\$90,000 + \$10,000).

Total assets in the balance sheet will be understated by the amount that ending inventory is understated, \$10,000.

BRIEF EXERCISE 6-9

$$\text{Inventory turnover: } \frac{\$270,000}{(\$60,000 + \$40,000) \div 2} = \frac{\$270,000}{\$50,000} = 5.4$$

$$\text{Days in inventory: } \frac{365}{5.4} = 67.6 \text{ days}$$

*BRIEF EXERCISE 6-10

(1) FIFO Method

Product E2-D2					
<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>		
May 7	(50 @ \$10) \$500		(50 @ \$10)	\$500	
June 1		(30 @ \$10) \$300	(20 @ \$10)	\$200	
July 28	(30 @ \$13) \$390		(20 @ \$10)		
			(30 @ \$13)	\$590	
Aug. 27		(20 @ \$10)			
		(20 @ \$13) } \$460	(10 @ \$13)	\$130	

***BRIEF EXERCISE 6-10 (Continued)**

(2) LIFO Method

Product E2-D2					
Date	Purchases	Cost of Goods Sold		Balance	
May 7	(50 @ \$10) \$500			(50 @ \$10)	\$500
June 1		(30 @ \$10)	\$300	(20 @ \$10)	\$200
July 28	(30 @ \$13) \$390			(20 @ \$10)	} \$590
				(30 @ \$13)	
Aug. 27		(30 @ \$13)	} \$490		
		(10 @ \$10)		(10 @ \$10)	\$100

(3) Average-Cost

Product E2-D2					
Date	Purchases	Cost of Goods Sold		Balance	
May 7	(50 @ \$10) \$500			(50 @ \$10)	\$500
June 1		(30 @ \$10)	\$300	(20 @ \$10)	\$200
July 28	(30 @ \$13) \$390			(50 @ \$11.80)*	\$590
Aug. 27		(40 @ \$11.80)	\$472	(10 @ \$11.80)	\$118

*($\$200 + \$390$) $\div$ 50

***BRIEF EXERCISE 6-11**

(1) Net sales.....	\$330,000
Less: Estimated gross profit (35% X \$330,000)	<u>115,500</u>
Estimated cost of goods sold	<u>\$214,500</u>
(2) Cost of goods available for sale	\$230,000
Less: Estimated cost of goods sold	<u>214,500</u>
Estimated cost of ending inventory	<u>\$ 15,500</u>

***BRIEF EXERCISE 6-12**

	At Cost	At Retail
Goods available for sale	\$35,000	\$50,000
Net sales		<u>40,000</u>
Ending inventory at retail		<u>\$10,000</u>

Cost-to-retail ratio = ($\$35,000 \div \$50,000$) = 70%

Estimated cost of ending inventory = ($\$10,000 \times 70\%$) = \$7,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 6-1

Inventory per physical count.....	\$300,000
Inventory out on consignment.....	26,000
Inventory sold, in transit at year-end.....	—0—
Inventory purchased, in transit at year-end	<u>17,000</u>
Correct December 31 inventory.....	<u>\$343,000</u>

DO IT! 6-2

Cost of goods available for sale = $(3,000 \times \$5) + (8,000 \times \$7) = \$71,000$

Ending inventory = $3,000 + 8,000 - 9,200 = 1,800$ units

- (a) FIFO: $\$71,000 - (1,800 \times \$7) = \$58,400$
 (b) LIFO: $\$71,000 - (1,800 \times \$5) = \$62,000$
 (c) Average-cost: $\$71,000 / 11,000 = \$6.455$ per unit
 $9,200 \times \$6.455 = \$59,386$

DO IT! 6-3

- (a) The lowest value for each inventory type is: Small \$64,000, Medium \$260,000, and Large \$152,000. The total inventory value is the sum of these figures, \$476,000.

	2010	2011
(b) Ending inventory	\$31,000 understated	No effect
Cost of goods sold	\$31,000 overstated	\$31,000 understated
Owner's equity	\$31,000 understated	No effect

DO IT! 6-4

	2009		2010
Inventory turnover ratio	$\frac{\$1,200,000}{(\$180,000 + \$220,000)/2} = 6$		$\frac{\$1,425,000}{(\$220,000 + \$80,000)/2} = 9.5$
Days in inventory	$365 \div 6 = 60.8 \text{ days}$		$365 \div 9.5 = 38.4 \text{ days}$

The company experienced a very significant decline in its ending inventory as a result of the just-in-time inventory. This decline improved its inventory turnover ratio and its days in inventory. It is possible that this increase is the result of a more focused inventory policy. It appears that this change is a win-win situation for Aragon Company.

SOLUTIONS TO EXERCISES

EXERCISE 6-1

Ending inventory—physical count	\$297,000
1. No effect—title passes to purchaser upon shipment when terms are FOB shipping point	0
2. No effect—title does not transfer to Lima until goods are received.....	0
3. Add to inventory: Title passed to Lima when goods were shipped.....	22,000
4. Add to inventory: Title remains with Lima until purchaser receives goods	35,000
5. The goods did not arrive prior to year-end. The goods, therefore, cannot be included in the inventory	(44,000)
Correct inventory	<u>\$310,000</u>

EXERCISE 6-2

Ending inventory—as reported.....	\$740,000
1. Subtract from inventory: The goods belong to Superior Corporation. Strawser is merely holding them as a consignee	(250,000)
2. No effect—title does not pass to Strawser until goods are received (Jan. 3)	0
3. Subtract from inventory: Office supplies should be carried in a separate account. They are not considered inventory held for resale	(17,000)
4. Add to inventory: The goods belong to Strawser until they are shipped (Jan. 1)	30,000
5. Add to inventory: District Sales ordered goods with a cost of \$8,000. Strawser should record the corresponding sales revenue of \$10,000. Strawser's decision to ship extra "unordered" goods does not constitute a sale. The manager's statement that District could ship the goods back indicates that Strawser knows this over-shipment is not a legitimate sale. The manager acted unethically in an attempt to improve Strawser's reported income by over-shipping.....	52,000

EXERCISE 6-2 (Continued)

6. Subtract from inventory: GAAP require that inventory be valued at the lower of cost or market. Obsolete parts should be adjusted from cost to zero if they have no other use.....	(40,000)
Correct inventory	<u>\$515,000</u>

EXERCISE 6-3

(a) FIFO Cost of Goods Sold

$$(\#1012) \$100 + (\#1045) \$90 = \$190$$

- (b) It could choose to sell specific units purchased at specific costs if it wished to impact earnings selectively. If it wished to minimize earnings it would choose to sell the units purchased at higher costs—in which case the Cost of Goods Sold would be \$190. If it wished to maximize earnings it would choose to sell the units purchased at lower costs—in which case the cost of goods sold would be \$170.
- (c) I recommend they use the FIFO method because it produces a more appropriate balance sheet valuation and reduces the opportunity to manipulate earnings.

(The answer may vary depending on the method the student chooses.)

EXERCISE 6-4

(a)		FIFO	
Beginning inventory (26 X \$97).....			\$ 2,522
Purchases			
Sept. 12 (45 X \$102)	\$4,590		
Sept. 19 (20 X \$104)	2,080		
Sept. 26 (50 X \$105)	<u>5,250</u>		<u>11,920</u>
Cost of goods available for sale.....			14,442
Less: Ending inventory (20 X \$105)			<u>2,100</u>
Cost of goods sold.....			<u>\$12,342</u>

EXERCISE 6-4 (Continued)

Proof			
Date	Units	Unit Cost	Total Cost
9/1	26	\$ 97	\$ 2,522
9/12	45	102	4,590
9/19	20	104	2,080
9/26	30	105	3,150
	<u>121</u>		<u>\$12,342</u>

LIFO

Cost of goods available for sale.....	\$14,442
Less: Ending inventory (20 X \$97)	<u>1,940</u>
Cost of goods sold	<u>\$12,502</u>

Proof			
Date	Units	Unit Cost	Total Cost
9/26	50	\$105	\$ 5,250
9/19	20	104	2,080
9/12	45	102	4,590
9/1	6	97	582
	<u>121</u>		<u>\$12,502</u>

(b)

FIFO \$2,100 (ending inventory) + \$12,342 (COGS) = \$14,442	} Cost of goods available for sale
LIFO \$1,940 (ending inventory) + \$12,502 (COGS) = \$14,442	

Under both methods, the sum of the ending inventory and cost of goods sold equals the same amount, \$14,442, which is the cost of goods available for sale.

EXERCISE 6-5

FIFO

Beginning inventory (30 X \$8).....		\$240
Purchases		
May 15 (25 X \$11)	\$275	
May 24 (35 X \$12)	<u>420</u>	<u>695</u>
Cost of goods available for sale.....		935
Less: Ending inventory (25 X \$12)		<u>300</u>
Cost of goods sold		<u>\$635</u>

EXERCISE 6-5 (Continued)

Proof			
Date	Units	Unit Cost	Total Cost
5/1	30	\$ 8	\$240
5/15	25	11	275
5/24	10	12	120
			<u>\$635</u>

LIFO

Cost of goods available for sale	\$935
Less: Ending inventory (25 X \$8).....	<u>200</u>
Cost of goods sold	<u>\$735</u>

Proof			
Date	Units	Unit Cost	Total Cost
5/24	35	\$12	\$420
5/15	25	11	275
5/1	5	8	40
			<u>\$735</u>

EXERCISE 6-6

(a)

FIFO

Beginning inventory (200 X \$5)	\$1,000
Purchases	
June 12 (300 X \$6)	\$1,800
June 23 (500 X \$7)	<u>3,500</u>
Cost of goods available for sale	6,300
Less: Ending inventory (120 X \$7)	<u>840</u>
Cost of goods sold	<u>\$5,460</u>

LIFO

Cost of goods available for sale	\$6,300
Less: Ending inventory (120 X \$5)	<u>600</u>
Cost of goods sold	<u>\$5,700</u>

EXERCISE 6-6 (Continued)

- (b) The FIFO method will produce the higher ending inventory because costs have been rising. Under this method, the earliest costs are assigned to cost of goods sold and the latest costs remain in ending inventory. For Yount Company, the ending inventory under FIFO is \$840 or $(120 \times \$7)$ compared to \$600 or $(120 \times \$5)$ under LIFO.
- (c) The LIFO method will produce the higher cost of goods sold for Yount Company. Under LIFO the most recent costs are charged to cost of goods sold and the earliest costs are included in the ending inventory. The cost of goods sold is \$5,700 or $[\$6,300 - (120 \times \$5)]$ compared to \$5,460 or $(\$6,300 - \$840)$ under FIFO.

EXERCISE 6-7

(a)	(1)	FIFO	
		Beginning inventory	\$10,000
		Purchases	<u>26,000</u>
		Cost of goods available for sale.....	36,000
		Less: ending inventory $(80 \times \$130)$	<u>10,400</u>
		Cost of goods sold.....	<u>\$25,600</u>
	(2)	LIFO	
		Beginning inventory	\$10,000
		Purchases	<u>26,000</u>
		Cost of goods available for sale.....	36,000
		Less: ending inventory $(80 \times \$100)$	<u>8,000</u>
		Cost of goods sold.....	<u>\$28,000</u>
	(3)	AVERAGE	
		Beginning inventory	\$10,000
		Purchases	<u>26,000</u>
		Cost of goods available for sale.....	36,000
		Less: ending inventory $(80 \times \$120)$	<u>9,600</u>
		Cost of goods sold.....	<u>\$26,400</u>

- (b) The use of FIFO would result in the highest net income since the earlier lower costs are matched with revenues.
- (c) The use of FIFO would result in inventories approximating current cost in the balance sheet, since the more recent units are assumed to be on hand.
- (d) The use of LIFO would result in Jones paying the least taxes in the first year since income will be lower.

EXERCISE 6-8

(a)	Cost of Goods Available for Sale \$6,300	÷	Total Units Available for Sale 1,000	=	Weighted Average Unit Cost \$6.30

Ending inventory (120 X \$6.30)	\$ 756
Cost of goods sold (880 X \$6.30)	5,544

- (b) Ending inventory is lower than FIFO (\$840) and higher than LIFO (\$600). In contrast, cost of goods sold is higher than FIFO (\$5,460) and lower than LIFO (\$5,700).
- (c) The average-cost method uses a weighted-average unit cost, not a simple average of unit costs.

EXERCISE 6-9

	<u>Cost</u>	<u>Market</u>	<u>Lower of Cost or Market:</u>
Cameras			
Minolta	\$ 850	\$ 780	\$ 780
Canon	900	912	900
Total	<u>1,750</u>	<u>1,692</u>	
Light meters			
Vivitar	1,500	1,380	1,380
Kodak	<u>1,680</u>	<u>1,890</u>	<u>1,680</u>
Total	<u>3,180</u>	<u>3,270</u>	
Total inventory	<u>\$4,930</u>	<u>\$4,962</u>	<u>\$4,740</u>

EXERCISE 6-10

	<u>Cost</u>	<u>Market</u>	<u>Lower of Cost or Market:</u>
Cameras	\$ 6,500	\$ 7,100	\$ 6,500
DVD players	11,250	10,350	10,350
Ipods	<u>10,000</u>	<u>9,750</u>	<u>9,750</u>
Total inventory	<u>\$27,750</u>	<u>\$27,200</u>	<u>\$26,600</u>

EXERCISE 6-11

	<u>2010</u>	<u>2011</u>
Beginning inventory	\$ 20,000	\$ 27,000
Cost of goods purchased	<u>150,000</u>	<u>175,000</u>
Cost of goods available for sale.....	170,000	202,000
Corrected ending inventory	<u>27,000^a</u>	<u>41,000^b</u>
Cost of goods sold	<u>\$143,000</u>	<u>\$161,000</u>

^a\$30,000 – \$3,000 = \$27,000.

^b\$35,000 + \$6,000 = \$41,000.

EXERCISE 6-12

(a)		<u>2010</u>	<u>2011</u>
	Sales	<u>\$210,000</u>	<u>\$250,000</u>
	Cost of goods sold		
	Beginning inventory	32,000	39,000
	Cost of goods purchased	<u>173,000</u>	<u>202,000</u>
	Cost of goods available for sale	205,000	241,000
	Ending inventory (\$44,000 – \$5,000)	<u>39,000</u>	<u>52,000</u>
	Cost of goods sold	<u>166,000</u>	<u>189,000</u>
	Gross profit	<u>\$ 44,000</u>	<u>\$ 61,000</u>

- (b) The cumulative effect on total gross profit for the two years is zero as shown below:

Incorrect gross profits:	\$49,000 + \$56,000 = \$105,000
Correct gross profits:	\$44,000 + \$61,000 = <u>105,000</u>
Difference	<u>\$ 0</u>

- (c) Dear Mr./Ms. President:

Because your ending inventory of December 31, 2010 was overstated by \$5,000, your net income for 2010 was overstated by \$5,000. For 2011 net income was understated by \$5,000.

In a periodic system, the cost of goods sold is calculated by deducting the cost of ending inventory from the total cost of goods you have available for sale in the period. Therefore, if this ending inventory figure is overstated, as it was in December 2010, then the cost of goods sold is understated and therefore net income will be overstated by that amount. Consequently, this overstated ending inventory figure goes on to become the next period's beginning inventory amount and is a part of the total cost of goods available for sale. Therefore, the mistake repeats itself in the reverse.

EXERCISE 6-12 (Continued)

The error also affects the balance sheet at the end of 2010. The inventory reported in the balance sheet is overstated; therefore, total assets are overstated. The overstatement of the 2010 net income results in the capital account balance being overstated. The balance sheet at the end of 2011 is correct because the overstatement of the capital account at the end of 2010 is offset by the understatement of the 2011 net income and the inventory at the end of 2011 is correct.

Thank you for allowing me to bring this to your attention. If you have any questions, please contact me at your convenience.

Sincerely,

EXERCISE 6-13

	2009	2010	2011
Inventory	\$900,000	\$1,120,000	\$1,300,000
turnover	$(\$100,000 + \$300,000) \div 2$	$(\$300,000 + \$400,000) \div 2$	$(\$400,000 + \$480,000) \div 2$
	$\frac{\$900,000}{\$200,000} = 4.5$	$\frac{\$1,120,000}{\$350,000} = 3.2$	$\frac{\$1,300,000}{\$440,000} = 2.95$
Days in	$\frac{365}{4.5} = 81.1 \text{ days}$	$\frac{365}{3.2} = 114.1 \text{ days}$	$\frac{365}{2.95} = 123.7 \text{ days}$
inventory			
Gross	$\frac{\$1,200,000 - \$900,000}{\$1,200,000} = .25$	$\frac{\$1,600,000 - \$1,120,000}{\$1,600,000} = .30$	$\frac{\$1,900,000 - \$1,300,000}{\$1,900,000} = .32$
profit rate			

The inventory turnover ratio decreased by approximately 34% from 2009 to 2011 while the days in inventory increased by almost 53% over the same time period. Both of these changes would be considered negative since it's better to have a higher inventory turnover with a correspondingly lower days in inventory. However, Santo's Photo gross profit rate increased by 28% from 2009 to 2011, which is a positive sign.

EXERCISE 6-14

- (a)
- | | <u>O'Brien Company</u> | <u>Weinberg Company</u> |
|--------------------|--|--|
| Inventory Turnover | $\frac{\$190,000}{(\$45,000 + \$55,000)/2}$ $= \underline{3.80}$ | $\frac{\$292,000}{(\$71,000 + \$69,000)/2}$ $= \underline{4.17}$ |
| Days in Inventory | $365/3.80 = \underline{96 \text{ days}}$ | $365/4.17 = \underline{88 \text{ days}}$ |
- (b) Weinberg Company is moving its inventory more quickly, since its inventory turnover is higher, and its days in inventory is lower.

*EXERCISE 6-15

- (1) **FIFO**
- | <u>Date</u> | <u>Purchases</u> | <u>Cost of Goods Sold</u> | <u>Balance</u> |
|-------------|---------------------|---------------------------|---------------------|
| Jan. 1 | | | (3 @ \$600) \$1,800 |
| 8 | | (2 @ \$600) \$1,200 | (1 @ \$600) 600 |
| 10 | (6 @ \$660) \$3,960 | | (1 @ \$600) |
| | | | (6 @ \$660) 4,560 |
| 15 | | (1 @ \$600) | |
| | | (3 @ \$660) \$2,580 | (3 @ \$660) 1,980 |
- (2) **LIFO**
- | <u>Date</u> | <u>Purchases</u> | <u>Cost of Goods Sold</u> | <u>Balance</u> |
|-------------|---------------------|---------------------------|---------------------|
| Jan. 1 | | | (3 @ \$600) \$1,800 |
| 8 | | (2 @ \$600) \$1,200 | (1 @ \$600) 600 |
| 10 | (6 @ \$660) \$3,960 | | (1 @ \$600) |
| | | | (6 @ \$660) 4,560 |
| 15 | | (4 @ \$660) \$2,640 | (1 @ \$600) |
| | | | (2 @ \$660) 1,920 |

***EXERCISE 6-15 (Continued)**

(3) MOVING-AVERAGE COST

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
Jan. 1			(3 @ \$600) \$1,800
8		(2 @ \$600) \$1,200	(1 @ \$600) 600
10	(6 @ \$660) \$3,960		(7 @ \$651.43)* 4,560
15		(4 @ \$651.43) \$2,606	(3 @ \$651.43) 1,954

*Average-cost = $(\$600 + \$3,960) \div 7 = \$651.43$ (rounded)

***EXERCISE 6-16**

(a) The cost of goods available for sale is:

June 1 Inventory	200 @ \$5	\$1,000
June 12 Purchase	300 @ \$6	1,800
June 23 Purchase	500 @ \$7	<u>3,500</u>
Total cost of goods available for sale		<u>\$6,300</u>

FIFO

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
June 1			(200 @ \$5) \$1,000
June 12	(300 @ \$6) \$1,800		(200 @ \$5) } (300 @ \$6) } \$2,800
June 15		(200 @ \$5) \$1,000 (200 @ \$6) 1,200	(100 @ \$6) \$ 600 (100 @ \$6) } (500 @ \$7) } \$4,100
June 23	(500 @ \$7) \$3,500		
June 27		(100 @ \$6) 600 (380 @ \$7) <u>2,660</u> <u>\$5,460</u>	(120 @ \$7) \$ 840

Ending inventory: \$840. Cost of goods sold: \$6,300 – \$840 = \$5,460.

***EXERCISE 6-16 (Continued)**

LIFO					
<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>		<u>Balance</u>	
June 1				(200 @ \$5)	\$1,000
June 12	(300 @ \$6) \$1,800			(200 @ \$5) } (300 @ \$6) }	\$2,800
June 15		(300 @ \$6) \$1,800 (100 @ \$5) \$ 500		(100 @ \$5)	\$ 500
June 23	(500 @ \$7) \$3,500			(100 @ \$5) } (500 @ \$7) }	\$4,000
June 27		(480 @ \$7) <u>\$3,360</u> <u>\$5,660</u>		(100 @ \$5) } (20 @ \$7) }	\$ 640

Ending inventory: \$640. Cost of goods sold: \$6,300 – \$640 = \$5,660.

Moving-Average Cost					
<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>		<u>Balance</u>	
June 1				(200 @ \$5)	\$1,000
June 12	(300 @ \$6) \$1,800			(500 @ \$5.60)	\$2,800
June 15		(400 @ \$5.60) \$2,240		(100 @ \$5.60)	\$ 560
June 23	(500 @ \$7) \$3,500			(600 @ \$6.767)	\$4,060
June 27		(480 @ \$6.767) <u>\$3,248</u> <u>\$5,488</u>		(120 @ \$6.767)	\$ 812

Ending inventory: \$812. Cost of goods sold: \$6,300 – \$812 = \$5,488.

- (b) FIFO gives the same ending inventory and cost of goods sold values under both the periodic and perpetual inventory system. LIFO and average give different ending inventory and cost of goods sold values under the periodic and perpetual inventory systems, due to the Last-in, First-out assumption being applied to a different pool of costs.
- (c) The simple average would be $[(\$5 + \$6 + \$7) \div 3]$ or \$6. However, the moving-average cost method uses a weighted-average unit cost that changes each time a purchase is made rather than a simple average.

***EXERCISE 6-17**

(a)

FIFO

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
9/1			(26 @ \$ 97) \$2,522
9/5		(12 @ \$ 97) \$1,164	(14 @ \$ 97) \$1,358
9/12	(45 @ \$102) \$4,590		(14 @ \$ 97) (45 @ \$102) \$5,948
9/16		(14 @ \$ 97) (36 @ \$102) \$5,030	(9 @ \$102) \$ 918
9/19	(20 @ \$104) \$2,080		(9 @ \$102) (20 @ \$104) \$2,998
9/26	(50 @ \$105) \$5,250		(9 @ \$102) (20 @ \$104) (50 @ \$105) \$8,248
9/29		(9 @ \$102) (20 @ \$104) (30 @ \$105) \$6,148	(20 @ \$105) \$2,100

LIFO

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
9/1			(26 @ \$ 97) \$2,522
9/5		(12 @ \$ 97) \$1,164	(14 @ \$ 97) \$1,358
9/12	(45 @ \$102) \$4,590		(14 @ \$ 97) (45 @ \$102) \$5,948
9/16		(45 @ \$102) (5 @ \$ 97) \$5,075	(9 @ \$ 97) \$ 873
9/19	(20 @ \$104) \$2,080		(9 @ \$ 97) (20 @ \$104) \$2,953
9/26	(50 @ \$105) \$5,250		(9 @ \$ 97) (20 @ \$104) (50 @ \$105) \$8,203
9/29		(50 @ \$105) (9 @ \$104) \$6,186	(9 @ \$ 97) (11 @ \$104) \$2,017

***EXERCISE 6-17 (Continued)**

Moving-Average Cost					
Date	Purchases	Cost of Goods Sold		Balance	
9/1				(26 @ \$97)	\$2,522
9/5		(12 @ \$97)	\$1,164	(14 @ \$97)	\$1,358
9/12	(45 @ \$102) \$4,590			(59 @ \$100.81) ^a	\$5,948
9/16		(50 @ \$100.81)	\$5,041*	(9 @ \$100.81)	\$ 907
9/19	(20 @ \$104) \$2,080			(29 @ \$103.00) ^b	\$2,987
9/26	(50 @ \$105) \$5,250			(79 @ \$104.27) ^c	\$8,237
9/29		(59 @ \$104.27)	\$6,152*	(20 @ \$104.27)	\$2,085

*Rounded

^a \$5,948 ÷ 59 = \$100.81

^b \$2,987 ÷ 29 = \$103.00

^c \$8,237 ÷ 79 = \$104.27

(b)

	<u>Periodic</u>	<u>Perpetual</u>
Ending Inventory FIFO	\$2,100	\$2,100
Ending Inventory LIFO	\$1,940	\$2,017

(c) FIFO yields the same ending inventory value under both the periodic and perpetual inventory system.

LIFO yields different ending inventory values when using the periodic versus perpetual inventory system.

***EXERCISE 6-18**

(a)	Sales.....	\$800,000
	Cost of goods sold	
	Inventory, November 1	\$100,000
	Cost of goods purchased.....	<u>500,000</u>
	Cost of goods available for sale	600,000
	Inventory, December 31	<u>120,000</u>
	Cost of goods sold.....	<u>480,000</u>
	Gross profit.....	<u>\$320,000</u>
	Gross profit rate \$320,000/\$800,000 = <u>40%</u>	

***EXERCISE 6-18 (Continued)**

(b) Sales	\$1,000,000
Less: Estimated gross profit (40% X \$1,000,000).....	400,000
Estimated cost of goods sold	<u>\$ 600,000</u>
Beginning inventory	\$120,000
Cost of goods purchased	610,000
Cost of goods available for sale	730,000
Less: Estimated cost of goods sold	600,000
Estimated cost of ending inventory	<u>\$130,000</u>

***EXERCISE 6-19**

(a) Net sales (\$51,000 – \$1,000).....	\$50,000
Less: Estimated gross profit (40% X \$50,000).....	20,000
Estimated cost of goods sold	<u>\$30,000</u>
Beginning inventory	\$20,000
Cost of goods purchased (\$31,200 – \$1,400 + \$1,200)	31,000
Cost of goods available for sale	51,000
Less: Estimated cost of goods sold	30,000
Estimated cost of merchandise lost	<u>\$21,000</u>
(b) Net sales.....	\$50,000
Less: Estimated gross profit (30% X \$50,000).....	15,000
Estimated cost of goods sold	<u>\$35,000</u>
Beginning inventory	\$30,000
Cost of goods purchased	31,000
Cost of goods available for sale	61,000
Less: Estimated cost of goods sold	35,000
Estimated cost of merchandise lost	<u>\$26,000</u>

***EXERCISE 6-20**

	Women's Department		Men's Department	
	Cost	Retail	Cost	Retail
Beginning inventory	\$ 32,000	\$ 46,000	\$ 45,000	\$ 60,000
Goods purchased	148,000	179,000	136,300	185,000
Goods available for sale	<u>\$180,000</u>	<u>225,000</u>	<u>\$181,300</u>	<u>245,000</u>
Net sales		178,000		185,000
Ending inventory at retail		<u>\$ 47,000</u>		<u>\$ 60,000</u>

Cost-to-retail ratio	$\frac{\$180,000}{\$225,000} = \underline{80\%}$	$\frac{\$181,300}{\$245,000} = \underline{74\%}$

Estimated cost of ending inventory	$\$47,000 \times 80\% = \underline{\$37,600}$	$\$60,000 \times 74\% = \underline{\$44,400}$

SOLUTIONS TO PROBLEMS

PROBLEM 6-1A

- (a) The goods should not be included in inventory as they were shipped FOB shipping point and shipped February 26. Title to the goods transfers to the customer February 26. Heath should have recorded the transaction in the Sales and Accounts Receivable accounts.**
- (b) The amount should not be included in inventory as they were shipped FOB destination and not received until March 2. The seller still owns the inventory. No entry is recorded.**
- (c) Include \$500 in inventory.**
- (d) Include \$400 in inventory.**
- (e) \$750 should be included in inventory as the goods were shipped FOB shipping point.**
- (f) The sale will be recorded on March 2. The goods should be included in inventory at the end of February at their cost of \$250.**
- (g) The damaged goods should not be included in inventory. They should be recorded in a loss account since they are not saleable.**

PROBLEM 6-2A

(a) COST OF GOODS AVAILABLE FOR SALE

<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
March 1	Beginning Inventory	1,500	\$ 7	\$ 10,500
5	Purchase	3,000	8	24,000
13	Purchase	5,500	9	49,500
21	Purchase	4,000	10	40,000
26	Purchase	2,000	11	22,000
	Total	<u>16,000</u>		<u>\$146,000</u>

(b) FIFO

(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$146,000
March 26	2,000	\$11	\$22,000	Less: Ending inventory	<u>37,000</u>
21	1,500	10	15,000	Cost of goods sold	<u>\$109,000</u>
	<u>3,500*</u>		<u>\$37,000</u>		

$$*16,000 - 12,500 = 3,500$$

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
March 1	1,500	\$ 7	\$ 10,500
5	3,000	8	24,000
13	5,500	9	49,500
21	2,500	10	25,000
	<u>12,500</u>		<u>\$109,000</u>

PROBLEM 6-2A (Continued)

LIFO					
(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$146,000
March 1	1,500	\$7	\$10,500	Less: Ending inventory	26,500
5	<u>2,000</u>	8	<u>16,000</u>	Cost of goods sold	<u>\$119,500</u>
	<u>3,500</u>		<u>\$26,500</u>		

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
March 26	2,000	\$11	\$22,000
21	4,000	10	40,000
13	5,500	9	49,500
5	<u>1,000</u>	8	<u>8,000</u>
	<u>12,500</u>		<u>\$119,500</u>

AVERAGE-COST

(1) Ending Inventory			(2) Cost of Goods Sold	
$\$146,000 \div 16,000 = \underline{\$9.125}$			Cost of goods available for sale	\$146,000
<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Less: Ending inventory	31,938
<u>3,500</u>	<u>\$9.125</u>	<u>\$31,938*</u>	Cost of goods sold	<u>\$114,062</u>

*rounded to nearest dollar

- (c) (1) As shown in (b) above, FIFO produces the highest inventory amount, \$37,000.
- (2) As shown in (b) above, LIFO produces the highest cost of goods sold, \$119,500.

PROBLEM 6-3A

(a) COST OF GOODS AVAILABLE FOR SALE

<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1/1	Beginning Inventory	400	\$ 8	\$ 3,200
2/20	Purchase	600	9	5,400
5/5	Purchase	500	10	5,000
8/12	Purchase	300	11	3,300
12/8	Purchase	200	12	2,400
	Total	<u>2,000</u>		<u>\$19,300</u>

(b) FIFO

(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$19,300
12/8	200	\$12	\$2,400	Less: Ending inventory	5,700
8/12	300	11	3,300	Cost of goods sold	<u>\$13,600</u>
	<u>500</u>		<u>\$5,700</u>		

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1/1	400	\$ 8	\$ 3,200
2/20	600	9	5,400
5/5	500	10	5,000
	<u>1,500</u>		<u>\$13,600</u>

PROBLEM 6-3A (Continued)

(b)

LIFO

(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$19,300
1/1	400	\$8	\$3,200	Less: Ending inventory	<u>4,100</u>
2/20	<u>100</u>	9	<u>900</u>	Cost of goods sold	<u>\$15,200</u>
	<u>500</u>		<u>\$4,100</u>		

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
12/8	200	\$12	\$ 2,400
8/12	300	11	3,300
5/5	500	10	5,000
2/20	<u>500</u>	9	<u>4,500</u>
	<u>1,500</u>		<u>\$15,200</u>

AVERAGE-COST

(1) Ending Inventory			(2) Cost of Goods Sold	
\$19,300 ÷ 2,000 = <u>\$9.65</u>			Cost of goods available for sale	\$19,300
<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Less: Ending inventory	<u>4,825</u>
<u>500</u>	<u>\$9.65</u>	<u>\$4,825</u>	Cost of goods sold	<u>\$14,475</u>

Proof of Cost of Goods Sold

$$1,500 \text{ units} \times 9.65 = \$14,475$$

(c) (1) LIFO results in the lowest inventory amount for the balance sheet, \$4,100.

(2) FIFO results in the lowest cost of goods sold, \$13,600.

PROBLEM 6-4A

(a)

MORALES CO. **Condensed Income Statement** **For the Year Ended December 31, 2010**

	<u>FIFO</u>	<u>LIFO</u>
Sales	<u>\$865,000</u>	<u>\$865,000</u>
Cost of goods sold		
Beginning inventory	32,000	32,000
Cost of goods purchased	<u>595,000</u>	<u>595,000</u>
Cost of goods available for sale	627,000	627,000
Ending inventory	<u>84,000^a</u>	<u>68,000^b</u>
Cost of goods sold	<u>543,000</u>	<u>559,000</u>
Gross profit	322,000	306,000
Operating expenses	<u>147,000</u>	<u>147,000</u>
Income before income taxes	175,000	159,000
Income taxes (34%)	<u>59,500</u>	<u>54,060</u>
Net income	<u>\$115,500</u>	<u>\$104,940</u>

^a30,000 X \$2.80 = \$84,000.

^b\$32,000 + (15,000 X \$2.40) = \$68,000.

- (b) (1) The FIFO method produces the most meaningful inventory amount for the balance sheet because the units are costed at the most recent purchase prices.
- (2) The LIFO method produces the most meaningful net income because the costs of the most recent purchases are matched against sales.
- (3) The FIFO method is most likely to approximate actual physical flow because the oldest goods are usually sold first to minimize spoilage and obsolescence.
- (4) There will be \$5,440 additional cash available under LIFO because income taxes are \$54,060 under LIFO and \$59,500 under FIFO.
- (5) Gross profit under the average cost method will be: (a) lower than FIFO and (b) higher than LIFO.

PROBLEM 6-5A

Cost of Goods Available for Sale

<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
October 1	Beginning Inventory	60	\$25	\$1,500
9	Purchase	120	26	3,120
17	Purchase	70	27	1,890
25	Purchase	80	28	2,240
	Total	<u>330</u>		<u>\$8,750</u>

Ending Inventory in Units:

Units available for sale	330
Sales (100 + 60 + 110)	<u>270</u>
Units remaining in ending inventory	<u>60</u>

Sales Revenue

<u>Date</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Sales</u>
October 11	100	\$35	\$ 3,500
22	60	40	2,400
29	110	40	4,400
	<u>270</u>		<u>\$10,300</u>

(a)

(1) LIFO

(i) Ending Inventory

October 1 60 @ \$25 = \$1,500

(ii) Cost of Goods Sold

Cost of goods available for sale	\$8,750
Less: Ending inventory	<u>1,500</u>
Cost of goods sold	<u>\$7,250</u>

(iii) Gross Profit

Sales revenue	\$10,300
Cost of goods sold	<u>7,250</u>
Gross profit	<u>\$ 3,050</u>

(iv) Gross Profit Rate

Gross profit	\$ 3,050	
Net sales	\$10,300	= 29.6%

PROBLEM 6-5A (Continued)

(2) FIFO

(i) Ending Inventory

October 25 60 @ \$28 = \$1,680

(ii) Cost of Goods Sold

Cost of goods available for sale	\$ 8,750
Less: Ending inventory	<u>1,680</u>
Cost of goods sold	<u>\$ 7,070</u>

(iii) Gross Profit

Sales revenue	\$10,300
Cost of goods sold	<u>7,070</u>
Gross profit	<u>\$ 3,230</u>

(iv) Gross Profit Rate

Gross profit	\$ 3,230	= 31.4%
Net sales	\$10,300	

(3) Average-Cost

Weighted-average cost per unit: $\frac{\text{cost of goods available for sale}}{\text{units available for sale}}$

$$\frac{\$8,750}{330} = \$26.515$$

(i) Ending Inventory

60 @ \$26.515 = \$1,591*

*rounded to nearest dollar

(ii) Cost of Goods Sold

Cost of goods available for sale	\$8,750
Less: Ending inventory	<u>1,591</u>
Cost of goods sold	<u>\$7,159</u>

(iii) Gross Profit

Sales revenue	\$10,300
Cost of goods sold	<u>7,159</u>
Gross profit	<u>\$ 3,141</u>

(iv) Gross Profit Rate

Gross profit	\$ 3,141	= 30.5%
Net sales	\$10,300	

(b) LIFO produces the lowest ending inventory value, gross profit, and gross profit rate because its cost of goods sold is higher than FIFO or average-cost.

PROBLEM 6-6A

- (a) (1) To maximize gross profit, Bernelli Diamonds should sell the diamonds with the lowest cost.

<u>Sale Date</u>	<u>Cost of Goods Sold</u>		<u>Sales Revenue</u>	
March 5	150 @ \$300	\$ 45,000	180 @ \$600	\$108,000
	30 @ \$350	10,500	<u>400 @ \$650</u>	<u>260,000</u>
March 25	170 @ \$350	59,500		
	<u>230 @ \$375</u>	<u>86,250</u>		
	<u>580</u>	<u>\$201,250</u>	<u>580</u>	<u>\$368,000</u>

Gross profit \$368,000 – \$201,250 = \$166,750.

- (2) To minimize gross profit, Bernelli Diamonds should sell the diamonds with the highest cost.

<u>Sale Date</u>	<u>Cost of Goods Sold</u>		<u>Sales Revenue</u>	
March 5	180 @ \$350	\$ 63,000	180 @ \$600	\$108,000
March 25	350 @ \$375	131,250	<u>400 @ \$650</u>	<u>260,000</u>
	20 @ \$350	7,000		
	<u>30 @ \$300</u>	<u>9,000</u>		
	<u>580</u>	<u>\$210,250</u>	<u>580</u>	<u>\$368,000</u>

Gross profit \$368,000 – \$210,250 = \$157,750.

(b) FIFO

Cost of goods available for sale

March 1	Beginning inventory	150 @ \$300	\$ 45,000
3	Purchase	200 @ \$350	70,000
10	Purchase	<u>350 @ \$375</u>	<u>131,250</u>
		<u>700</u>	<u>\$246,250</u>
Goods available for sale		700	
Units sold		<u>580</u>	
Ending inventory		<u>120 @ \$375</u>	\$45,000

PROBLEM 6-6A (Continued)

Goods available for sale	\$246,250
– Ending inventory	<u>45,000</u>
Cost of goods sold	<u>\$201,250</u>

Gross profit: $\$368,000 - \$201,250 = \$166,750$.

(c) LIFO

Cost of goods available for sale	\$246,250
(from part b)	
– Ending inventory 120 @ \$300	<u>36,000</u>
Cost of goods sold	<u>\$210,250</u>

Gross profit: $\$368,000 - \$210,250 = \$157,750$.

- (d) The choice of inventory method depends on the company's objectives. Since the diamonds are marked and coded, the company could use specific identification. This could, however, result in "earnings management" by the company because, as shown, it could carefully choose which diamonds to sell to result in the maximum or minimum income. Employing a cost flow assumption, such as LIFO or FIFO, would reduce record-keeping costs. FIFO would result in higher income, but LIFO would reduce income taxes and provide better matching of current sales revenue with current costs.

PROBLEM 6-7A

(a)

UTLEY INC. Condensed Income Statement For the Year Ended December 31, 2010

	<u>FIFO</u>	<u>LIFO</u>
Sales	<u>\$665,000</u>	<u>\$665,000</u>
Cost of goods sold		
Beginning inventory	35,000	35,000
Cost of goods purchased	<u>504,500</u>	<u>504,500</u>
Cost of goods available for sale	539,500	539,500
Ending inventory	<u>133,500^a</u>	<u>115,000^b</u>
Cost of goods sold	<u>406,000</u>	<u>424,500</u>
Gross profit	259,000	240,500
Operating expenses	<u>130,000</u>	<u>130,000</u>
Income before income taxes	129,000	110,500
Income tax expense (28%)	<u>36,120</u>	<u>30,940</u>
Net income	<u>\$ 92,880</u>	<u>\$ 79,560</u>

^a(25,000 @ \$4.50) + (5,000 @ \$4.20) = \$133,500.

^b(10,000 @ \$3.50) + (20,000 @ \$4.00) = \$115,000.

(b) Answers to questions:

- (1) The FIFO method produces the most meaningful inventory amount for the balance sheet because the units are costed at the most recent purchase prices.
- (2) The LIFO method produces the most meaningful net income because the costs of the most recent purchases are matched against sales.
- (3) The FIFO method is most likely to approximate actual physical flow because the oldest goods are usually sold first to minimize spoilage and obsolescence.
- (4) There will be \$5,180 additional cash available under LIFO because income taxes are \$30,940 under LIFO and \$36,120 under FIFO.

PROBLEM 6-7A (Continued)

- (5) The illusory gross profit is \$18,500 or (\$259,000 – \$240,500). Under LIFO, Utley Inc. has recovered the current replacement cost of the units (\$424,500), whereas under FIFO, it has only recovered the earlier costs (\$406,000). This means that under FIFO the company must reinvest \$18,500 of the gross profit to replace the units used.

Answer in business letter form:

Dear Utley Inc.

After preparing the comparative condensed income statements for 2010 under FIFO and LIFO methods, we have found the following:

The FIFO method produces the most meaningful inventory amount for the balance sheet because the units are costed at the most recent purchase prices. This method is most likely to approximate actual physical flow because the oldest goods are usually sold first to minimize spoilage and obsolescence.

The LIFO method produces the most meaningful net income because the costs of the most recent purchases are matched against sales. There will be \$5,180 additional cash available under LIFO because income taxes are \$30,940 under LIFO and \$36,120 under FIFO.

There exists an illusory gross profit of \$18,500 (\$259,000 – \$240,500). Under LIFO, you have recovered the current replacement cost of the units (\$424,500) whereas under FIFO you have only recovered the earlier costs (\$406,000). This means that under FIFO, the company must reinvest \$18,500 of the gross profit to replace the units sold.

Sincerely,

***PROBLEM 6-8A**

(a)

Sales:

Date

January 6	150 units @ \$40	\$ 6,000
January 9 (return)	(10 units @ \$40)	(400)
January 10	50 units @ \$45	2,250
January 30	110 units @ \$50	5,500
Total sales		<u>\$13,350</u>

(1) **LIFO**

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
January 1			(150 @ \$17) \$2,550
January 2	(100 @ \$21) \$2,100		(150 @ \$17) } \$4,650 (100 @ \$21) }
January 6		(100 @ \$21) } \$2,950 (50 @ \$17) }	(100 @ \$17) \$1,700
January 9	(75 @ \$24) \$1,800		(110 @ \$17) } \$3,670 (75 @ \$24) }
January 9		(-10 @ \$17) (\$ 170)	(110 @ \$17) } \$3,310 (60 @ \$24) }
January 10	(-15 @ \$24)(\$ 360)		(110 @ \$17) } \$2,110 (10 @ \$24) }
January 10		(50 @ \$24) \$1,200	(110 @ \$17) } \$4,910 (10 @ \$24) }
January 23	(100 @ \$28) \$2,800		(100 @ \$28) } \$1,870 (110 @ \$17) }
January 30		(100 @ \$28) } \$3,040 (10 @ \$24) }	
		<u>\$7,020</u>	

(i) Cost of goods sold: = \$7,020. (ii) Ending inventory = \$1,870. (iii) Gross profit = \$13,350 – \$7,020 = \$6,330

***PROBLEM 6-8A (Continued)**

(2) FIFO

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
January 1			(150 @ \$17) \$2,550
January 2	(100 @ \$21) \$2,100		(150 @ \$17) } \$4,650 (100 @ \$21) }
January 6		(150 @ \$17) \$2,550	(100 @ \$21) \$2,100
January 9		(-10 @ \$17) (\$ 170)	(10 @ \$17) }
January 9	(75 @ \$24) \$1,800		(100 @ \$21) } \$4,070 (75 @ \$24) }
			(10 @ \$17) }
January 10	(-15 @ \$24)(\$ 360)		(100 @ \$21) } \$3,710 (60 @ \$24) }
January 10		(10 @ \$17) } \$1,010 (40 @ \$21) }	(60 @ \$21) } \$2,700 (60 @ \$24) }
January 23	(100 @ \$28) \$2,800		(60 @ \$21) }
			(60 @ \$24) } \$5,500 (100 @ \$28) }
January 30		(60 @ \$21) } \$2,460 (50 @ \$24) }	(10 @ \$24) } \$3,040 (100 @ \$28) }
		<u>\$5,850</u>	

(i) Cost of goods sold = \$5,850. (ii) Ending inventory = \$3,040. (iii) Gross profit = \$13,350 – \$5,850 = \$7,500.

(3) Moving-Average

<u>Date</u>	<u>Purchases</u>	<u>Cost of goods sold</u>	<u>Balance</u>
January 1			(150 @ \$17) \$2,550
January 2	(100 @ \$21) \$2,100		(250 @ \$18.60) ^a \$4,650
January 6		(150 @ \$18.60) \$2,790	(100 @ \$18.60) \$1,860
January 9		(-10 @ \$18.60) (\$ 186)	(110 @ \$18.60) \$2,046
January 9	(75 @ \$24) \$1,800		(185 @ \$20.789) ^b \$3,846
January 10	(-15 @ \$24) (\$ 360)		(170 @ \$20.506) ^c \$3,486
January 10		(50 @ \$20.506) \$1,025	(120 @ \$20.506) \$2,461
January 23	(100 @ \$28) \$2,800		(220 @ \$23.914) ^d \$5,261
January 30		(110 @ \$23.914) \$2,631	(110 @ \$23.914) \$2,630
		<u>\$6,260</u>	

^a\$4,650 ÷ 250 = \$18.60

^b\$3,846 ÷ 185 = \$20.789

^c\$3,486 ÷ 170 = \$20.506

^d\$5,261 ÷ 220 = \$23.914

(i) Cost of goods sold = \$6,260. (ii) Ending inventory = \$2,630. (iii) Gross profit = \$13,350 – \$6,260 = \$7,090.

***PROBLEM 6-8A (Continued)**

(b)

Gross profit:	<u>LIFO</u>	<u>FIFO</u>	<u>Moving-Average</u>
Sales	\$13,350	\$13,350	\$13,350
Cost of goods sold	<u>7,020</u>	<u>5,850</u>	<u>6,260</u>
Gross profit	<u>\$ 6,330</u>	<u>\$ 7,500</u>	<u>\$ 7,090</u>
Ending inventory	<u>\$ 1,870</u>	<u>\$ 3,040</u>	<u>\$ 2,630</u>

In a period of rising costs, the LIFO cost flow assumption results in the highest cost of goods sold and lowest gross profit. FIFO gives the lowest cost of goods sold and highest gross profit. The weighted average cost flow assumption results in amounts between the other two.

On the balance sheet, FIFO gives the highest ending inventory (representing the most current costs); LIFO gives the lowest ending inventory (representing the oldest costs); and average-cost results in an ending inventory falling between the other two.

***PROBLEM 6-9A**

(a) (1)		FIFO			
Date	Purchases	Cost of Goods Sold		Balance	
May 1	(7 @ \$150) \$1,050			(7 @ \$150) \$1,050	
4		(4 @ \$150) \$600		(3 @ \$150) \$ 450	
8	(8 @ \$170) \$1,360			(3 @ \$150) } (8 @ \$170) }	\$1,810
12		(3 @ \$150) } (2 @ \$170) }	\$790	(6 @ \$170) \$1,020	
15	(6 @ \$185) \$1,110			(6 @ \$170) } (6 @ \$185) }	\$2,130
20		(3 @ \$170) \$510		(3 @ \$170) } (6 @ \$185) }	\$1,620
25		(3 @ \$170) } (1 @ \$185) }	\$695	(5 @ \$185) \$ 925	

(2)		MOVING-AVERAGE COST			
Date	Purchases	Cost of Goods Sold		Balance	
May 1	(7 @ \$150) \$1,050			(7 @ \$150) \$1,050	
4		(4 @ \$150) \$600		(3 @ \$150) \$ 450	
8	(8 @ \$170) \$1,360			(11 @ \$164.55)* \$1,810	
12		(5 @ \$164.55) \$823		(6 @ \$164.55) \$ 987	
15	(6 @ \$185) \$1,110			(12 @ \$174.75)** \$2,097	
20		(3 @ \$174.75) \$524		(9 @ \$174.75) \$1,573	
25		(4 @ \$174.75) \$699		(5 @ \$174.75) \$ 874	

*Average-cost = \$1,810 ÷ 11 (rounded)

**\$2,097 ÷ 12

***PROBLEM 6-9A (Continued)**

		LIFO			
Date	Purchases	Cost of Goods Sold		Balance	
May 1	(7 @ \$150) \$1,050			(7 @ \$150)	\$1,050
4		(4 @ \$150)	\$600	(3 @ \$150)	\$ 450
8	(8 @ \$170) \$1,360			(3 @ \$150)	\$1,810
				(8 @ \$170)	
12		(5 @ \$170)	\$850	(3 @ \$150)	\$ 960
				(3 @ \$170)	
15	(6 @ \$185) \$1,110			(3 @ \$150)	\$2,070
				(3 @ \$170)	
				(6 @ \$185)	
20		(3 @ \$185)	\$555	(3 @ \$150)	\$1,515
				(3 @ \$170)	
				(3 @ \$185)	
25		(3 @ \$185)	\$725	(3 @ \$150)	\$ 790
		(1 @ \$170)		(2 @ \$170)	

- (b) (1) The highest ending inventory is \$925 under the FIFO method.
 (2) The lowest ending inventory is \$790 under the LIFO method.

***PROBLEM 6-10A**

(a)	<u>February</u>
Net sales	\$300,000
Cost of goods sold	
Beginning inventory	\$ 4,500
Net purchases	\$197,800
Add: Freight-in.....	<u>2,900</u>
Cost of goods purchased	<u>200,700</u>
Cost of goods available for sale	205,200
Ending inventory.....	<u>13,200</u>
Cost of goods sold	<u>192,000</u>
Gross profit	<u>\$108,000</u>

$$\text{Gross profit rate} = \frac{\$108,000}{\$300,000} = 36\%$$

(b)	Net sales	\$250,000
	Less: Estimated gross profit	
	(36% X \$250,000)	<u>90,000</u>
	Estimated cost of goods sold.....	<u>\$160,000</u>
	Beginning inventory	\$ 13,200
	Net purchases.....	\$191,000
	Add: Freight-in	<u>4,000</u>
	Cost of goods purchased	<u>195,000</u>
	Cost of goods available for sale	208,200
	Less: Estimated cost of goods sold	<u>160,000</u>
	Estimated total cost of ending	
	inventory	48,200
	Less: Inventory not lost	
	(30% X \$48,200).....	<u>14,460</u>
	Estimated inventory lost in fire	
	(70% X \$48,200)	<u>\$ 33,740</u>

***PROBLEM 6-11A**

(a)

	Sporting Goods		Jewelry and Cosmetics	
	Cost	Retail	Cost	Retail
Beginning inventory	\$ 47,360	\$ 74,000	\$ 39,440	\$ 62,000
Purchases	675,000	1,066,000	741,000	1,158,000
Purchase returns	(26,000)	(40,000)	(12,000)	(20,000)
Purchase discounts	(12,360)		(2,440)	
Freight-in	9,000		14,000	
Goods available for sale	<u>\$693,000</u>	1,100,000	<u>\$780,000</u>	1,200,000
Net sales		(1,000,000)		(1,160,000)
Ending inventory at retail		<u>\$ 100,000</u>		<u>\$ 40,000</u>

Cost-to-retail ratio:

Sporting Goods—\$693,000 ÷ \$1,100,000 = 63%.

Jewelry and Cosmetics—\$780,000 ÷ \$1,200,000 = 65%.

Estimated ending inventory at cost:

\$100,000 X 63% = \$63,000—Sporting Goods.

\$ 40,000 X 65% = \$26,000—Jewelry and Cosmetics.

(b) Sporting Goods—\$95,000 X 60% = \$57,000.

Jewelry and Cosmetics—\$44,000 X 64% = \$28,160.

PROBLEM 6-1B

- (a) The sale will be recorded on February 26. The goods (cost, \$800) should be excluded from Elms' February 28 inventory.**
- (b) Elms owns the goods once they are shipped on February 26. Include inventory of \$480.**
- (c) Include \$650 in inventory.**
- (d) Exclude the items from Elm's inventory. Title remains with the consignor.**
- (e) Title of the goods does not transfer to Elm's until March 2. Exclude this amount from the February 28 inventory.**
- (f) Title to the goods does not transfer to the customer until March 2. The \$200 cost should be included in ending inventory.**

PROBLEM 6-2B

(a) COST OF GOODS AVAILABLE FOR SALE

<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Oct. 1	Beginning Inventory	2,000	\$7	\$ 14,000
3	Purchase	3,000	8	24,000
9	Purchase	3,500	9	31,500
19	Purchase	3,000	10	30,000
25	Purchase	3,500	11	38,500
	Total	15,000		\$138,000

(b) FIFO

(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$138,000
Oct. 25	3,500	\$11	\$38,500	Less: Ending inventory	39,500
19	100	10	1,000	Cost of goods sold	<u>\$ 98,500</u>
	<u>3,600*</u>		<u>\$39,500</u>		

$$*15,000 - 11,400 = 3,600$$

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Oct. 1	2,000	\$7	\$14,000
3	3,500	8	24,000
9	3,500	9	31,500
19	2,900	10	29,000
	<u>11,400</u>		<u>\$98,500</u>

LIFO

(1) Ending Inventory				(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Cost of goods available for sale	\$138,000
Oct. 1	2,000	\$7	\$14,000	Less: Ending inventory	26,800
3	1,600	8	12,800	Cost of goods sold	<u>\$111,200</u>
	<u>3,600</u>		<u>\$26,800</u>		

PROBLEM 6-2B (Continued)**Proof of Cost of Goods Sold**

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Oct. 25	3,500	\$11	\$ 38,500
19	3,000	10	30,000
9	3,500	9	31,500
3	<u>1,400</u>	8	<u>11,200</u>
	<u>11,400</u>		<u>\$111,200</u>

AVERAGE COST

<u>(1) Ending Inventory</u>			<u>(2) Cost of Goods Sold</u>	
$\$138,000 \div 15,000 = \underline{\$9.20}$			Cost of goods available for sale	\$138,000
<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Less: Ending inventory	<u>33,120</u>
<u>3,600</u>	<u>\$9.20</u>	<u>\$33,120</u>	Cost of goods sold	<u>\$104,880</u>

(c) (1) FIFO results in the highest inventory amount for the balance sheet, \$39,500.

(2) LIFO results in the highest cost of goods sold, \$111,200.

PROBLEM 6-3B

(a)

COST OF GOODS AVAILABLE FOR SALE				
<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1/1	Beginning Inventory	150	\$20	\$ 3,000
3/15	Purchase	400	23	9,200
7/20	Purchase	250	24	6,000
9/4	Purchase	350	26	9,100
12/2	Purchase	100	29	2,900
	Total	<u>1,250</u>		<u>\$30,200</u>

(b)

FIFO			
(1) Ending Inventory		(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
12/2	100	\$29	\$2,900
9/4	150	26	3,900
	<u>250</u>		<u>\$6,800</u>

Cost of goods available for sale	\$30,200
Less: Ending inventory	6,800
Cost of goods sold	<u>\$23,400</u>

Proof of Cost of Goods Sold

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1/1	150	\$20	\$ 3,000
3/15	400	23	9,200
7/20	250	24	6,000
9/4	200	26	5,200
	<u>1,000</u>		<u>\$23,400</u>

LIFO

(1) Ending Inventory		(2) Cost of Goods Sold	
<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
1/1	150	\$20	\$3,000
3/15	100	23	2,300
	<u>250</u>		<u>\$5,300</u>

Cost of goods available for sale	\$30,200
Less: Ending inventory	5,300
Cost of goods sold	<u>\$24,900</u>

PROBLEM 6-3B (Continued)**Proof of Cost of Goods Sold**

<u>Date</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
12/2	100	\$29	\$ 2,900
9/4	350	26	9,100
7/20	250	24	6,000
3/15	<u>300</u>	<u>23</u>	<u>6,900</u>
	<u>1,000</u>		<u>\$24,900</u>

AVERAGE COST

(1) Ending Inventory			(2) Cost of Goods Sold	
$\$30,200 \div 1,250 = \underline{\$24.16}$			Cost of goods available for sale	\$30,200
<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>	Less: Ending inventory	<u>6,040</u>
<u>250</u>	<u>\$24.16</u>	<u>\$6,040</u>	Cost of goods sold	<u>\$24,160</u>

Proof of Cost of Goods Sold

1,000 units X \$24.16 = \$24,160

- (c) (1) FIFO results in the highest inventory amount, \$6,800, as shown in (b) above.
- (2) LIFO produces the highest cost of goods sold, \$24,900 as shown in (b) above.

PROBLEM 6-4B**(a)**

MONER INC.
Condensed Income Statements
For the Year Ended December 31, 2010

	<u>FIFO</u>	<u>LIFO</u>
Sales.....	<u>\$747,000</u>	<u>\$747,000</u>
Cost of goods sold		
Beginning inventory.....	16,000	16,000
Cost of goods purchased.....	<u>468,000</u>	<u>468,000</u>
Cost of goods available for sale.....	484,000	484,000
Ending inventory.....	<u>48,600^a</u>	<u>38,000^b</u>
Cost of goods sold	<u>435,400</u>	<u>446,000</u>
Gross profit.....	311,600	301,000
Operating expenses.....	<u>130,000</u>	<u>130,000</u>
Income before income taxes.....	181,600	171,000
Income taxes (40%).....	<u>72,640</u>	<u>68,400</u>
Net income	<u>\$108,960</u>	<u>\$102,600</u>

^a18,000 X \$2.70 = \$48,600.

^b\$16,000 + (10,000 X \$2.20) = \$38,000.

- (b) (1) The FIFO method produces the most meaningful inventory amount for the balance sheet because the units are costed at the most recent purchase prices.**
- (2) The LIFO method produces the most meaningful net income because the cost of the most recent purchases are matched against sales.**
- (3) The FIFO method is most likely to approximate actual physical flow because the oldest goods are usually sold first to minimize spoilage and obsolescence.**
- (4) There will be \$4,240 additional cash available under LIFO because income taxes are \$68,400 under LIFO and \$72,640 under FIFO.**
- (5) Gross profit under the average cost method will be: (a) lower than FIFO and (b) higher than LIFO.**

PROBLEM 6-5B

(a) Cost of Goods Available for Sale

<u>Date</u>	<u>Explanation</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Total Cost</u>
June 1	Beginning Inventory	40	\$40	\$ 1,600
June 4	Purchase	135	44	5,940
June 18	Purchase	55	46	2,530
June 18	Purchase return	(10)	46	(460)
June 28	Purchase	30	50	1,500
	Total	<u>250</u>		<u>\$11,110</u>

Ending Inventory in Units:

Units available for sale	250
Sales (110 – 15 + 65)	<u>160</u>
Units remaining in ending inventory	<u>90</u>

Sales Revenue

<u>Date</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Sales</u>
June 10	110	\$70	\$ 7,700
11	(15)	70	(1,050)
25	65	75	4,875
	<u>160</u>		<u>\$11,525</u>

(1) LIFO

(i) Ending Inventory

June 1	40 @ \$40	\$1,600
4	50 @ 44	<u>2,200</u>
	<u>90</u>	<u>\$3,800</u>

(ii) Cost of Goods Sold

Cost of goods available for sale	\$11,110
Less: Ending inventory	<u>3,800</u>
Cost of goods sold	<u>\$ 7,310</u>

(iii) Gross Profit

Sales revenue	\$11,525
Cost of goods sold	<u>7,310</u>
Gross profit	<u>\$ 4,215</u>

(iv) Gross Profit Rate

Gross profit	\$ 4,215	
Net sales	<u>\$11,525</u>	= 36.6%

PROBLEM 6-5B (Continued)**(2) FIFO****(i) Ending Inventory**

June 28	30 @ \$50	\$1,500
18	45 @ \$46	2,070
4	15 @ \$44	660
	<u>90</u>	<u>\$4,230</u>

(ii) Cost of Goods Sold

Cost of goods available for sale	\$11,110
Less: Ending inventory	<u>4,230</u>
Cost of goods sold	<u>\$ 6,880</u>

(iii) Gross Profit

Sales revenue	\$11,525
Cost of goods sold	<u>6,880</u>
Gross profit	<u>\$ 4,645</u>

(iv) Gross Profit Rate

Gross profit	\$ 4,645	
Net sales	\$11,525	= 40.3%

(3) Average-Cost**Weighted-average cost per unit:**

$$\frac{\text{Cost of goods available for sale}}{\text{Units available for sale}}$$

$$\frac{\$11,110}{250} = \$44.44$$

(i) Ending Inventory

90 units @ \$44.44	<u>3,999.60</u>

(ii) Cost of Goods Sold

Cost of goods available for sale	\$11,110.00
Less: Ending inventory	<u>3,999.60</u>
Cost of goods sold	<u>\$ 7,110.40</u>

(iii) Gross Profit

Sales revenue	\$11,525.00
Cost of goods sold	<u>7,110.40</u>
Gross profit	<u>\$ 4,414.60</u>

(iv) Gross Profit Rate

Gross profit	\$ 4,414.60	
Net sales	\$11,525.00	= 38.3%

(b) In this period of rising prices, LIFO gives the highest cost of goods sold and the lowest gross profit. FIFO gives the lowest cost of goods sold and the highest gross profit.

PROBLEM 6-6B

(a)

MONDELLO INC.
Income Statement (partial)
For the Year Ended December 31, 2010

	<u>Specific Identification</u>	<u>FIFO</u>	<u>LIFO</u>
Sales revenue ^a	<u>\$8,560</u>	<u>\$8,560</u>	<u>\$8,560</u>
Beginning inventory	<u>1,200</u>	<u>1,200</u>	<u>1,200</u>
Purchases ^b	<u>6,505</u>	<u>6,505</u>	<u>6,505</u>
Cost of goods available for sale	<u>7,705</u>	<u>7,705</u>	<u>7,705</u>
Ending inventory ^c	<u>2,735</u>	<u>2,936</u>	<u>2,370</u>
Cost of goods sold	<u>4,970</u>	<u>4,769</u>	<u>5,335</u>
Gross profit	<u>\$3,590</u>	<u>\$3,791</u>	<u>\$3,225</u>

(a) $(2,200 @ \$1.05) + (5,000 @ \$1.25)$

(b) $(2,500 @ \$.65) + (4,000 @ \$.72) + (2,500 @ \$.80)$

(c) Specific identification ending inventory consists of:

Beginning inventory (2,000 liters – 1,100 – 450)	450 @ \$.60	\$ 270.00
March 3 purchase (2,500 liters – 1,100 – 550)	850 @ \$.65	552.50
March 10 purchase (4,000 liters – 2,900)	1,100 @ \$.72	792.00
March 20 purchase (2,500 liters – 1,100)	1,400 @ \$.80	1,120.00
	<u>3,800 liters</u>	<u>\$2,734.50</u>

FIFO ending inventory consists of:

March 20 purchase	2,500 @ \$.80	\$2,000
March 10 purchase	1,300 @ \$.72	936
	<u>3,800 liters</u>	<u>\$2,936</u>

LIFO ending inventory consists of:

Beginning inventory	2,000 @ \$.60	\$1,200
March 3 purchase	1,800 @ \$.65	1,170
	<u>3,800 liters</u>	<u>\$2,370</u>

(b) Companies can choose a cost flow method that produces the highest possible cost of goods sold and lowest gross profit to justify price increases. In this example, LIFO produces the lowest gross profit and best support to increase selling prices.

PROBLEM 6-7B

(a)

CLARE CO. Condensed Income Statement For the Year Ended December 31, 2010

	FIFO	LIFO
Sales.....	<u>\$700,000</u>	<u>\$700,000</u>
Cost of goods sold		
Beginning inventory	45,000	45,000
Cost of goods purchased	<u>532,000</u>	<u>532,000</u>
Cost of goods available for sale.....	577,000	577,000
Ending inventory	<u>168,000^a</u>	<u>147,000^b</u>
Cost of goods sold	<u>409,000</u>	<u>430,000</u>
Gross profit.....	291,000	270,000
Operating expenses	<u>140,000</u>	<u>140,000</u>
Income before income taxes.....	151,000	130,000
Income tax expense (30%)	<u>45,300</u>	<u>39,000</u>
Net income	<u>\$105,700</u>	<u>\$ 91,000</u>

^a(30,000 @ \$5.60) = \$168,000.

^b(10,000 @ \$4.50) + (20,000 @ \$5.10) = \$147,000.

(b) Answers to questions:

- (1) The FIFO method produces the most meaningful inventory amount for the balance sheet because the units are costed at the most recent purchase prices.
- (2) The LIFO method produces the most meaningful net income because the costs of the most recent purchases are matched against sales.
- (3) The FIFO method is most likely to approximate actual physical flow because the oldest goods are usually sold first to minimize spoilage and obsolescence.
- (4) There will be \$6,300 additional cash available under LIFO because income taxes are \$39,000 under LIFO and \$45,300 under FIFO.
- (5) The illusionary gross profit is \$21,000 or (\$291,000 – \$270,000). Under LIFO, Clare Co. has recovered the current replacement cost of the units (\$430,000), whereas under FIFO, it has only recovered the earlier costs (\$409,000). This means that, under FIFO, the company must reinvest at least \$21,000 of the gross profit to replace the units used.

***PROBLEM 6-8B**

(a)

Sales:

January 8	110 units @ \$28	\$3,080
January 10 (return)	(10 units @ \$28)	(280)
January 20	80 units @ \$32	2,560
	<u>180 units</u>	<u>\$5,360</u>

(1) **LIFO**

Date	Purchases	Cost of Goods Sold	Balance
January 1			(100 @ \$15) \$1,500
January 5	(150 @ \$18) \$2,700		(100 @ \$15) } \$4,200 (150 @ \$18) }
January 8		(110 @ \$18) \$1,980	(100 @ \$15) } \$2,220 (40 @ \$18) }
January 10		(-10 @ \$18) (\$ 180)	(100 @ \$15) } \$2,400 (50 @ \$18) }
January 15	(55 @ \$20) \$1,100		(100 @ \$15) } \$3,500 (50 @ \$18) }
January 16	(-5 @ \$20) (\$ 100)		(100 @ \$15) } \$3,400 (50 @ \$18) }
January 20		(50 @ \$20) } \$1,540 (30 @ \$18) }	(100 @ \$15) } \$1,860 (20 @ \$18) }
January 25	(30 @ \$22) \$ 660		(100 @ \$15) } \$2,520 (20 @ \$18) }
		<u>\$3,340</u>	(30 @ \$22) }

(i) Cost of goods sold = \$3,340. (ii) Ending inventory = \$2,520. (iii) Gross profit = \$5,360 – \$3,340 = \$2,020.

***PROBLEM 6-8B (Continued)**

(2) FIFO

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
January 1			(100 @ \$15) \$1,500
January 5	(150 @ \$18) \$2,700		(100 @ \$15) } (150 @ \$18) } \$4,200
January 8		(100 @ \$15) } (10 @ \$18) } \$1,680	(140 @ \$18) \$2,520
January 10		(-10 @ \$18) (\$ 180)	(150 @ \$18) \$2,700
January 15	(55 @ \$20) \$1,100		(150 @ \$18) } (55 @ \$20) } \$3,800
January 16	(-5 @ \$20)(\$ 100)		(150 @ \$18) } (50 @ \$20) } \$3,700
January 20		(80 @ \$18) \$1,440	(70 @ \$18) } (50 @ \$20) } \$2,260
January 25	(30 @ \$22) \$ 660		(70 @ \$18) } (50 @ \$20) } (30 @ \$22) } \$2,920
		<u>\$2,940</u>	

(i) Cost of goods sold = \$2,940. (ii) Ending inventory = \$2,920. (iii) Gross profit = \$5,360 – \$2,940 = \$2,420.

(3) Moving-Average Cost

<u>Date</u>	<u>Purchases</u>	<u>Cost of Goods Sold</u>	<u>Balance</u>
January 1			(100 @ \$15) \$1,500
January 5	(150 @ \$18) \$2,700		(250 @ \$16.80) ^a \$4,200
January 8		(110 @ \$16.80) \$1,848	(140 @ \$16.80) \$2,352
January 10		(-10 @ \$16.80) (\$ 168)	(150 @ \$16.80) \$2,520
January 15	(55 @ \$20) \$1,100		(205 @ \$17.658) ^b \$3,620
January 16	(-5 @ \$20) (\$ 100)		(200 @ \$17.60) ^c \$3,520
January 20		(80 @ \$17.60) \$1,408	(120 @ \$17.60) \$2,112
January 25	(30 @ \$22) \$ 660		(150 @ \$18.48) ^d \$2,772
		<u>\$3,088</u>	

*rounded

^a\$4,200 ÷ 250 = \$16.80

^c\$3,520 ÷ 200 = \$17.60

^b\$3,620 ÷ 205 = \$17.659

^d\$2,772 ÷ 150 = \$18.48

(i) Cost of goods sold = \$3,088. (ii) Ending inventory = \$2,772. (iii) Gross profit = \$5,360 – \$3,088 = \$2,272.

***PROBLEM 6-8B (Continued)**

(b)

Gross profit:	<u>LIFO</u>	<u>FIFO</u>	<u>Moving-Average Cost</u>
Sales	\$5,360	\$5,360	\$5,360
Cost of goods sold	<u>3,340</u>	<u>2,940</u>	<u>3,088</u>
Gross profit	<u>\$2,020</u>	<u>\$2,420</u>	<u>\$2,272</u>
Ending inventory	<u>\$2,520</u>	<u>\$2,920</u>	<u>\$2,772</u>

In a period of rising costs, the LIFO cost flow assumption results in the highest cost of goods sold and lowest gross profit. FIFO gives the lowest cost of goods sold and highest gross profit. The moving-average cost flow assumption results in amounts between the other two.

On the balance sheet, FIFO gives the highest ending inventory (representing the most current costs); LIFO gives the lowest ending inventory (representing the oldest costs); and moving-average cost results in an ending inventory falling between the other two.

***PROBLEM 6-9B**

(a)
(1)

FIFO

Date	Purchases	Cost of Goods Sold	Balance
July 1	(5 @ \$120) \$ 600		(5 @ \$120) \$ 600
6		(4 @ \$120) \$480	(1 @ \$120) \$ 120
11	(7 @ \$136) \$ 952		(1 @ \$120) } (7 @ \$136) } \$1,072
14		(1 @ \$120) } (2 @ \$136) } \$392	(5 @ \$136) \$ 680
21	(8 @ \$147) \$1,176		(5 @ \$136) } (8 @ \$147) } \$1,856
27		(5 @ \$136) } (1 @ \$147) } \$827	(7 @ \$147) \$1,029

(2)

MOVING-AVERAGE COST

Date	Purchases	Cost of Goods Sold	Balance
July 1	(5 @ \$120) \$ 600		(5 @ \$120) \$ 600
6		(4 @ \$120) \$480	(1 @ \$120) \$ 120
11	(7 @ \$136) \$ 952		(8 @ \$134)* \$1,072
14		(3 @ \$134) \$402	(5 @ \$134) \$ 670
21	(8 @ \$147) \$1,176		(13 @ \$142)** \$1,846
27		(6 @ \$142) \$852	(7 @ \$142) \$ 994

*\$1,072 ÷ 8 = \$134

**\$1,846 ÷ 13 = \$142

(3)

LIFO

Date	Purchases	Cost of Goods Sold	Balance
July 1	(5 @ \$120) \$ 600		(5 @ \$120) \$ 600
6		(4 @ \$120) \$480	(1 @ \$120) \$ 120
11	(7 @ \$136) \$ 952		(1 @ \$120) } (7 @ \$136) } \$1,072
14		(3 @ \$136) \$408	(1 @ \$120) } (4 @ \$136) } \$ 664
21	(8 @ \$147) \$1,176		(1 @ \$120) } (4 @ \$136) } (8 @ \$147) } \$1,840
27		(6 @ \$147) \$882	(1 @ \$120) } (4 @ \$136) } (2 @ \$147) } \$ 958

(b) The highest ending inventory is \$1,029 under the FIFO method.

***PROBLEM 6-10B**

(a)	<u>November</u>
Net sales	\$600,000
Cost of goods sold	
Beginning inventory	\$ 32,000
Purchases	\$377,000
Less: Purchase returns and allowances	(13,300)
Purchase discounts	(8,500)
Add: Freight-in	<u>8,800</u>
Cost of goods purchased	<u>364,000</u>
Cost of goods available for sale	396,000
Ending inventory	<u>36,000</u>
Cost of goods sold	<u>360,000</u>
Gross profit	<u>\$240,000</u>

$$\text{Gross profit rate} = \frac{\$240,000}{\$600,000} = 40\%$$

(b) Net sales	\$700,000
Less: Estimated gross profit (40% X \$700,000)	<u>280,000</u>
Estimated cost of goods sold	<u>\$420,000</u>
Beginning inventory	\$ 36,000
Purchases	\$424,000
Less: Purchase returns and allowances	\$14,900
Purchase discounts	<u>9,500</u>
Net purchases	<u>24,400</u>
Freight-in	399,600
Cost of goods purchased	<u>9,900</u>
Cost of goods available for sale	<u>409,500</u>
Less: Estimated cost of goods sold	445,500
Estimated inventory lost in fire	<u>420,000</u>
	<u>\$ 25,500</u>

***PROBLEM 6-11B**

(a)

	Hardcovers		Paperbacks	
	Cost	Retail	Cost	Retail
Beginning inventory	\$ 420,000	\$ 700,000	\$ 280,000	\$ 360,000
Purchases	2,135,000	3,200,000	1,155,000	1,540,000
Freight-in	24,000		12,000	
Purchase discounts	(44,000)		(22,000)	
Goods available for sale	<u>\$2,535,000</u>	3,900,000	<u>\$1,425,000</u>	1,900,000
Net sales		3,100,000		1,570,000
Ending inventory at retail		<u>\$ 800,000</u>		<u>\$ 330,000</u>

Cost-to-retail ratio:

Hardcovers— $\$2,535,000 \div \$3,900,000 = 65\%$.

Paperbacks— $\$1,425,000 \div \$1,900,000 = 75\%$.

Estimated ending inventory at cost:

$\$800,000 \times 65\% = \$520,000$ —Hardcovers.

$\$330,000 \times 75\% = \$247,500$ —Paperbacks.

- (b) Hardcovers— $\$790,000 \times 65\% = \$513,500$.
 Paperbacks— $\$335,000 \times 75\% = \$251,250$.

(a)		<u>December 29, 2007</u>	<u>December 30, 2006</u>
	Inventories	\$2,290 million	\$1,926 million

(b) Dollar change in inventories between 2006 and 2007:

$$\$2,290 - \$1,926 = \$364 \text{ million increase}$$

Percent change in inventories between 2006 and 2007:

$$\$364 \div \$1,926 = 18.9\% \text{ increase}$$

2007 inventory as a percent of current assets:

$$\$2,290 \div \$10,151 = 22.6\%$$

(c) Inventories are valued at lower of cost or market. Cost is determined using the average, first-in, first-out (FIFO) or last-in, first-out (LIFO) methods. (See Note 14).

(d)	<u>PepsiCo (in millions)</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>
	Cost of Goods Sold	\$18,038	\$15,762	\$14,176

2007 cost of goods sold as a percent of sales:

$$\$18,038 \div \$39,474 = 45.7\%$$

(a) (1) Inventory turnover:

$$\text{PepsiCo:} \quad \$18,038 \div \frac{\$1,926 + 2,290}{2} = 8.56 \text{ times}$$

$$\text{Coca-Cola:} \quad \$10,406 \div \frac{\$1,641 + 2,220}{2} = 5.39 \text{ times}$$

(2) Days in inventory:

$$\text{PepsiCo:} \quad 365 \div 8.56 = 42.6 \text{ days}$$

$$\text{Coca-Cola:} \quad 365 \div 5.39 = 67.7 \text{ days}$$

- (b) PepsiCo's turnover of 8.56 times is approximately 59% higher than Coca-Cola's 5.39 times, resulting in days in inventory of 42.6 versus 67.7. Thus, PepsiCo's inventory control is significantly more effective.**

The following responses are based on the 2007 annual report:

- (a) \$1,322,000,000, as of July 28, 2007.
- (b) $\$1,322,000,000 - \$1,371,000,000 = \$49,000,000$ decrease.
- (c) 64.9 percent ($\$858 \div \$1,322$).
- (d) Lower of cost or market using standard cost, which approximates FIFO.

(a) (1)	Sales January 1–March 31		\$180,000
	Cash sales 4/1–4/10 (\$18,500 X 40%)....		7,400
	Acknowledged credit sales 4/1–4/10		37,000
	Sales made but unacknowledged.....		5,600
	Sales as of April 10		<u>\$230,000</u>
(2)	Purchases January 1–March 31		\$ 94,000
	Cash purchases 4/1–4/10.....		4,200
	Credit purchases 4/1–4/10.....	\$12,400	
	Less: Items in transit	<u>1,600</u>	<u>10,800</u>
	Purchases as of April 10.....		<u>\$109,000</u>

*(b)		2009	2008
	Net sales.....	<u>\$600,000</u>	<u>\$480,000</u>
	Cost of goods sold		
	Inventory, January 1	60,000	40,000
	Cost of goods purchased.....	<u>404,000</u>	<u>356,000</u>
	Cost of goods available for sale	464,000	396,000
	Inventory, December 31	<u>80,000</u>	<u>60,000</u>
	Cost of goods sold	<u>384,000</u>	<u>336,000</u>
	Gross profit	<u>\$216,000</u>	<u>\$144,000</u>
	Gross profit rate	<u>36%</u>	<u>30%</u>
	Average gross profit rate		<u>33%</u>

*(c)	Sales	\$230,000
	Less: Gross profit (\$230,000 X 33%)	<u>75,900</u>
	Cost of goods sold	<u>\$154,100</u>
	Inventory, January 1.....	\$ 80,000
	Purchases	<u>109,000</u>
	Cost of goods available for sale	189,000
	Cost of goods sold	<u>154,100</u>
	Estimated inventory at time of fire	34,900
	Less: Inventory salvaged	<u>17,000</u>
	Estimated inventory loss.....	<u>\$ 17,900</u>

MEMO

To: Janice Lemay, President
From: Student
Re: 2009 ending inventory error

As you know, 2009 ending inventory was overstated by \$1 million. Of course, this error will cause 2009 net income to be incorrect because the ending inventory is used to compute 2009 cost of goods sold. Since the ending inventory is subtracted in the computation of cost of goods sold, an overstatement of ending inventory results in an understatement of cost of goods sold and therefore an overstatement of net income.

Unfortunately, unless corrected, this error will also affect 2010 net income. The 2009 ending inventory is also the 2010 beginning inventory. Therefore, 2010 beginning inventory is also overstated, which causes an overstatement of cost of goods sold and an understatement of 2010 net income.

- (a) The higher cost of the items ordered, received, and on hand at year-end will be charged to cost of goods sold, thereby lowering current year's income and income taxes. If the purchase at year-end had been made in the next year, the next year's cost of goods sold would have absorbed the higher cost. Next year's income will be increased if unit purchases (next year) are less than unit sales (next year). This is because the lower costs carried from the earlier year as inventory will be charged to next year's cost of goods sold. Therefore, next year's income taxes will increase.
- (b) No. The president would not have given the same directive because the purchase under FIFO would have had no effect on net income of the current year.
- (c) The accountant has no grounds for not ordering the goods if the president insists. The purchase is legal and ethical.

Students responses to this question will vary depending on the inventory fraud they choose to investigate. Here are responses for the two examples given in the activity.

The fraud at Leslie Fay involved a number of illegal actions, all of which increased net income. The company intentionally overstated ending inventory, which has the effect of understating cost of goods sold. It also understated or completely omitted discounts and allowances that it gave to retailers. In addition, it recorded inventory costs at amounts that differed from the invoice amount. It also reported sales in incorrect periods.

McKesson Corporation increased its reported net income through manipulation of inventory and sales records. It back-dated many transactions to increase current period results. It also swapped inventory to increase reported revenue. Many of the transactions that it reported as sales, and which resulted in reductions in inventory, were actually not sales because they had negotiated side agreements which allowed the buyer to return the merchandise.

CHAPTER 7

Accounting Information Systems

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the basic concepts of an accounting information system.	1, 2, 3, 4	1, 2, 3	1			
2. Describe the nature and purpose of a subsidiary ledger.	5, 6, 9, 11, 16	4, 5	2	1, 2, 3, 4, 5, 6, 7, 9, 11, 12	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B
3. Explain how companies use special journals in journalizing.	7, 8, 10, 11, 12, 13, 14, 17	6, 7, 8, 9		6, 7, 8, 10, 12	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B
4. Indicate how companies post a multi-column journal.	12, 15	10		1, 3, 9, 11, 13, 14	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Journalize transactions in cash receipts journal; post to control account and subsidiary ledger.	Simple	30–40
2A	Journalize transactions in cash payments journal; post to control account and subsidiary ledgers.	Simple	30–40
3A	Journalize transactions in multi-column purchases journal; post to the general and subsidiary ledgers.	Moderate	40–50
4A	Journalize transactions in special journals.	Moderate	50–60
5A	Journalize in sales and cash receipts journals; post; prepare a trial balance; prove control to subsidiary; prepare adjusting entries; prepare an adjusted trial balance.	Moderate	60–70
6A	Journalize in special journals; post; prepare a trial balance.	Complex	60–70
1B	Journalize transactions in cash receipts journal; post to control account and subsidiary ledger.	Simple	30–40
2B	Journalize transactions in cash payments journal; post to the general and subsidiary ledgers.	Simple	30–40
3B	Journalize transactions in multi-column purchases journal; post to the general and subsidiary ledgers.	Moderate	40–50
4B	Journalize transactions in special journals.	Moderate	50–60
5B	Journalize in purchases and cash payments journals; post; prepare a trial balance; prove control to subsidiary; prepare adjusting entries; prepare an adjusted trial balance.	Moderate	60–70

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ACCOUNTING INFORMATION SYSTEMS

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	1–2
BE2	1	C	Simple	2–4
BE3	1	C	Simple	2–3
BE4	2	C	Simple	6–8
BE5	2	C	Simple	2–3
BE6	3	C	Simple	2–4
BE7	3	C	Simple	2–4
BE8	3	C	Simple	2–4
BE9	3	C	Simple	3–5
BE10	4	C	Simple	3–5
DI1	2	AP	Simple	6–8
DI2	3	K	Simple	2–4
EX1	2, 4	AP	Simple	6–8
EX2	2	C	Simple	6–8
EX3	2, 4	AP	Simple	10–12
EX4	2	AP	Simple	6–8
EX5	2	AP	Simple	6–8
EX6	2, 3	AP	Simple	6–8
EX7	2, 3	AP	Simple	8–10
EX8	3	C	Simple	10–12
EX9	2, 4	AP	Simple	8–10
EX10	3	C	Simple	6–8
EX11	2, 4	C	Moderate	6–8
EX12	2, 3	AP	Simple	8–10
EX13	4	AP	Simple	6–8
EX14	4	AP	Moderate	8–10

ACCOUNTING INFORMATION SYSTEMS (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	2–4	AP	Simple	30–40
P2A	2–4	AP	Simple	30–40
P3A	2–4	AP	Moderate	40–50
P4A	2–4	AP	Moderate	50–60
P5A	2–4	AP	Moderate	60–70
P6A	2–4	AP	Complex	60–70
P1B	2–4	AP	Simple	30–40
P2B	2–4	AP	Simple	30–40
P3B	2–4	AP	Moderate	40–50
P4B	2–4	AP	Moderate	50–60
P5B	2–4	AP	Moderate	60–70
BYP1	3, 4	AP	Moderate	80–90
BYP2	1	C	Simple	10–15
BYP3	2–4	E	Moderate	15–20
BYP4	3, 4	E	Simple	10–15
BYP5	—	E	Simple	10–15
BYP6	1	E	Simple	8–10

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the basic concepts of an accounting information system.		Q7-1 Q7-2 Q7-3 Q7-4	BE7-1 BE7-2 BE7-3			
2. Describe the nature and purpose of a subsidiary ledger.	Q7-5	Q7-6 Q7-9 Q7-16 BE7-4 BE7-5 E7-2 E7-11	DI7-1 E7-9 E7-12 E7-1A E7-3 E7-4 E7-5 E7-6 E7-7	Q7-11 P7-6A Q7-11 P7-1B P7-2B P7-3B P7-4B P7-5B		
3. Explain how companies use special journals in journalizing.		Q7-7 Q7-8 Q7-10 Q7-12 Q7-13 Q7-14 Q7-17	BE7-6 BE7-7 BE7-8 BE7-9 DI7-2 E7-8 E7-10	P7-5A Q7-11 P7-6A P7-1B P7-2B P7-3B P7-4B P7-5B		
4. Indicate how companies post a multi-column journal.		Q7-12 Q7-15 BE7-10 E7-11	E7-1 E7-3 E7-9 E7-13 E7-14 P7-1A	P7-2A P7-3B P7-4B P7-5B P7-6A P7-1B		
Broadening Your Perspective		Exploring the Web	Financial Reporting (Mini Practice Set)			Decision Making Across the Organization Communication Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) An accounting information system collects and processes transaction data and communicates financial information to decision makers.
(b) Disagree. An accounting information system applies regardless of whether manual or computerized procedures are used to process the transaction data.
2. There are three principles for developing an accounting information system:

Cost effectiveness. The system must be cost-effective; that is, the benefits obtained from the information must outweigh the cost of providing it.
Useful output. To be useful, information must be understandable, relevant, reliable, timely, and accurate.
Flexibility. The system should accommodate a variety of users and changing information needs.
3. Common features of a computerized accounting package beyond recording transactions and preparing financial statements are: easy data access and report preparation; audit trail, internal controls, customization; and network compatibility.
4. ERP systems go far beyond the functions of an entry-level general ledger package. They integrate all aspects of the organization, including accounting, sales, human resource management, and manufacturing.
5. A subsidiary ledger is a group of accounts with a common characteristic. The accounts are assembled together to facilitate the accounting process by freeing the general ledger from details concerning individual balances. The advantages of using subsidiary ledgers are that they:
 - ▶ Show in a single account transactions affecting a single customer or single creditor, thus providing up-to-date information on specific account balances.
 - ▶ Free the general ledger of excessive details relating to accounts receivable and accounts payable. As a result, a trial balance of the general ledger does not contain vast numbers of individual account balances.
 - ▶ Assist in locating errors in individual accounts by reducing the number of accounts in one ledger and by using control accounts.
 - ▶ Permit a division of labor in posting by having one employee post to the general ledger and (a) different employee(s) post to the subsidiary ledgers.
6. (a) (1) Transactions to subsidiary accounts are generally posted daily.
(2) In contrast, postings to the control accounts are usually made in total at the end of the month.
(b) A control account is a general ledger account that summarizes subsidiary ledger data. Subsidiary ledger accounts keep track of specific account activity (i.e., specific debtors or creditors). A subsidiary ledger is an addition to, and an expansion of, the general ledger.

7. Sales journal. Records entries for all sales of merchandise on account.
Cash receipts journal. Records entries for all cash received by the business.
Purchases journal. Records entries for all purchases of merchandise on account.
Cash payments journal. Records entries for all cash paid.

Some advantages of each journal are given below:

- ▶ Sales journal. (1) Since the sales journal employs only one line to record a Sales transaction, its use reduces recording time; (2) the column totals are only posted to the general ledger once an accounting period; and (3) the journal's use separates responsibilities between employees.
- ▶ Cash receipts journal. (1) Its use aids in the posting process since the totals for Cash, Sales Discounts, Accounts Receivable, and Sales are all recorded in the general ledger only at the end of the month; and (2) it allows all accounts receivable credits to be posted to the appropriate subsidiary ledger accounts daily.
- ▶ Purchases journal. The advantages are similar to those of the sales journal except that items involved are Merchandise Inventory debits and Accounts Payable credits.
- ▶ Cash payments journal. Similar advantages to cash receipts journal except the columns involved are different.

In general, special journals: (1) allow greater division of labor because various individuals can record entries in different journals at the same time; and (2) reduce posting time of journals.

8. The entry for the sales return should be recorded in the general journal. Since Thogmartin Company has a single-column sales journal, only credit sales can be recorded there. A purchase by Thogmartin Company has not taken place, so the use of the purchases journal is inappropriate. Finally, no cash is received or paid, so neither the cash receipts or cash payments journal should be used.
9. At the end of the month, after all postings to both the general ledger and the subsidiary accounts have been made, the total of the subsidiary account balances should equal the balance of the control account in the general ledger. In this case, the control account balance will be \$450 larger than the total of the subsidiary accounts.
10. The purpose of special journals is to facilitate the recording process of the business entity. Therefore, the columns included in any special journal should correspond to the unique needs of the entity. In particular, one type of business which might not require an Accounts Receivable column would be grocery stores. These businesses rarely sell on credit to their customers. The minimum frequency of the transaction implies no need for an Accounts Receivable column in the cash receipts journal.
11. (a) No, the customers' ledger will not agree with the Accounts Receivable control account. The customers' ledger will be posted correctly, but the Accounts Receivable control account will be incorrect.
(b) The trial balance will balance, although Cash will be \$4,000 too high and Accounts Receivable \$4,000 too low.
12. The special journal is the sales journal. The other account is Sales. (The cash receipts journal is an incorrect answer because there would be more than two month-end postings to general ledger accounts.)

Questions Chapter 7 (Continued)

13. (a) General journal. (d) Sales journal.
(b) General journal. (e) Cash receipts journal.
(c) Cash receipts journal. (f) General journal.
14. (a) Cash receipts journal. (d) Purchases journal.
(b) Cash receipts journal. (e) General journal.
(c) General journal. (f) Cash payments journal.
15. Typically included would be credit purchases of equipment, office supplies, and store supplies. However, any other item purchased on credit could also be included in a special column or the "other" column.
16. One such example is a purchase return. Here the Accounts Payable control and subsidiary account must be debited for the same amount. The debit/credit equality is unaffected since the balance sheet equation is computed using general ledger (control) accounts only. The subsidiary accounts should prove to the control account balance.
17. The general journal may be used to record such transactions as the granting of credit to a customer for a sales return or allowance, the receipt of credit from a supplier for purchases returned, acceptance of a note receivable from a customer, or the purchase of a plant asset by issuing a note payable. In addition, all correcting, adjusting, and closing entries should be made in the general journal.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 7-1

1. True.
2. False.
3. True.

BRIEF EXERCISE 7-2

(a) 3	(d) 2
(b) 4	(e) 1
(c) 5	

BRIEF EXERCISE 7-3

1. True.
2. False. The benefits obtained from information provided by the accounting information system *must* outweigh the cost of providing that information.
3. True.
4. False. An accounting information system must be cost effective, provide useful output, *and be flexible enough to accommodate changing information needs.*

BRIEF EXERCISE 7-4

Accounts Receivable Subsidiary Ledger					General Ledger				
Agler Co.					Accounts Receivable				
Date	Ref.	Debit	Credit	Balance	Date	Ref.	Debit	Credit	Balance
Jan. 7		10,000		10,000	Jan. 31		25,000		25,000
17			7,000	3,000	31			20,000	5,000
Barto Co.									
Date	Ref.	Debit	Credit	Balance					
Jan. 15		6,000		6,000					
24			4,000	2,000					
Maris Co.									
Date	Ref.	Debit	Credit	Balance					
Jan. 23		9,000		9,000					
29			9,000	0					

BRIEF EXERCISE 7-5

1. General ledger	3. General ledger
2. Subsidiary ledger	4. Subsidiary ledger

BRIEF EXERCISE 7-6

1. Cash Receipts Journal	4. Sales Journal
2. Cash Payments Journal	5. Purchases Journal
3. Cash Payments Journal	6. Cash Receipts Journal

BRIEF EXERCISE 7-7

1. No	3. Yes
2. Yes	4. No

BRIEF EXERCISE 7-8

1. General Journal (if a one-column Purchases Journal)
Purchases Journal (if a multi-column Purchases Journal)
2. Purchases Journal
3. Cash Payments Journal
4. Sales Journal

BRIEF EXERCISE 7-9

1. Cash Receipts Journal
2. Cash Receipts Journal
3. Cash Receipts Journal
4. Sales Journal and Cash Receipts Journal
5. Purchases Journal

BRIEF EXERCISE 7-10

1. Both in total and daily	3. In total
2. In total	4. Only daily

DO IT! 7-1

Subsidiary balances:

Eli Company	\$2,500	(\$9,000 – \$6,500)
Teddy Company	\$–0–	(\$12,000 – \$12,000)
U-2 Company	\$2,300	(\$10,000 – \$7,700)

General ledger Accounts Payable balance: \$4,800 (\$2,500 + \$2,300)

DO IT! 7-2

1. Sold merchandise on account: Sales journal
2. Purchased merchandise on account: Purchases journal
3. Collected cash from a sale to Athletic Company: Cash receipts Journal
4. Recorded accrued interest on a note payable: General journal
5. Paid \$2,000 for supplies: Cash payments journal

SOLUTIONS TO EXERCISES

EXERCISE 7-1

- (a) **\$350,400. Beginning balance of \$320,000 plus \$161,400 debit from sales journal less \$131,000 credit from cash receipts journal.**
- (b) **\$85,900. Beginning balance of \$77,000 plus \$56,400 credit from purchases journal less \$47,500 debit from cash payments journal.**
- (c) **The column total of \$161,400 in the sales journal would be posted to the credit side of the Sales account and the debit side of the Accounts Receivable account in the general ledger.**
- (d) **The accounts receivable column total of \$131,000 in the cash receipts journal would be posted to the credit side of the Accounts Receivable account in the general ledger.**

EXERCISE 7-2

To: Andrea Barden, Chief Financial Officer

From: Student

Subject: Jeremy Dody account

The explanation of the three entries in the subsidiary ledger for the Jeremy Dody account is as follows:

- Sept. 2 This was a credit sale of merchandise to Dody. The entry was recorded on page 31 of the Sales Journal.**
- Sept. 9 This was a sales return or allowance granted to Dody. The entry was recorded on page 4 of the General Journal.**
- Sept. 27 This was a payment by Dody of the balance due. The entry was recorded on page 8 of the Cash Receipts Journal.**

If I can be of further help, please let me know.

EXERCISE 7-3**(a) & (b)****General Ledger****Accounts Receivable**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			10,960
		S	4,490		15,450
		CR		7,030	8,420
		G		220	8,200

Accounts Receivable Subsidiary Ledger**Bannister**

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			2,060
		S	1,100		3,160
		CR		1,310	1,850

Crampton

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			4,820
		S	800		5,620
		CR		2,300	3,320
		G		220	3,100

Iman

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1					0
		S	1,330		1,330
		CR		380	950

Kingston

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			2,640
		CR		1,800	840

EXERCISE 7-3 (Continued)

Ruiz

Date	Explanation	Ref.	Debit	Credit	Balance
Sept. 1	Balance	✓			1,440
		S	1,260		2,700
		CR		1,240	1,460

(c)

SEAVER COMPANY
Schedule of Customers
As of September 30, 2010

Bannister	\$1,850
Crampton	3,100
Iman	950
Kingston	840
Ruiz	1,460
Total	<u>\$8,200</u>
 Accounts Receivable	 <u>\$8,200</u>

EXERCISE 7-4

- (a) \$4,500 [$\$11,000 - (\$4,000 + \$2,500)$].
- (b) \$13,000 [$\$11,000 + (\$9,000 + \$7,000 + \$8,500) - (\$8,000 + \$2,500 + \$9,000) - \$3,000$].
- (c)
- | | | |
|-------|---|-----------------|
| Smith | $(\$4,000 + \$9,000 - \$8,000)$ | \$ 5,000 |
| Green | $(\$2,500 + \$7,000 - \$2,500 - \$3,000)$ | 4,000 |
| Koyan | $(\$4,500 + \$8,500 - \$9,000)$ | <u>4,000</u> |
| | | <u>\$13,000</u> |
- (d) The sales return (\$3,000) would be recorded in the general journal.

EXERCISE 7-5

- (a) \$3,375 [$\$8,250 - (\$3,000 + \$1,875)$].
- (b) \$9,750 [$\$8,250 + (\$6,750 + \$5,250 + \$6,375) - (\$6,000 + \$1,875 + \$6,750) - \$2,250$].
- (c)
- | | | |
|--------|---|----------------|
| Jones | $(\$3,000 + \$6,750 - \$6,000)$ | \$3,750 |
| Brown | $(\$1,875 + \$5,250 - \$1,875 - \$2,250)$ | 3,000 |
| Aatski | $(\$3,375 + \$6,375 - \$6,750)$ | <u>3,000</u> |
| | | <u>\$9,750</u> |
- (d) The purchase return (\$2,250) would be recorded in the general journal.

EXERCISE 7-6**(a) & (b)**

MONTALVO COMPANY
Sales Journal

S1

Date	Account Debited	Invoice No.	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
2010					
Sept. 2	T. Hossfeld	101		720	420
21	P. Lowther	102		<u>800</u>	<u>480</u>
				<u>1,520</u>	<u>900</u>

MONTALVO COMPANY
Purchases Journal

P1

Date	Account Credited	Terms	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
2010				
Sept. 10	L. Rincon	2/10, n/30		600
25	W. Barone	n/30		<u>860</u>
				<u>1,460</u>

EXERCISE 7-7**(a) & (b)**

PHERIGO CO.
Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
2010								
May 1	I. Pherigo, Cap.		50,000				50,000	
2			6,300			6,300		4,200
22	M. Moody		<u>9,000</u>		<u>9,000</u>			
			<u>65,300</u>		<u>9,000</u>	<u>6,300</u>	<u>50,000</u>	<u>4,200</u>

EXERCISE 7-7 (Continued)

PHERIGO CO. Cash Payments Journal CP1						
Date	Ck. No.	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Cash Cr.
2010						
May 3	101	Merchandise Inventory		7,200		7,200
14	102	Salary Expense		700		700
				<u>7,900</u>		<u>7,900</u>

EXERCISE 7-8**(a) Journal****(b) Columns in the journal**

1. Cash Payments	Cash (Cr.), Other Accounts (Dr.).
2. Cash Receipts	Cash (Dr.), Sales Discounts (Dr.), and Accounts Receivable (Cr.).
3. Cash Payments	Cash (Cr.), Other Accounts (Dr.).
4. Cash Payments	Cash (Cr.), Merchandise Inventory (Cr.), and Accounts Payable (Dr.).
5. Cash Receipts	Cash (Dr.), Accounts Receivable (Cr.).
6. Cash Payments	Cash (Cr.), Other Accounts (Dr.).
7. Cash Payments	Cash (Cr.), Other Accounts (Dr.).
8. Cash Receipts	Cash (Dr.), Other Accounts (Cr.).
9. Cash Payments	Cash (Cr.), Other Accounts (Dr.).
10. Cash Receipts	Cash (Dr.), Sales (Cr.), Cost of Goods Sold (Dr.), and Merchandise Inventory (Cr.).

EXERCISE 7-9

(a)	Mar. 2	Equipment.....	9,400	
		Accounts Payable—Chang		
		Company.....		9,400
		5 Accounts Payable—Lyden		
		Company.....	410	
		Merchandise Inventory		410
		7 Sales Returns and Allowances	400	
		Accounts Receivable—Higley		
		Company.....		400
		Merchandise Inventory	260	
		Cost of Goods Sold.....		260

(b) To: President Velasquez

From: Chief Accountant

Subject: Posting of Control and Subsidiary Accounts

The posting of these accounts varies with the journals used in recording the transactions.

Sales and purchases journals—the total for the month is posted to the control accounts. The individual entries are posted daily to the subsidiary accounts.

Columnar cash receipts and cash payments journals—the total of the control account column for the month is posted to the control account. The individual amounts in the column are posted daily to the subsidiary accounts.

General journal—the individual entries are posted daily. Each entry that pertains to a control and a subsidiary account is dual posted. That is, it is posted to both the control account and the subsidiary account.

I hope this memo answers your questions about posting.

EXERCISE 7-10

1. Cash Payments Journal	8. Cash Receipts Journal
2. General Journal	9. Cash Payments Journal
3. Cash Receipts Journal	10. General Journal
4. Cash Receipts Journal	11. General Journal
5. Sales Journal	12. Cash Payments Journal
6. Cash Receipts Journal	13. Purchases Journal
7. General Journal	

EXERCISE 7-11

- (a) The debit posting reference on February 28 should be from the cash payments journal to record the payments made during the month. The general ledger debit amount should be \$29,340 to balance. Tebbetts' ending balance must be \$2,600. (Accounts Payable control balance of \$9,500 less Perez, \$4,600, and Zerbe, \$2,300.)
- (b) Only the general journal amounts were dual posted. Thus, the amounts were \$1,400 (Dr.), \$265 (Cr.), and \$550 (Cr.).

EXERCISE 7-12

(a)

Purchases Journal			P1
Date	Account Credited	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
July 3	Brian Co.	✓	2,400
12	Erik Co.	✓	500
14	Drago Co.	✓	1,100
17	Chacon Corp.	✓	1,400
20	Brian Co.	✓	700
21	Erik Co.	✓	600
29	Chacon Corp.	✓	1,600
			<u>8,300</u>
			120/201

EXERCISE 7-12 (Continued)**(b)**

General Journal				
Date	Accounts and Explanations	Ref.	Debit	Credit
July 1	Store Equipment.....	153	3,900	
	Accounts Payable—Albin Equipment Co.....	201/✓		3,900
15	Merchandise Inventory	120	400	
	Accounts Payable—Heinen Inc.....	201/✓		400
	(This entry should have been recorded in the Purchases Journal.)			
18	Accounts Payable—Chacon Corp.....	201/✓	100	
	Merchandise Inventory	120		100
25	Accounts Payable—Drago Co.	201/✓	200	
	Merchandise Inventory	120		200

EXERCISE 7-13

\$925 (\$200 + \$240 + \$145 + \$190 + \$150). All of the debit postings to the subsidiary ledger accounts should be from sales invoices. The total of all these debits should therefore be the total credit sales for the month, which would be the same amount as the end-of-month debit to Accounts Receivable.

EXERCISE 7-14

- (a) $\$14,000 + \$72,000 - \$46,000 = \underline{\$40,000}$**
(b) $\$22,000 + \$100,000 - \$45,000 = \underline{\$77,000}$
(c) $\$17,000 + \$61,000 - \$55,000 = \underline{\$23,000}$
(d) $\$13,500 + \$72,000 - \$1,000 - \$63,600 = \underline{\$20,900}$
(e) $\$100,000 + \$6,000 = \underline{\$106,000}$

SOLUTIONS TO PROBLEMS

PROBLEM 7-1A

(a)

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold	
								Merchandise Inventory Dr.	Cr.
Apr. 1	O. Grider, Capital	301	7,200				7,200		
4	Baez	✓	1,764	36	1,800				
5	Eggleston Co.	✓	920		920				
8			7,245			7,245			4,347
10	Ogden	✓	600		600				
11	Merchandise Inventory	120	740				740		
23	Eggleston Co.	✓	1,500		1,500				
29	Chelsea	✓	1,200		1,200				
			<u>21,169</u>	<u>36</u>	<u>6,020</u>	<u>7,245</u>	<u>7,940</u>	<u>4,347</u>	
			(101)	(414)	(112)	(401)	(X)	(505)	(120)

(b)

General Ledger

Accounts Receivable

No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			7,450
30		CR1		6,020	1,430

Accounts Receivable Subsidiary Ledger

Ogden

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			1,550
10		CR1		600	950

PROBLEM 7-1A (Continued)**Chelsea**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			1,200
29		CR1		1,200	0

Eggleston Co.

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			2,900
5		CR1		920	1,980
23		CR1		1,500	480

Baez

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 1	Balance	✓			1,800
4		CR1		1,800	0

(c) Accounts receivable balance: \$1,430

Subsidiary account balances:

Ogden	\$ 950
Eggleston Co.	<u>480</u>
Total	<u>\$1,430</u>

PROBLEM 7-2A

(a)

Cash Payments Journal							CP1
				Other	Accounts	Merchandise	
Date	Ck.	Account Debited	Ref.	Accounts	Payable	Inventory	Cash
	No.			Dr.	Dr.	Cr.	Cr.
Oct. 1	63	Merch. Inventory	120	300			300
3	64	Equipment	157	800			800
5	65	Bovary Company	✓		2,700	54	2,646
10	66	Merch. Inventory	120	2,250			2,250
15	67	Pyron Co.	✓		1,800		1,800
16	68	T. Ming, Drawing	306	400			400
19	69	Nyman Co.	✓		1,600	32	1,568
29	70	Sims Company	✓		2,500		2,500
				<u>3,750</u>	<u>8,600</u>	<u>86</u>	<u>12,264</u>
				(X)	(201)	(120)	(101)

(b)

General Ledger

Accounts Payable					No. 201
Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			10,700
31		CP1	8,600		2,100

Accounts Payable Subsidiary Ledger

Bovary Company

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			2,700
5		CP1	2,700		0

PROBLEM 7-2A (Continued)**Nyman Co.**

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			2,500
19		CP1	1,600		900

Pyron Co.

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			1,800
15		CP1	1,800		0

Sims Company

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			3,700
29		CP1	2,500		1,200

(c) Accounts payable balance: \$2,100

Subsidiary account balances:

Nyman Co.	\$ 900
Sims Company	<u>1,200</u>
	<u>\$2,100</u>

PROBLEM 7-3A

(a)

Purchases Journal					P1
Date	Account Credited (Debited)	Ref.	Accounts Payable Cr.	Merchandise Inventory Dr.	Other Accounts Dr.
July 1	Fritz Company	✓	8,000	8,000	
2	Wayward Shipping	✓	400	400	
5	Moon Company	✓	3,200	3,200	
13	Cress Supply (Supplies)	126/✓	720		720
15	Fritz Company	✓	3,600	3,600	
15	Anton Company	✓	3,300	3,300	
18	Lynda Advertisements (Advertising Expense)	610/✓	600		600
24	Moon Company	✓	3,000	3,000	
26	Cress Supply (Equipment)	157/✓	900		900
28	Wayward Shipping	✓	380	380	
			<u>24,100</u>	<u>21,880</u>	<u>2,220</u>
			(201)	(120)	(X)

Sales Journal					S1
Date	Account Debited	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.	
July 3	Pinick Company	✓	1,300	910	
3	Wayne Bros.	✓	1,500	1,050	
16	Sager Company	✓	3,450	2,415	
16	Wayne Bros.	✓	1,570	1,099	
21	Pinick Company	✓	310	217	
21	Haddad Company	✓	2,800	1,960	
30	Sager Company	✓	5,600	3,920	
			<u>16,530</u>	<u>11,571</u>	
			(112)(401)	(505)(120)	

PROBLEM 7-3A (Continued)

General Journal				G1
Date	Accounts and Explanations	Ref.	Debit	Credit
July 8	Accounts Payable—Moon Company	201/✓	300	
	Merchandise Inventory	120		300
22	Sales Returns and Allowances	412	40	
	Accounts Receivable—Pinick Company	112/✓		40

(b) General Ledger					
Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1	16,530		16,530
22		G1		40	16,490

Merchandise Inventory					No. 120
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		P1	21,880		21,880
8		G1		300	21,580
31		S1		11,571	10,009

Supplies					No. 126
Date	Explanation	Ref.	Debit	Credit	Balance
July 13		P1	720		720

PROBLEM 7-3A (Continued)**Equipment** **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
July 26		P1	900		900

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		P1		24,100	24,100
8		G1	300		23,800

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1		16,530	16,530

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
July 22		G1	40		40

Cost of Goods Sold **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1	11,571		11,571

Advertising Expense **No. 610**

Date	Explanation	Ref.	Debit	Credit	Balance
July 18		P1	600		600

PROBLEM 7-3A (Continued)**Accounts Receivable Subsidiary Ledger****Wayne Bros.**

Date	Explanation	Ref.	Debit	Credit	Balance
July 3		S1	1,500		1,500
16		S1	1,570		3,070

Pinick Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 3		S1	1,300		1,300
21		S1	310		1,610
22		G1		40	1,570

Sager Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 16		S1	3,450		3,450
30		S1	5,600		9,050

Haddad Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 21		S1	2,800		2,800

Accounts Payable Subsidiary Ledger**Cress Supply**

Date	Explanation	Ref.	Debit	Credit	Balance
July 13		P1		720	720
26		P1		900	1,620

PROBLEM 7-3A (Continued)**Wayward Shipping**

Date	Explanation	Ref.	Debit	Credit	Balance
July 2		P1		400	400
28		P1		380	780

Fritz Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		P1		8,000	8,000
15		P1		3,600	11,600

Moon Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 5		P1		3,200	3,200
8		G1	300		2,900
24		P1		3,000	5,900

Lynda Advertisements

Date	Explanation	Ref.	Debit	Credit	Balance
July 18		P1		600	600

Anton Company

Date	Explanation	Ref.	Debit	Credit	Balance
July 15		P1		3,300	3,300

PROBLEM 7-3A (Continued)

(c) Accounts receivable balance.....		<u>\$16,490</u>
Subsidiary account balances		
Wayne Bros.	\$3,070	
Pinick Company	1,570	
Sager Company	9,050	
Haddad Company	<u>2,800</u>	
Total.....		<u>\$16,490</u>
 Accounts payable balance		 <u>\$23,800</u>
Subsidiary account balances		
Cress Supply	\$ 1,620	
Wayward Shipping	780	
Fritz Company	11,600	
Moon Company	5,900	
Lynda Advertisements	600	
Anton Company	<u>3,300</u>	
Total.....		<u>\$23,800</u>

PROBLEM 7-4A

(a), (b) & (c)

Sales Journal

S1

Date	Account Debited	Invoice No.	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
Jan. 4	Milam	371	✓	5,250	3,150
9	Connor	372	✓	6,400	3,840
17	Corp.	373	✓	1,200	720
31	Bullock Co.	374	✓	9,330	5,598
	Milam			<u>22,180</u>	<u>13,308</u>
				(112)(401)	(505)(120)

Purchases Journal

P1

Date	Account Credited	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
Jan. 3	Wortham Co.	✓	10,000
8	Noyes Co.	✓	4,500
11	Betz Co.	✓	3,700
23	Wortham Co.	✓	7,800
24	Forgetta Corp.	✓	5,100
			<u>31,100</u>
			(120)(201)

General Journal

G1

Date	Accounts and Explanations	Ref.	Debit	Credit
Jan. 5	Accounts Payable—Wortham Co.	201/✓	300	
	Merchandise Inventory	120		300
19	Equipment	157	5,500	
	Accounts Payable—Murphy Corp.	201/✓		5,500

PROBLEM 7-4A (Continued)
Cash Receipts Journal
CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold
								Dr. Merchandise Inventory Cr.
Jan. 6			3,150			3,150		1,890
13			6,260			6,260		3,756
15	Connor Corp.	✓	6,336	64	6,400			
17	Milam	✓	5,250		5,250			
20			3,200			3,200		1,920
27			4,230			4,230		2,538
30	Bullock Co.	✓	1,200		1,200			
			<u>29,626</u>	<u>64</u>	<u>12,850</u>	<u>16,840</u>	<u>0</u>	<u>10,104</u>
			(101)	(414)	(112)	(401)	(X)	(505)(120)

Cash Payments Journal
CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Merchandise Inventory Cr.	Cash
						Cr.
Jan. 4	Supplies	126	80			80
13	Wortham Co.	✓		9,700	194	9,506
15	Salaries Expense	726	14,300			14,300
20	Noyes Co.	✓		4,500	90	4,410
31	Salaries Expense	726	13,200			13,200
			<u>27,580</u>	<u>14,200</u>	<u>284</u>	<u>41,496</u>
			(X)	(201)	(120)	(101)

PROBLEM 7-5A

(a), (d) & (g)

General Ledger

Cash No. 101

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		CR1	101,035		101,035
31		CP1		39,066	61,969

Accounts Receivable No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1	19,700		19,700
31		CR1		14,700	5,000

Merchandise Inventory No. 120

Date	Explanation	Ref.	Debit	Credit	Balance
July 31		P1	44,020		44,020
29		CR1		420	43,600
31		CP1		234	43,366
31		S1		12,805	30,561
31		CR1		3,900	26,661

Store Supplies No. 127

Date	Explanation	Ref.	Debit	Credit	Balance
July 4		CP1	600		600
31	Adjusting entry	G1		460	140

Prepaid Rent No. 131

Date	Explanation	Ref.	Debit	Credit	Balance
July 11		CP1	6,000		6,000
31	Adjusting entry	G1		500	5,500

PROBLEM 7-5A (Continued)

Accounts Payable					No. 201
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		P1		44,020	44,020
31		CP1	30,200		13,820

Reyes, Capital					No. 301
Date	Explanation	Ref.	Debit	Credit	Balance
July 1		CR1		80,000	80,000

Reyes, Drawing					No. 306
Date	Explanation	Ref.	Debit	Credit	Balance
July 19		CP1	2,500		2,500

Sales					No. 401
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1		19,700	19,700
31		CR1		6,000	25,700

Sales Discounts					No. 414
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		CR1	85		85

Cost of Goods Sold					No. 505
Date	Explanation	Ref.	Debit	Credit	Balance
July 31		S1	12,805		12,805
31		CR1	3,900		16,705

PROBLEM 7-5A (Continued)

Supplies Expense No. 631

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting entry	G1	460		460

Rent Expense No. 729

Date	Explanation	Ref.	Debit	Credit	Balance
July 31	Adjusting entry	G1	500		500

(b)

Sales Journal S1

Date	Account Debited	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
July 6	Ewing Co.	✓	6,200	4,030
8	S. Beauty	✓	3,600	2,340
10	W. Pitts	✓	4,900	3,185
21	H. Prince	✓	5,000	3,250
			<u>19,700</u>	<u>12,805</u>
			(112)(401)	(505)(120)

Cash Receipts Journal CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
July 1	Reyes, Capital	301	80,000				80,000	
7			6,000			6,000		3,900
13	S. Beauty	✓	3,564	36	3,600			
16	W. Pitts	✓	4,851	49	4,900			
20	Ewing Co.	✓	6,200		6,200			
29	Merchandise Inventory	120	420				420	
			<u>101,035</u>	<u>85</u>	<u>14,700</u>	<u>6,000</u>	<u>80,420</u>	<u>3,900</u>
			(101)	(414)	(112)	(401)	(X)	(505)(120)

PROBLEM 7-5A (Continued)**(c) Accounts Receivable Subsidiary Ledger****Ewing Co.**

Date	Explanation	Ref.	Debit	Credit	Balance
July 6		S1	6,200		6,200
20		CR1		6,200	0

H. Prince

Date	Explanation	Ref.	Debit	Credit	Balance
July 21		S1	5000		5,000

W. Pitts

Date	Explanation	Ref.	Debit	Credit	Balance
July 10		S1	4,900		4,900
16		CR1		4,900	0

S. Beauty

Date	Explanation	Ref.	Debit	Credit	Balance
July 8		S1	3,600		3,600
13		CR1		3,600	0

Accounts Payable Subsidiary Ledger**C. Tabor**

Date	Explanation	Ref.	Debit	Credit	Balance
July 13		P1		15,300	15,300
21		CP1	15,300		0

A. Ernst

Date	Explanation	Ref.	Debit	Credit	Balance
July 5		P1		8,100	8,100
10		CP1	8,100		0

PROBLEM 7-5A (Continued)

M. Sneezy

Date	Explanation	Ref.	Debit	Credit	Balance
July 20		P1		7,900	7,900

G. Clemens

Date	Explanation	Ref.	Debit	Credit	Balance
July 4		P1		6,800	6,800
15		CP1	6,800		0

J. Happy

Date	Explanation	Ref.	Debit	Credit	Balance
July 11		P1		5,920	5,920

(e) **REYES CO.**
Trial Balance
July 31, 2010

	Debit	Credit
Cash	\$ 61,969	
Accounts Receivable	5,000	
Merchandise Inventory.....	26,661	
Store Supplies.....	600	
Prepaid Rent	6,000	
Accounts Payable		\$ 13,820
Reyes, Capital		80,000
Reyes, Drawing.....	2,500	
Sales.....		25,700
Sales Discounts.....	85	
Cost of Goods Sold	16,705	
	<u>\$119,520</u>	<u>\$119,520</u>

PROBLEM 7-5A (Continued)

(f)	Accounts receivable balance.....	<u>\$ 5,000</u>
	Subsidiary accounts balance	
	H. Prince.....	<u>\$ 5,000</u>
	Accounts payable balance	<u>\$13,820</u>
	Subsidiary accounts balance	
	M. Sneezy	\$ 7,900
	J. Happy	<u>5,920</u>
		<u>\$13,820</u>

(g)

General Journal				G1
Date	Accounts and Explanations	Ref.	Debit	Credit
July 31	Supplies Expense	631	460	
	Store Supplies	127		460
31	Rent Expense	729	500	
	Prepaid Rent.....	131		500

PROBLEM 7-5A (Continued)**(h)****REYES CO.
Adjusted Trial Balance
July 31, 2010**

	Debit	Credit
Cash.....	\$ 61,969	
Accounts Receivable	5,000	
Merchandise Inventory	26,661	
Store Supplies	140	
Prepaid Rent	5,500	
Accounts Payable		\$ 13,820
Reyes, Capital.....		80,000
Reyes, Drawing	2,500	
Sales		25,700
Sales Discounts	85	
Cost of Goods Sold	16,705	
Supplies Expense.....	460	
Rent Expense.....	500	
	<u>\$119,520</u>	<u>\$119,520</u>

PROBLEM 7-6A

(b) & (c)

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold
								Dr. Merchandise Inventory Cr.
Jan. 7	T. Dudley	✓	3,500		3,500			
13	M. Rensing	✓	4,900	100	5,000			
23			9,100			9,100		5,460
29	Notes Receivable	115	<u>40,000</u>				<u>40,000</u>	
			<u>57,500</u>	<u>100</u>	<u>8,500</u>	<u>9,100</u>	<u>40,000</u>	<u>5,460</u>
			(101)	(414)	(112)	(401)	(X)	(505)(120)

Cash Payments Journal

CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Merchandise Inventory Cr.	Cash
						Cr.
Jan. 11	Merchandise Inventory	120	300			300
12	Rent Expense	729	1,000			1,000
15	K. Inwood	✓		15,000	150	14,850
18	Sales Salaries Expense	726	2,800			2,800
18	Office Salaries Expense	727	2,000			2,000
27	E. Vietti	✓		950		950
			<u>6,100</u>	<u>15,950</u>	<u>150</u>	<u>21,900</u>
			(X)	(201)	(120)	(101)

Sales Journal

S1

Date	Account Debited	Ref.	Accounts Receivable		Cost of Goods Sold
			Sales	Dr. Cr.	Dr. Merchandise Inventory Cr.
Jan. 3	M. Rensing	✓	5,000		3,000
24	F. Cone	✓	7,400		4,440
			<u>12,400</u>		<u>7,440</u>
			(112)(401)		(505)(120)

PROBLEM 7-6A (Continued)
Purchases Journal
P1

			Merchandise Inventory Dr.
			Accounts Payable Cr.
Date	Account Credited	Ref.	
Jan. 5	E. Vietti	✓	2,000
17	G. Marley	✓	<u>1,600</u>
			<u>3,600</u>
			(120)(201)

General Journal
G1

Date	Accounts and Explanations	Ref.	Debit	Credit
Jan. 14	Sales Returns and Allowances	412	300	
	Accounts Receivable—			
	J. Anders	✓/112		300
	Merchandise Inventory	120	180	
	(\$300 X .60)			
	Cost of Goods Sold	505		180
20	Accounts Payable—D. Goodman.....	✓/201	18,000	
	Notes Payable.....	200		18,000
30	Accounts Payable—G. Marley	✓/201	300	
	Merchandise Inventory.....	120		300

(a) & (c)
General Ledger

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			41,500
31		CR1	57,500		99,000
31		CP1		21,900	77,100

PROBLEM 7-6A (Continued)**Accounts Receivable** **No. 112**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			15,000
14		G1		300	14,700
31		CR1		8,500	6,200
31		S1	12,400		18,600

Notes Receivable **No. 115**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			45,000
29		CR1		40,000	5,000

Merchandise Inventory **No. 120**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			23,000
11		CP1	300		23,300
14		G1	180		23,480
30		G1		300	23,180
31		P1	3,600		26,780
31		CP1		150	26,630
31		CR1		5,460	21,170
31		S1		7,440	13,730

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			6,450

Accumulated Depreciation—Equipment **No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,500

PROBLEM 7-6A (Continued)**Notes Payable** **No. 200**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 20		G1		18,000	18,000

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			43,000
20		G1	18,000		25,000
30		G1	300		24,700
31		P1		3,600	28,300
31		CP1	15,950		12,350

B. Cortez, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			86,450

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CR1		9,100	9,100
31		S1		12,400	21,500

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 14		G1	300		300

Sales Discounts **No. 414**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CR1	100		100

PROBLEM 7-6A (Continued)**Cost of Goods Sold** **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CR1	5,460		5,460
31		S1	7,440		12,900
14		G1		180	12,720

Sales Salaries Expense **No. 726**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 18		CP1	2,800		2,800

Office Salaries Expense **No. 727**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 18		CP1	2,000		2,000

Rent Expense **No. 729**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 12		CP1	1,000		1,000

Accounts Receivable Subsidiary Ledger**J. Anders**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			2,500
14		G1		300	2,200

F. Cone

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			7,500
24		S1	7,400		14,900

PROBLEM 7-6A (Continued)**T. Dudley**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			5,000
7		CR1		3,500	1,500

M. Rensing

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 3		S1	5,000		5,000
13		CR1		5,000	0

Accounts Payable Subsidiary Ledger**G. Marley**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 17		P1		1,600	1,600
30		G1	300		1,300

J. Feeney

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			10,000

D. Goodman

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			18,000
20		G1	18,000		0

K. Inwood

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			15,000
15		CP1	15,000		0

PROBLEM 7-6A (Continued)

E. Vietti

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 5		P1		2,000	2,000
27		CP1	950		1,050

(d) **CORTEZ CO.**
Trial Balance
January 31, 2011

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 77,100	
Accounts Receivable.....	18,600	
Notes Receivable.....	5,000	
Merchandise Inventory	13,730	
Equipment.....	6,450	
Accumulated Depreciation—Equipment		\$ 1,500
Notes Payable.....		18,000
Accounts Payable.....		12,350
B. Cortez, Capital.....		86,450
Sales		21,500
Sales Returns and Allowances	300	
Sales Discounts	100	
Cost of Goods Sold.....	12,720	
Sales Salaries Expense	2,800	
Office Salaries Expense	2,000	
Rent Expense.....	1,000	
	<u>\$139,800</u>	<u>\$139,800</u>

(e) **Accounts Receivable Subsidiary Ledger**

J. Anders.....	\$ 2,200
F. Cone	14,900
T. Dudley.....	1,500
	<u>\$18,600</u>

Accounts Receivable Control.....	<u>\$18,600</u>

PROBLEM 7-6A (Continued)

Accounts Payable Subsidiary Ledger	
G. Marley	\$ 1,300
J. Feeney	10,000
E. Vietti.....	<u>1,050</u>
	<u>\$12,350</u>
 Accounts Payable Control	 <u><u>\$12,350</u></u>

PROBLEM 7-1B

(a)

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold	
								Dr. Merchandise Inventory Cr.	
June 1	Ken Tucky, Capital	301	12,000				12,000		
3	Marx Co.	✓	1,960	40	2,000				
6	Chris Co.	✓	2,744	56	2,800				
7			8,700			8,700		5,000	
9	Moose & Son	✓	3,430	70	3,500				
11	Merchandise Inventory	120	450				450		
15			6,500			6,500		4,000	
20	Cornell Bros.	✓	2,400		2,400				
			<u>38,184</u>	<u>166</u>	<u>10,700</u>	<u>15,200</u>	<u>12,450</u>	<u>9,000</u>	
			(101)	(414)	(112)	(401)	(X)	(505/120)	

(b)

General Ledger

Accounts Receivable

No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
June 1	Balance	✓			10,700
30		CR1		10,700	0

Accounts Receivable Subsidiary Ledger

Moose & Son

Date	Explanation	Ref.	Debit	Credit	Balance
June 1	Balance	✓			3,500
9		CR1		3,500	0

PROBLEM 7-1B (Continued)**Chris Co.**

Date		Explanation	Ref.	Debit	Credit	Balance
June	1	Balance	✓			2,800
	6		CR1		2,800	0

Cornell Bros.

Date		Explanation	Ref.	Debit	Credit	Balance
June	1	Balance	✓			2,400
	20		CR1		2,400	0

Marx Co.

Date		Explanation	Ref.	Debit	Credit	Balance
June	1	Balance	✓			2,000
	3		CR1		2,000	0

- (c) Accounts receivable balance = 0.
Sum of all subsidiary accounts = 0.

PROBLEM 7-2B

(a)

Cash Payments Journal							CP1
Date	Ck. No.	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Merchandise Inventory Cr.	Cash Cr.
Nov. 1	11	Merch. Inventory	120	950			950
3	12	Equipment	157	1,400			1,400
5	13	J. Lynne	✓		1,300	13	1,287
11	14	Merch. Inventory	120	1,700			1,700
15	15	G. Harrison	✓		800	24	776
16	16	Starr, Drawing	306	400			400
19	17	J. Lennon	✓		2,100	42	2,058
25	18	Prepaid Insurance	130	2,400			2,400
30	19	P. McCartney	✓		2,900		2,900
				<u>6,850</u>	<u>7,100</u>	<u>79</u>	<u>13,871</u>
				(X)	(201)	(120)	(101)

(b)

General Ledger

Accounts Payable					No. 201
Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			8,200
30		CP1	7,100		1,100

Accounts Payable Subsidiary Ledger

P. McCartney

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			4,000
30		CP1	2,900		1,100

PROBLEM 7-2B (Continued)**J. Lennon**

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			2,100
19		CP1	2,100		0

G. Harrison

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			800
15		CP1	800		0

J. Lynne

Date	Explanation	Ref.	Debit	Credit	Balance
Nov. 1	Balance	✓			1,300
5		CP1	1,300		0

(c) Accounts payable balance: \$1,100

Subsidiary account balances:

P. McCartney \$1,100
\$1,100

PROBLEM 7-3B

(a)

Purchases Journal					P1
Date	Account Credited (Debited)	Ref.	Accounts Payable Cr.	Merchandise Inventory Dr.	Other Accounts Dr.
May 2	Older Company	✓	5,000	5,000	
3	Fast Freight	✓	250	250	
8	Wolfe Company	✓	5,400	5,400	
8	Zig Company	✓	3,000	3,000	
15	Michelle's Supplies (Supplies)	126/✓	600		600
16	Older Company	✓	3,100	3,100	
16	Wolfe Company	✓	4,800	4,800	
18	Fast Freight	✓	325	325	
25	Ole Advertising (Adv. Exp.)	610/✓	620		620
28	Michelle's Supplies (Equipment)	157/✓	400		400
			<u>23,495</u>	<u>21,875</u>	<u>1,620</u>
			(201)	(120)	(X)

Sales Journal					S1
Date	Account Debited	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.	
May 5	May Company	✓	1,300	780	
5	Coen Bros.	✓	1,800	1,080	
5	Lucy Company	✓	1,000	600	
23	Coen Bros.	✓	1,600	960	
23	Lucy Company	✓	<u>2,500</u>	<u>1,500</u>	
			<u>8,200</u>	<u>4,920</u>	
			(112)(401)	(505)(120)	

PROBLEM 7-3B (Continued)
General Journal

Date	Accounts and Explanations	Ref.	Debit	Credit
May 10	Accounts Payable—Zig			
	Company.....	201/✓	350	
	Merchandise Inventory.....	120		350
17	Accounts Payable—Michelle's			
	Supplies	201/✓	70	
	Supplies	126		70
20	Accounts Payable—Older			
	Company.....	201/✓	200	
	Merchandise Inventory.....	120		200
26	Sales Returns and Allowances	412	140	
	Accounts Receivable—			
	Lucy Company	112/✓		140

(b) General Ledger
Accounts Receivable No. 112

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		S1	8,200		8,200
26		G1		140	8,060

Merchandise Inventory No. 120

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		P1	21,875		21,875
10		G1		350	21,525
20		G1		200	21,325
31		S1		4,920	16,405

PROBLEM 7-3B (Continued)**Supplies** **No. 126**

Date	Explanation	Ref.	Debit	Credit	Balance
May 15		P1	600		600
17		G1		70	530

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
May 28		P1	400		400

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		P1		23,495	23,495
10		G1	350		23,145
17		G1	70		23,075
20		G1	200		22,875

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		S1		8,200	8,200

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
May 26		G1	140		140

Cost of Goods Sold **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
May 31		S1	4,920		4,920

Advertising Expense **No. 610**

Date	Explanation	Ref.	Debit	Credit	Balance
May 25		P1	620		620

PROBLEM 7-3B (Continued)**Accounts Receivable Subsidiary Ledger****May Company**

Date	Explanation	Ref.	Debit	Credit	Balance
May 5		S1	1,300		1,300

Coen Bros.

Date	Explanation	Ref.	Debit	Credit	Balance
May 5		S1	1,800		1,800
23		S1	1,600		3,400

Lucy Company

Date	Explanation	Ref.	Debit	Credit	Balance
May 5		S1	1,000		1,000
23		S1	2,500		3,500
26		G1		140	3,360

Accounts Payable Subsidiary Ledger**Fast Freight**

Date	Explanation	Ref.	Debit	Credit	Balance
May 3		P1		250	250
18		P1		325	575

Older Company

Date	Explanation	Ref.	Debit	Credit	Balance
May 2		P1		5,000	5,000
16		P1		3,100	8,100
20		G1	200		7,900

PROBLEM 7-3B (Continued)**Michelle's Supplies**

Date	Explanation	Ref.	Debit	Credit	Balance
May 15		P1		600	600
17		G1	70		530
28		P1		400	930

Wolfe Company

Date	Explanation	Ref.	Debit	Credit	Balance
May 8		P1		5,400	5,400
16		P1		4,800	10,200

Zig Company

Date	Explanation	Ref.	Debit	Credit	Balance
May 8		P1		3,000	3,000
10		G1	350		2,650

Ole Advertising

Date	Explanation	Ref.	Debit	Credit	Balance
May 25		P1		620	620

PROBLEM 7-3B (Continued)

(c) **Accounts receivable balance** **\$ 8,060**

Subsidiary account balances

May Company	\$1,300	
Coen Bros.	3,400	
Lucy Company	<u>3,360</u>	
Total		<u>\$ 8,060</u>

Accounts payable balance **\$22,875**

Subsidiary account balances

Fast Freight	\$ 575	
Older Company	7,900	
Michelle's Supplies	930	
Wolfe Company	10,200	
Zig Company	2,650	
Ole Advertising	<u>620</u>	
Total		<u>\$22,875</u>

PROBLEM 7-4B

(a), (b) & (c)

Sales Journal

S1

Date	Account Debited	Invoice No.	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.
Oct. 4	Erik Co.	204	✓	5,600	3,640
17	Ed's Warehouse	205	✓	3,900	2,535
25	David Corp.	206	✓	3,800	2,470
30	Ed's Warehouse	207	✓	3,400	2,210
				<u>16,700</u>	<u>10,855</u>
				(112)(401)	(505)(120)

Purchases Journal

P1

Date	Account Credited	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
Oct. 2	Janet Company	✓	12,000
10	Arduino Corp.	✓	2,600
27	Mary Co.	✓	6,200
30	Janet Company	✓	10,000
			<u>30,800</u>
			(120)(201)

General Journal

G1

Date	Accounts and Explanations	Ref.	Debit	Credit
Oct. 13	Accounts Payable—Arduino Corp.....	201/✓	150	
	Merchandise Inventory	120		150
25	Supplies.....	126	190	
	Accounts Payable—Paul Martin Co.....	201/✓		190

PROBLEM 7-4B (Continued)

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold
								Dr. Merchandise Inventory Cr.
Oct. 7			6,700			6,700		4,355
12	Erik Co.	✓	5,488	112	5,600			
14			6,000			6,000		3,900
16	Land	140	20,000				20,000	
21			6,000			6,000		3,900
25	Ed's Warehouse.	✓	3,822	78	3,900			
28			5,500			5,500		3,575
			<u>53,510</u>	<u>190</u>	<u>9,500</u>	<u>24,200</u>	<u>20,000</u>	<u>15,730</u>
			(101)	(414)	(112)	(401)	(X)	(505)(120)

Cash Payments Journal

CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Merchandise Inventory Cr.	Cash
						Cr.
Oct. 5	Supplies	126	60			60
9	Janet Co.	✓		12,000	240	11,760
18	Merchandise Inventory	120	1,600			1,600
23	Arduino Corp.	✓		2,450		2,450
26	Land	140	16,000			
	Buildings	145	10,000			26,000
30	Advertising Expense	610	290			290
			<u>27,950</u>	<u>14,450</u>	<u>240</u>	<u>42,160</u>
			(X)	(201)	(120)	(101)

PROBLEM 7-5B

(b)

Purchases Journal			P1
Date	Account Credited	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
Feb. 2	J. Garland	✓	3,600
7	B. Lahr	✓	23,000
16	D. Gale	✓	1,900
21	Kansas Company	✓	6,000
			<u>34,500</u>
			(120)(201)

Cash Payments Journal					CP1
Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Merchandise Inventory Cr. Cash Cr.
Feb. 9	Supplies	126	980		980
12	J. Garland	✓		3,600	3,528
15	Equipment	157	5,500		5,500
17	B. Lahr	✓		23,000	22,770
20	B. Wicked, Drawing	306	800		800
28	D. Gale	✓		1,900	1,900
			<u>7,280</u>	<u>28,500</u>	<u>35,478</u>
			(X)	(201)	(101)

(a), (d) & (g)

General Ledger

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		CR1	36,580		36,580
28		CP1		35,478	1,102

PROBLEM 7-5B (Continued)**Accounts Receivable** **No. 112**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		S1	21,000		21,000
28		CR1		9,000	12,000

Merchandise Inventory **No. 120**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		P1	34,500		34,500
18		CR1		120	34,380
28		CP1		302	34,078
28		S1		12,600	21,478
28		CR1		2,700	18,778

Supplies **No. 126**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 9		CP1	980		980
28	Adjusting entry	G1		780	200

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 15		CP1	5,500		5,500

Accumulated Depreciation—Equipment **No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28	Adjusting entry	G1		150	150

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		P1		34,500	34,500
28		CP1	28,500		6,000

PROBLEM 7-5B (Continued)**B. Wicked, Capital** **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 1		CR1		23,000	23,000

B. Wicked, Drawing **No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 20		CP1	800		800

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		S1		21,000	21,000
28		CR1		4,500	25,500

Sales Discounts **No. 414**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		CR1	40		40

Cost of Goods Sold **No. 505**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28		S1	12,600		12,600
28		CR1	2,700		15,300

Supplies Expense **No. 631**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28	Adjusting entry	G1	780		780

Depreciation Expense **No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 28	Adjusting entry	G1	150		150

PROBLEM 7-5B (Continued)**(c) Accounts Receivable Subsidiary Ledger****C. Lion**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 3		S1	4,000		4,000
13		CR1		4,000	0

T. Mann

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 12		S1	6,500		6,500

S. Crow

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 9		S1	5,000		5,000
26		CR1		5,000	0

W. Oz

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 26		S1	5,500		5,500

Accounts Payable Subsidiary Ledger**Kansas Company**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 21		P1		6,000	6,000

J. Garland

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 2		P1		3,600	3,600
12		CP1	3,600		0

PROBLEM 7-5B (Continued)

B. Lahr

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 7		P1		23,000	23,000
17		CP1	23,000		0

D. Gale

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 16		P1		1,900	1,900
28		CP1	1,900		0

(e)

WICKED CO. Trial Balance February 28, 2010

	Debit	Credit
Cash	\$ 1,102	
Accounts Receivable.....	12,000	
Merchandise Inventory	18,778	
Supplies	980	
Equipment.....	5,500	
Accounts Payable.....		\$ 6,000
B. Wicked, Capital		23,000
B. Wicked, Drawing	800	
Sales.....		25,500
Sales Discounts	40	
Cost of Goods Sold.....	15,300	
	<u>\$54,500</u>	<u>\$54,500</u>

PROBLEM 7-5B (Continued)

(f)	Accounts Receivable control account.....		<u>\$12,000</u>
	Accounts Receivable subsidiary accounts		
	T. Mann	\$6,500	
	W. Oz	<u>5,500</u>	<u>\$12,000</u>
	Accounts Payable control account.....		<u>\$ 6,000</u>
	Accounts Payable subsidiary account		
	Kansas Company		<u>\$ 6,000</u>

(g)	General Journal			G1
Date	Accounts and Explanations	Ref.	Debit	Credit
Feb. 28	Supplies Expense	631	780	
	Supplies	126		780
28	Depreciation Expense.....	711	150	
	Accumulated Depreciation—			
	Equipment	158		150

PROBLEM 7-5B (Continued)**(h)****WICKED CO.
Adjusted Trial Balance
February 28, 2010**

	Debit	Credit
Cash	\$ 1,102	
Accounts Receivable.....	12,000	
Merchandise Inventory	18,778	
Supplies	200	
Equipment	5,500	
Accumulated Depreciation—Equipment.....		\$ 150
Accounts Payable.....		6,000
B. Wicked, Capital		23,000
B. Wicked, Drawing	800	
Sales.....		25,500
Sales Discounts	40	
Cost of Goods Sold.....	15,300	
Supplies Expense.....	780	
Depreciation Expense	150	
	<u>\$54,650</u>	<u>\$54,650</u>

COMPREHENSIVE PROBLEM: CHAPTERS 3 TO 7

Note: If the working papers that accompany this text are not used in solving this problem, account numbers may differ from those presented in this solution.

(a)

Sales Journal				S1
Date	Account Debited	Invoice No.	Ref.	Accounts Receivable Dr. Sales Cr.
Jan. 3	B. Remy	510	✓	3,100
3	J. Fine	511	✓	1,800
11	R. Draves	512	✓	1,900
11	S. Ingles	513	✓	900
22	B. Remy	514	✓	3,700
22	R. Draves	515	✓	800
25	B. Hachinski	516	✓	3,500
25	J. Fine	517	✓	6,100
				<u>21,800</u>
				(112)(401)

Purchases Journal				P1
Date	Account Credited	Terms	Ref.	Purchases Dr. Accounts Payable Cr.
Jan. 5	S. Yost		✓	3,000
5	D. Laux		✓	2,700
16	D. Moreno		✓	15,000
16	S. Kosko		✓	13,900
16	S. Yost		✓	1,500
27	D. Moreno		✓	12,500
27	D. Laux		✓	1,200
27	S. Yost		✓	2,800
				<u>52,600</u>
				(510)(201)

COMPREHENSIVE PROBLEM (Continued)

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.
Jan. 7	S. Ingles	✓	4,000	4,000		
7	B. Hachinski	✓	2,000	2,000		
10			15,500		15,500	
13	B. Remy	✓	3,100	3,100		
13	J. Fine	✓	1,500	1,500		
20			17,500		17,500	
21	S. Ingles	✓	900	900		
31			<u>22,920</u>		<u>22,920</u>	
			<u>67,420</u>	<u>11,500</u>	<u>55,920</u>	
			(101)	(112)	(401)	

Cash Payments Journal

CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Office Supplies Dr.	Cash Cr.
Jan. 8	Freight In	516	180			180
9	S. Kosko	✓		9,000		9,000
9	D. Moreno	✓		11,000		11,000
12	Rent Expense	729	1,000			1,000
15	I. Packard, Drawing	306	800			800
17					400	400
23	D. Moreno	✓		15,000		15,000
23	S. Kosko	✓		13,700		13,700
28					200	200
31	Sales Salaries Expense	627	4,300			4,300
31	Office Salaries Expense	727	<u>3,600</u>			<u>3,600</u>
			<u>9,880</u>	<u>48,700</u>	<u>600</u>	<u>59,180</u>
			(X)	(201)	(125)	(101)

COMPREHENSIVE PROBLEM (Continued)**(a) & (e)**

General Journal				G1
Date	Account Titles and Explanations	Ref.	Debit	Credit
Jan. 9	Sales Returns and Allowances.....	412	300	
	Accounts Receivable— J. Fine	112/✓		300
	(Issued credit for merchandise returned)			
18	Accounts Payable—S. Kosko.....	201/✓	200	
	Purchase Returns and Allowances	512		200
	(Received credit for returned goods)			
21	Accounts Payable— R. Mikush	201/✓	15,000	
	Notes Payable.....	200		15,000
	(Issued note for balance due)			
<u>Adjusting Entries</u>				
31	Office Supplies Expense.....	728	900	
	Office Supplies.....	125		900
31	Insurance Expense (1/10 X 2,000)	722	200	
	Prepaid Insurance	130		200
31	Depreciation Expense (1/12 X 1,500)	711	125	
	Accumulated Depreciation— Equipment.....	158		125
31	Interest Expense	718	30	
	Interest Payable	230		30

COMPREHENSIVE PROBLEM (Continued)

General Journal				G1
Date	Account Titles and Explanations	Ref.	Debit	Credit
Jan. 31	Merchandise Inventory (Jan. 31).....	120	15,000	
	Sales	401	77,720	
	Purchase Returns and Allowances	512	200	
	Income Summary	350		92,920
31	Income Summary	350	83,235	
	Merchandise Inventory (Jan. 1)	120		20,000
	Sales Returns and Allowances	412		300
	Purchases	510		52,600
	Freight In.....	516		180
	Rent Expense	729		1,000
	Sales Salaries Expense	627		4,300
	Office Salaries Expense	727		3,600
	Office Supplies Expense	728		900
	Insurance Expense.....	722		200
	Depreciation Expense	711		125
	Interest Expense	718		30
31	Income Summary	350	9,685	
	I. Packard, Capital.....	301		9,685
31	I. Packard, Capital	301	800	
	I. Packard, Drawing	306		800

(b) & (e)

General Ledger

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			33,750
31		CR1	67,420		101,170
31		CP1		59,180	41,990

COMPREHENSIVE PROBLEM (Continued)**Accounts Receivable** **No. 112**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			13,000
31		S1	21,800		34,800
31		CR1		11,500	23,300
9		G1		300	23,000

Notes Receivable **No. 115**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			39,000

Merchandise Inventory **No. 120**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			20,000
31	Adj. entry	G1	15,000		35,000
31	Adj. entry	G1		20,000	15,000

Office Supplies **No. 125**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,000
31		CP1	600		1,600
31	Adj. entry	G1		900	700

Prepaid Insurance **No. 130**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			2,000
31	Adj. entry	G1		200	1,800

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			6,450

COMPREHENSIVE PROBLEM (Continued)**Accumulated Depreciation—Equipment****No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,500
31	Adj. entry	G1		125	1,625

Notes Payable**No. 200**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 21		G1		15,000	15,000

Accounts Payable**No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			35,000
31		P1		52,600	87,600
31		CP1	48,700		38,900
18		G1	200		38,700
21		G1	15,000		23,700

Interest Payable**No. 230**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31	Adj. entry	G1		30	30

I. Packard, Capital**No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			78,700
31		G1		9,685	88,385
31		G1	800		87,585

I. Packard, Drawing**No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 15		CP1	800		800
31		G1		800	0

COMPREHENSIVE PROBLEM (Continued)**Income Summary** **No. 350**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1		92,920	92,920
31		G1	83,235		9,685
31		G1	9,685		0

Sales **No. 401**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		S1		21,800	21,800
31		CR1		55,920	77,720
31		G1	77,720		0

Sales Returns and Allowances **No. 412**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 9		G1	300		300
31		G1		300	0

Purchases **No. 510**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		P1	52,600		52,600
31		G1		52,600	0

Purchase Returns and Allowances **No. 512**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 18		G1		200	200
31		G1	200		0

Freight-In **No. 516**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 8		CP1	180		180
31		G1		180	0

COMPREHENSIVE PROBLEM (Continued)**Sales Salaries Expense****No. 627**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CP1	4,300		4,300
31		G1		4,300	0

Depreciation Expense**No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	125		125
31		G1		125	0

Interest Expense**No. 718**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	30		30
31		G1		30	0

Insurance Expense**No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	200		200
31		G1		200	0

Office Salaries Expense**No. 727**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CP1	3,600		3,600
31		G1		3,600	0

COMPREHENSIVE PROBLEM (Continued)

Office Supplies Expense

No. 728

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	900		900
31		G1		900	0

Rent Expense

No. 729

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 12		CP1	1,000		1,000
31		G1		1,000	0

COMPREHENSIVE PROBLEM (Continued)**Accounts Receivable Subsidiary Ledger****R. Draves**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,500
11		S1	1,900		3,400
22		S1	800		4,200

J. Fine

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 3		S1	1,800		1,800
9		G1		300	1,500
13		CR1		1,500	0
25		S1	6,100		6,100

B. Hachinski

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			7,500
7		CR1		2,000	5,500
25		S1	3,500		9,000

S. Ingles

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			4,000
7		CR1		4,000	0
11		S1	900		900
21		CR1		900	0

B. Remy

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 3		S1	3,100		3,100
13		CR1		3,100	0
22		S1	3,700		3,700

COMPREHENSIVE PROBLEM (Continued)**Accounts Payable Subsidiary Ledger****D. Laux**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 5		P1		2,700	2,700
27		P1		1,200	3,900

S. Kosko

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			9,000
9		CP1	9,000		0
16		P1		13,900	13,900
18		G1	200		13,700
23		CP1	13,700		0

R. Mikush

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			15,000
21		G1	15,000		0

D. Moreno

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			11,000
9		CP1	11,000		0
16		P1		15,000	15,000
23		CP1	15,000		0
27		P1		12,500	12,500

S. Yost

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 5		P1		3,000	3,000
16		P1		1,500	4,500
27		P1		2,800	7,300

COMPREHENSIVE PROBLEM (Continued)

PACKARD COMPANY Worksheet

For the Month Ended January 31, 2010

(c)

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	41,990				41,990				41,990	
Accounts Receivable	23,000				23,000				23,000	
Notes Receivable	39,000				39,000				39,000	
Merchandise Inventory	20,000				20,000		20,000	15,000	15,000	
Office Supplies	1,600		(1) 900		700				700	
Prepaid Insurance	2,000		(2) 200		1,800				1,800	
Equipment	6,450				6,450				6,450	
Accum. Depreciation—Equipment		1,500	(3) 125			1,625				1,625
Notes Payable		15,000				15,000				15,000
Accounts Payable		23,700				23,700				23,700
Interest Payable			(4) 30			30				30
I. Packard, Capital		78,700				78,700				78,700
I. Packard, Drawing	800				800				800	
Sales		77,720				77,720	77,720			
Sales Returns and Allowances	300				300		300			
Purchases	52,600				52,600		52,600			
Purchase Returns and Allowances		200				200		200		
Freight In	180				180		180			
Sales Salaries Expense	4,300				4,300		4,300			
Office Salaries Expense	3,600				3,600		3,600			
Rent Expense	1,000				1,000		1,000			
Totals	<u>196,820</u>	<u>196,820</u>								
Office Supplies Expense			(1) 900		900		900			
Insurance Expense			(2) 200		200		200			
Depreciation Expense			(3) 125		125		125			
Interest Expense			(4) 30		30		30			
Totals			<u>1,255</u>	<u>1,255</u>	<u>196,975</u>	<u>196,975</u>	<u>83,235</u>	<u>92,920</u>	<u>128,740</u>	<u>119,055</u>
Net Income							<u>9,685</u>			<u>9,685</u>
Totals							<u>92,920</u>		<u>128,740</u>	<u>128,740</u>

COMPREHENSIVE PROBLEM (Continued)

(d) **PACKARD CO.**
Income Statement
For the Month Ended January 31, 2010

Sales revenues		
Sales		\$77,720
Less: Sales returns and allowances		<u>300</u>
Net sales revenue		77,420
Cost of goods sold		
Merchandise inventory, 1/1/10.....	\$20,000	
Purchases.....	\$52,600	
Less: Purchase returns and allowances	<u>200</u>	
Net purchases	52,400	
Freight in.....	<u>180</u>	52,580
Total merchandise available for sale		72,580
Less: Merchandise inventory, 1/31/10.....	<u>15,000</u>	
Cost of goods sold		<u>57,580</u>
Gross profit on sales		19,840
Operating expenses		
Sales salaries expense	4,300	
Office salaries expense.....	3,600	
Rent expense.....	1,000	
Office supplies expense	900	
Insurance expense	200	
Depreciation expense.....	<u>125</u>	
Total oper. expenses		<u>10,125</u>
Income from operations.....		9,715
Other expenses and losses		
Interest expense		<u>30</u>
Net income.....		<u>\$ 9,685</u>

COMPREHENSIVE PROBLEM (Continued)

PACKARD CO.
Owner's Equity Statement
For the Month Ended January 31, 2010

I. Packard, Capital, January 1, 2010.....	\$78,700
Add: Net income	<u>9,685</u>
	88,385
Less: Drawing	<u>800</u>
I. Packard, Capital, January 31, 2010	<u><u>\$87,585</u></u>

PACKARD CO.
Balance Sheet
January 31, 2010

Assets			
Current assets			
Cash	\$41,990		
Notes receivable.....	39,000		
Accounts receivable	23,000		
Merchandise inventory	15,000		
Office supplies.....	700		
Prepaid insurance.....	<u>1,800</u>		
Total current assets			\$121,490
Capital assets			
Equipment	6,450		
Less: Accumulated depreciation.....	<u>1,625</u>	4,825	
Total assets.....			<u><u>\$126,315</u></u>
Liabilities and Owner's Equity			
Current liabilities			
Notes payable	\$15,000		
Accounts payable	23,700		
Interest payable	<u>30</u>		
Total liabilities.....			\$ 38,730
Owner's equity			
I. Packard, Capital.....			<u>87,585</u>
Total liabilities and owner's equity			<u><u>\$126,315</u></u>

COMPREHENSIVE PROBLEM (Continued)**(f)**

PACKARD CO.
Post-Closing Trial Balance
January 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 41,990	
Notes Receivable	39,000	
Accounts Receivable	23,000	
Merchandise Inventory.....	15,000	
Office Supplies	700	
Prepaid Insurance.....	1,800	
Equipment	6,450	
Accumulated Depreciation—Equipment.....		\$ 1,625
Notes Payable		15,000
Accounts Payable		23,700
Interest Payable		30
I. Packard, Capital		87,585
	<u>\$127,940</u>	<u>\$127,940</u>

Accounts Receivable balance..... **\$23,000**

Subsidiary account balances

R. Draves.....	\$ 4,200	
J. Fine.....	6,100	
B. Hachinski	9,000	
B. Remy	<u>3,700</u>	
		<u>\$23,000</u>

Accounts Payable balance..... **\$23,700**

Subsidiary account balances

D. Laux.....	\$ 3,900	
D. Moreno.....	12,500	
S. Yost.....	<u>7,300</u>	
		<u>\$23,700</u>

(a)

Sales Journal						S1
Date	Account Debited	Invoice No.	Ref.	Accounts Receivable Dr. Sales Cr.	Cost of Goods Sold Dr. Merchandise Inventory Cr.	
Jan. 3	B. Richey	510	✓	3,100	1,860	
3	J. Forbes	511	✓	1,800	1,080	
11	R. Dvorak	512	✓	1,600	960	
11	S. LaDew	513	✓	900	540	
22	B. Richey	514	✓	2,700	1,620	
22	R. Dvorak	515	✓	1,300	780	
25	B. Garcia	516	✓	3,500	2,100	
25	J. Forbes	517	✓	6,100	3,660	
				<u>21,000</u>	<u>12,600</u>	
				(112)(401)	(505)(120)	

Purchases Journal						P1
Date	Account Credited	Terms	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.		
Jan. 5	S. Vogel	n/30	✓	5,000		
5	D. Lynch	n/30	✓	2,200		
16	D. Omara	1/10, n/30	✓	18,000		
16	S. Hoyt	2/10, n/30	✓	14,200		
16	S. Vogel	n/30	✓	1,500		
27	D. Omara	1/10, n/30	✓	14,500		
27	D. Lynch	n/30	✓	1,200		
27	S. Vogel	n/30	✓	5,400		
				<u>62,000</u>		
				(120)(201)		

Cash Receipts Journal

CR1

Date	Account Credited	Ref.	Cash Dr.	Sales Discounts Dr.	Accounts Receivable Cr.	Sales Cr.	Other Accounts Cr.	Cost of Goods Sold
								Dr. Merchandise Inventory Cr.
Jan. 7	S. LaDew	✓	4,000		4,000			
7	B. Garcia	✓	2,000		2,000			
10			15,500			15,500		9,300
13	B. Richey	✓	3,038	62	3,100			
13	J. Forbes	✓	1,470	30	1,500			
20			20,100			20,100		12,060
21	S. LaDew	✓	882	18	900			
31			<u>21,300</u>			<u>21,300</u>		<u>12,780</u>
			<u>68,290</u>	<u>110</u>	<u>11,500</u>	<u>56,900</u>		<u>34,140</u>
			(101)	(414)	(112)	(401)		(505)(120)

Cash Payments Journal

CP1

Date	Account Debited	Ref.	Other Accounts Dr.	Accounts Payable Dr.	Office Supplies Dr.	Merchandise Inventory Cr.	Cash
							Cr.
Jan. 8	Merchandise Inventory	120	235				235
9	S. Hoyt	✓		9,000		180	8,820
9	D. Omara	✓		11,000		110	10,890
12	Rent Expense	729	1,000				1,000
15	M. Bluma, Drawing	306	800				800
17					400		400
23	D. Omara	✓		18,000		180	17,820
23	S. Hoyt	✓		14,000		280	13,720
28					200		200
31	Sales Salaries Expense	627	4,300				4,300
31	Office Salaries Expense	727	3,800				3,800
			<u>10,135</u>	<u>52,000</u>	<u>600</u>	<u>750</u>	<u>61,985</u>
			(X)	(201)	(125)	(120)	(101)

(a) & (e)

General Journal				G1
Date	Account Titles and Explanations	Ref.	Debit	Credit
Jan. 9	Sales Returns and Allowances.....	412	300	
	Accounts Receivable—			
	J. Forbes	112/✓		300
	(Issued credit for merchandise returned)			
	Merchandise Inventory.....	120	180	
	(\$300 X .60)			
	Cost of Goods Sold.....	505		180
18	Accounts Payable—S. Hoyt.....	201/✓	200	
	Merchandise Inventory	120		200
	(Received credit for returned goods)			
21	Accounts Payable—R. Moses.....	201/✓	15,000	
	Notes Payable	200		15,000
	(Payment of balance due)			
Adjusting Entries				
31	Office Supplies Expense	728	700	
	Office Supplies	125		700
31	Insurance Expense	722	200	
	Prepaid Insurance	130		200
31	Depreciation Expense			
	(\$1,500 ÷ 12).....	711	125	
	Accumulated Depreciation—			
	Equipment	158		125
Closing Entries				
31	Interest Expense	718	50	
	Interest Payable.....	230		50
31	Sales.....	401	77,900	
	Income Summary.....	350		77,900

BYP 7-1 (Continued)

General Journal				G1
Date	Account Titles and Explanations	Ref.	Debit	Credit
Jan. 31	Income Summary	350	57,145	
	Sales Discounts	414		110
	Sales Returns and Allowances	412		300
	Cost of Goods Sold	505		46,560
	Rent Expense	729		1,000
	Sales Salaries Expense	627		4,300
	Office Salaries Expense	727		3,800
	Office Supplies Expense	728		700
	Insurance Expense	722		200
	Depreciation Expense	711		125
	Interest Expense	718		50
31	Income Summary	350	20,755	
	M. Bluma, Capital	301		20,755
31	M. Bluma, Capital	301	800	
	M. Bluma, Drawing	306		800

(b) & (e) General Ledger

Cash					No. 101
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			35,750
31		CR1	68,290		104,040
31		CP1		61,985	42,055

Accounts Receivable					No. 112
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			13,000
31		S1	21,000		34,000
31		CR1		11,500	22,500
9		G1		300	22,200

BYP 7-1 (Continued)**Notes Receivable** **No. 115**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			39,000

Merchandise Inventory **No. 120**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			18,000
31		P1	62,000		80,000
31		S1		12,600	67,400
31		CR1		34,140	33,260
8		CP1	235		33,495
31		CP1		750	32,745
9		G1	180		32,925
18		G1		200	32,725

Office Supplies **No. 125**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,000
31		CP1	600		1,600
31		G1		700	900

Prepaid Insurance **No. 130**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			2,000
31		G1		200	1,800

Equipment **No. 157**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			6,450

BYP 7-1 (Continued)**Accumulated Depreciation—Equipment** **No. 158**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,500
31		G1		125	1,625

Notes Payable **No. 200**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 21		G1		15,000	15,000

Accounts Payable **No. 201**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			35,000
31		P1		62,000	97,000
31		CP1	52,000		45,000
18		G1	200		44,800
21		G1	15,000		29,800

Interest Payable **No. 230**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1		50	50

M. Bluma, Capital **No. 301**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			78,700
31		G1		20,755	99,455
31		G1	800		98,655

M. Bluma, Drawing **No. 306**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 15		CP1	800		800
31		G1		800	0

BYP 7-1 (Continued)

Income Summary

No. 350

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1		77,900	77,900
31		G1	57,145		20,755
31		G1	20,755		0

Sales

No. 401

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		S1		21,000	21,000
31		CR1		56,900	77,900
31		G1	77,900		0

Sales Returns and Allowances

No. 412

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 9		G1	300		300
31		G1		300	0

Sales Discounts

No. 414

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CR1	110		110
31		G1		110	0

Cost of Goods Sold

No. 505

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		S1	12,600		12,600
31		CR1	34,140		46,740
9		G1		180	46,560
31		G1		46,560	0

BYP 7-1 (Continued)**Sales Salaries Expense** **No. 627**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CP1	4,300		4,300
31		G1		4,300	0

Depreciation Expense **No. 711**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	125		125
31		G1		125	0

Interest Expense **No. 718**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	50		50
31		G1		50	0

Insurance Expense **No. 722**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	200		200
31		G1		200	0

Office Salaries Expense **No. 727**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		CP1	3,800		3,800
31		G1		3,800	0

Office Supplies Expense **No. 728**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 31		G1	700		700
31		G1		700	0

BYP 7-1 (Continued)

Rent Expense					No. 729
Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 12		CP1	1,000		1,000
31		G1		1,000	0

Accounts Receivable Subsidiary Ledger

R. Dvorak

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,500
11		S1	1,600		3,100
22		S1	1,300		4,400

J. Forbes

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 3		S1	1,800		1,800
9		G1		300	1,500
13		CR1		1,500	0
25		S1	6,100		6,100

B. Garcia

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			7,500
7		CR1		2,000	5,500
25		S1	3,500		9,000

S. LaDew

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			4,000
7		CR1		4,000	0
11		S1	900		900
21		CR1		900	0

BYP 7-1 (Continued)**B. Richey**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 3		S1	3,100		3,100
13		CR1		3,100	0
22		S1	2,700		2,700

Accounts Payable Subsidiary Ledger**D. Lynch**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 5		P1		2,200	2,200
27		P1		1,200	3,400

S. Hoyt

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			9,000
9		CP1	9,000		0
16		P1		14,200	14,200
18		G1	200		14,000
23		CP1	14,000		0

R. Moses

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			15,000
21		G1	15,000		0

BYP 7-1 (Continued)**D. Omara**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			11,000
9		CP1	11,000		0
16		P1		18,000	18,000
23		CP1	18,000		0
27		P1		14,500	14,500

S. Vogel

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 5		P1		5,000	5,000
16		P1		1,500	6,500
27		P1		5,400	11,900

BLUMA COMPANY
Worksheet

For the Month Ended January 31, 2010

(c)

Account Titles	Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	42,055				42,055				42,055	
Accounts Receivable	22,200				22,200				22,200	
Notes Receivable	39,000				39,000				39,000	
Merchandise Inventory	32,725				32,725				32,725	
Office Supplies	1,600		(1)	700	900				900	
Prepaid Insurance	2,000		(2)	200	1,800				1,800	
Equipment	6,450				6,450				6,450	
Accum. Depreciation—Equipment		1,500	(3)	125		1,625				1,625
Notes Payable		15,000				15,000				15,000
Accounts Payable		29,800				29,800				29,800
Interest Payable			(4)	50		50				50
M. Bluma, Capital		78,700				78,700				78,700
M. Bluma, Drawing	800				800				800	
Sales		77,900				77,900		77,900		
Sales Returns and Allowances	300				300		300			
Sales Discounts	110				110		110			
Cost of Goods Sold	46,560				46,560		46,560			
Sales Salaries Expense	4,300				4,300		4,300			
Office Salaries Expense	3,800				3,800		3,800			
Rent Expense	1,000				1,000		1,000			
Totals	<u>202,900</u>	<u>202,900</u>								
Office Supplies Expense			(1)	700		700	700			
Insurance Expense			(2)	200		200	200			
Depreciation Expense			(3)	125		125	125			
Interest Expense			(4)	50		50	50			
Totals			<u>1,075</u>	<u>1,075</u>	<u>203,075</u>	<u>203,075</u>	<u>57,145</u>	<u>77,900</u>	<u>145,930</u>	<u>125,175</u>
Net Income							<u>20,755</u>			<u>20,755</u>
Totals							<u>77,900</u>	<u>77,900</u>	<u>145,930</u>	<u>145,930</u>

(d)

BLUMA CO.
Income Statement
For the Month Ended January 31, 2010

Sales revenues		
Sales.....		\$77,900
Less: Sales discounts.....	\$ 110	
Sales returns and allowances.....	300	410
Net sales revenue		77,490
Cost of goods sold		46,560
Gross profit.....		30,930
Operating expenses		
Sales salaries expense	\$4,300	
Office salaries expense.....	3,800	
Rent expense.....	1,000	
Office supplies expense	700	
Insurance expense	200	
Depreciation expense.....	125	
Total operating expenses		10,125
Income from operations		20,805
Other expenses and losses		
Interest expense.....		50
Net income		<u>\$20,755</u>

BLUMA CO.
Owner's Equity Statement
For the Month Ended January 31, 2010

M. Bluma, Capital, January 1, 2010	\$78,700
Add: Net income	<u>20,755</u>
	99,455
Less: Drawings	<u>800</u>
M. Bluma, Capital, January 31, 2010	<u><u>\$98,655</u></u>

BLUMA CO.
Balance Sheet
January 31, 2010

Assets			
Current assets			
Cash.....	\$42,055		
Accounts receivable.....	22,200		
Notes receivable	39,000		
Merchandise inventory	32,725		
Office supplies	900		
Prepaid insurance	<u>1,800</u>		
Total current assets.....			\$138,680
Property, plant, and equipment			
Equipment	6,450		
Less: Accumulated depreciation	<u>1,625</u>	<u>4,825</u>	
Total assets			<u><u>\$143,505</u></u>
Liabilities and Owner's Equity			
Current liabilities			
Notes payable.....	\$15,000		
Accounts payable	29,800		
Interest payable	<u>50</u>		
Total liabilities			\$ 44,850
Owner's equity			
M. Bluma, Capital		<u>98,655</u>	
Total liabilities and owner's equity			<u><u>\$143,505</u></u>

(f)

BLUMA CO.
Post-Closing Trial Balance
January 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 42,055	
Notes Receivable	39,000	
Accounts Receivable.....	22,200	
Merchandise Inventory	32,725	
Office Supplies	900	
Prepaid Insurance	1,800	
Equipment.....	6,450	
Accumulated Depreciation—Equipment		\$ 1,625
Notes Payable		15,000
Accounts Payable.....		29,800
Interest Payable		50
M. Bluma, Capital.....		98,655
	<u>\$145,130</u>	<u>\$145,130</u>

Accounts Receivable balance **\$22,200**

Subsidiary account balances

R. Dvorak	\$ 4,400	
J. Forbes	6,100	
B. Garcia	9,000	
B. Richey.....	<u>2,700</u>	
		<u>\$22,200</u>

Accounts Payable balance **\$29,800**

Subsidiary account balances

D. Lynch	\$ 3,400	
D. Omara	14,500	
S. Vogel	<u>11,900</u>	
		<u>\$29,800</u>

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- 2. Save time on everyday tasks.**
- 3. Save time by using business templates.**
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- 6. Simplify payroll and tax processes.**
- 7. Track employee time and job costs.**
- 8. Share information with your accountant or CPA.**
- 9. Sell on eBay.**
- 10. Use PayPal and Equifax to do business with confidence.**

(b) The basic features of the payroll service in Microsoft Office Accounting Professional include:

- 1. Setup Wizard: Get started in minutes with an easy step-by-step guide.**
- 2. Fast, easy tax calculation: constantly calculate your federal, state and local taxes.**
- 3. Always up to date tax tables: Payroll for Office Accounting is an online service, so tax tables are always current.**
- 4. Direct deposit: Generate a direct deposit file and send it to your bank for transmission at no additional charge.**
- 5. Print checks: Print payroll checks and stubs in popular check formats.**
- 6. Run clear, insightful reports: Generate standard reports or customize them to meet your needs.**
- 7. Print signature-ready tax forms: Print pre-filled forms for your federal and state taxes to avoid errors in filling out complex paperwork.**
- 8. Automatic reminders: avoid penalties for late filing or payment.**
- 9. Integration with Office Accounting: Payroll for Office Accounting automatically enters the appropriate transactions in your general ledger.**
- 10. Support: In-depth online Help documentation answers your payroll questions quickly and accurately.**

- (a) The special journals for Hughey & Payne should be: (1) sales journal, (2) purchases journal, (3) cash receipts journal, and (4) cash payments journal.

(1) Sales Journal columns:

Date.

Account Debited.

Invoice Number.

Reference.

Accounts Receivable, Dr. and Sales—Appliances, Cr.

Cost of Goods Sold, Dr. and Merchandise Inventory—Appliances, Cr.

(2) Purchases Journal columns:

Date.

Account Credited.

Terms.

Reference.

Accounts Payable, Cr.

Merchandise Inventory—Appliances, Dr.

Merchandise Inventory—Parts, Dr.

Note: Because two different types of merchandise are purchased on credit, a three-column purchases journal might be used.

(3) Cash Receipts Journal columns:

Date.

Account Credited.

Reference.

Cash, Dr.

Accounts Receivable, Cr.

Sales—Appliances, Cr.

Sales—Parts, Cr.

Revenue from Repairs, Cr.

Other Accounts, Cr.

Cost of Goods Sold, Dr. and Merchandise Inventory—
Appliances, Cr.

Cost of Goods Sold, Dr. and Merchandise Inventory—Parts, Cr.

Note: A Sales Discounts, Dr. column is not needed because all credit terms are net/30 days.

(4) Cash Payments Journal columns:

Date.

Check Number.

Account Debited.

Reference.

Other Accounts, Dr.

Accounts Payable, Dr.

Advertising Expense, Dr.

Salaries Expense, Dr.

Merchandise Inventory—Appliances, Cr.

Merchandise Inventory—Parts, Cr.

Cash, Cr.

(b) Hughey & Payne should have:

- (1) An accounts receivable control account with individual customers' accounts in a customers' subsidiary ledger.**
- (2) An accounts payable control account with individual creditors in a creditors' subsidiary ledger.**

The use of control accounts and subsidiary ledgers will: (1) provide necessary up-to-date information on specific customer and creditor balances, (2) free the general ledger of excessive detail, (3) help locate errors in individual accounts, and (4) make possible a division of labor in posting.

**Mr. Jim Houser
2 Main Street
Central City, Michigan 48172**

Dear Mr. Houser:

Thank you for hiring two additional bookkeepers a month ago to help me with the accounting. Unfortunately, the inefficiencies in recording transactions have continued at an even higher rate. The reason is that there are often times when more than one person needs to use the journal. In addition, the daily posting of transactions continues to be very time consuming.

I would like to suggest some changes in the accounting system. Because of the increased volume of business, I believe it is time for us to use special journals for journalizing transactions. Special journals would be in addition to the journal that we are using now. There would be four special journals:

- 1. Sales journal—for all sales of merchandise on account.**
- 2. Cash receipts journal—for all cash received.**
- 3. Purchases journal—for all purchases of merchandise on account.**
- 4. Cash payments journal—for all cash payments.**

To use special journals, we will need columnar journal paper which can be obtained at any office supply store at very low cost. I can also quickly train the new bookkeepers in the use of special journals. Special journals will permit a division of labor so that all three of us can be recording transactions at the same time. Thus, the inefficiencies in journalizing will be eliminated.

Special journals also make it possible to do some postings monthly. This will significantly reduce the time required to make daily postings. As a result, it should free up some time for us to do other things!

I am confident that the use of special journals will improve the efficiency of the accounting department. If you have any questions on this recommendation, please let me know.

Yours sincerely,

Barb

- (a) The stakeholders in this case are:
- ▶ Jose Molina, manager of Roniger's centralized computer accounting operation.
 - ▶ The employees of Roniger's three divisions at Freeport, Rockport, and Bayport.
- (b) Jose's instructions to assign the Bayport code to all uncoded and incorrectly coded sales documents overstates the sales of Bayport and understates the sales of Freeport and Rockport, thereby affecting the employee bonus plan. Jose's intent and action are unethical. He is padding the sales of his wife, relatives, and friends at Bayport division and unfairly aiding them in the bonus competition.
- (c) Roniger Products Company should have a written policy covering uncoded and incorrectly coded sales documents. This would prevent the manager from arbitrarily designating the division to be credited for the uncoded sales.

The process begins when journal entries are recorded for transactions in a journal. Once entries are made in the journal, they are posted to the ledger by using the Post function. After entries have been posted, you can click on Reports in the Main Menu and choose from a variety of reports. These include the following: Chart of Accounts, Trial Balance, General Ledger, Subsidiary Ledger, Journals, Balance Sheet, Income Statement, Owner's Equity Statement.

CHAPTER 8

Fraud, Internal Control, and Cash

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Define fraud and internal control.	1, 2, 3, 4	1, 2, 3	2			
2. Identify the principles of internal control activities.	5, 6, 7, 8, 9, 10, 11	4	3	1, 2, 3, 5, 6	1A, 6A	1B, 6B
3. Explain the applications of internal control principles to cash receipts.	6, 13, 14, 15	5, 6, 7	5	2, 5, 6	6A	1B, 6B
4. Explain the applications of internal control principles to cash disbursements.	16, 17, 18, 19	8	7	3, 4, 5, 6	1A, 6A	6B
5. Describe the operation of a petty cash fund.	21	9		7, 8	2A	2B
6. Indicate the control features of a bank account.	22	10				
7. Prepare a bank reconciliation.	20, 23, 24, 25	11, 12 13, 14		9, 10, 11, 12, 13	3A, 4A, 5A	3B, 4B, 5B, 6B
8. Explain the reporting of cash.	12, 26, 27	15		14		

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Identify internal control principles over cash disbursements.	Simple	20–30
2A	Journalize and post petty cash fund transactions.	Simple	20–30
3A	Prepare a bank reconciliation and adjusting entries.	Simple	20–30
4A	Prepare a bank reconciliation and adjusting entries from detailed data.	Moderate	40–50
5A	Prepare a bank reconciliation and adjusting entries.	Moderate	30–40
6A	Identify internal control weaknesses in cash receipts and cash disbursements.	Complex	35–45
1B	Identify internal control weaknesses over cash receipts.	Simple	20–30
2B	Journalize and post petty cash fund transactions.	Simple	20–30
3B	Prepare a bank reconciliation and adjusting entries.	Simple	20–30
4B	Prepare a bank reconciliation and adjusting entries from detailed data.	Moderate	40–50
5B	Prepare a bank reconciliation and adjusting entries.	Moderate	30–40
6B	Prepare comprehensive bank reconciliation with theft and internal control deficiencies.	Complex	40–50

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 8
FRAUD, INTERNAL CONTROL, AND CASH

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	2–4
BE2	1	C	Simple	2–4
BE3	1	C	Simple	4–6
BE4	2	C	Simple	3–5
BE5	3	C	Simple	4–6
BE6	3	AP	Simple	4–6
BE7	3	AP	Simple	2–4
BE8	4	C	Simple	4–6
BE9	5	AP	Simple	4–6
BE10	6	C	Simple	2–4
BE11	7	C	Simple	3–5
BE12	7	C	Simple	3–5
BE13	7	AP	Simple	2–4
BE14	7	AP	Simple	2–4
BE15	8	C	Simple	2–4
DI1	2	C	Moderate	6–8
DI2	3	C	Simple	4–6
DI3	5	AP	Simple	4–6
DI4	7	C	Simple	2–4
EX1	2	C	Simple	8–10
EX2	2, 3	E	Moderate	8–10
EX3	2, 4	E	Moderate	8–10
EX4	4	E	Moderate	12–15
EX5	2–4	C	Simple	6–8
EX6	2–4	C	Simple	6–8
EX7	5	AP	Simple	8–10
EX8	5	AP	Simple	6–8
EX9	7	AN	Simple	8–10
EX10	7	AP	Simple	3–5

FRAUD, INTERNAL CONTROL, AND CASH (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX11	7	AN	Simple	10–12
EX12	7	AN	Simple	12–15
EX13	7	AN	Moderate	10–12
EX14	8	C, AP	Simple	8–10
P1A	2, 4	C	Simple	20–30
P2A	5	AP	Simple	20–30
P3A	7	AN	Simple	20–30
P4A	7	AN	Moderate	40–50
P5A	7	AN	Moderate	30–40
P6A	2–4	E	Complex	35–45
P1B	2, 3	E	Simple	20–30
P2B	5	AP	Simple	20–30
P3B	7	AN	Simple	20–30
P4B	7	AN	Moderate	40–50
P5B	7	AN	Moderate	30–40
P6B	2–4, 7	E	Complex	40–50
BYP1	2, 8	C	Simple	10–15
BYP2	8	AN	Simple	8–12
BYP3	2, 7	E	Simple	10–15
BYP4	3	AN	Moderate	15–20
BYP5	3	E	Simple	10–15
BYP6	3	E	Simple	10–15
BYP7	—	E	Simple	10–15

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Define fraud and internal control.		Q8-1 Q8-2 Q8-3 Q8-4				
2. Identify the principles of internal control activities.		Q8-5 Q8-6 Q8-7 Q8-8	Q8-9 Q8-10 Q8-11 Q8-12 Q8-13			E8-2 E8-3 P8-1B P8-6A
3. Explain the applications of internal control principles to cash receipts.		Q8-6 Q8-13 Q8-14 Q8-15	BE8-5 BE8-6 BE8-7			E8-2 P8-1B P8-6A P8-6B
4. Explain the applications of internal control principles to cash disbursements.	Q8-18 Q8-19	Q8-16 Q8-17 BE8-8	E8-5 E8-6 P8-1A			E8-3 E8-4 P8-6A
5. Describe the operation of a petty cash fund.		Q8-21	BE8-9 DI8-3 E8-7	E8-8 P8-2A P8-2B		
6. Indicate the control features of a bank account.		Q8-22 BE8-10				
7. Prepare a bank reconciliation.	Q8-20 Q8-24	Q8-23 Q8-25 BE8-11 BE8-12	DI8-4 BE8-13 BE8-14 E8-10	E8-9 P8-3A P8-4A P8-5A P8-5B P8-13 P8-3B		P8-6B
8. Explain the reporting of cash.	Q8-27	Q8-26 BE8-15	Q8-12 E8-14			
Broadening Your Perspective		Financial Reporting		Comparative Analysis Decision Making Across the Organization		Exploring the Web Communication Ethics Case All About You

ANSWERS TO QUESTIONS

1. Fraud is dishonest act by an employee that results in personal benefit to the employee at a cost to the employer. An example of fraud that might occur at a bank would be a computer operator embezzling funds by transferring a customer's deposits into another account.
2. The three main factors that contribute to employee fraud are opportunity, financial pressure, and rationalization. Opportunities that an employee can take advantage of occur when the workplace lacks sufficient controls to deter and detect fraud. Financial pressure occurs when employees want to lead a lifestyle that they cannot afford on their current salary. Rationalization involves employees justifying fraud because they believe they are underpaid while their employer is making lots of money.
3. The five components of a good internal control system are: (1) A control environment, (2) Risk assessment, (3) Control activities, (4) Information and communication, and (5) Monitoring.
4. Disagree. Internal control is also concerned with the safeguarding of company assets from employee theft, robbery, and unauthorized use.
5. The principles of internal control are: (a) establishment of responsibility, (b) segregation of duties, (c) documentation procedures, (d) physical controls, (e) independent internal verification, and (f) human resource controls.
6. This is a violation of the internal control principle of establishing responsibility. In this case, each sales clerk should have a separate cash register or cash register drawer.
7. The two applications of segregation of duties are:
 - (1) Different individuals should be responsible for related activities.
 - (2) Responsibility for the record keeping for an asset should be separate from the physical custody of that asset.
8. Documentation procedures contribute to good internal control by providing evidence that transactions and events have occurred and, when signatures (or initials) are added, the documents establish responsibility for the transactions. The prompt transmittal of documents to accounting contributes to recording transactions in the proper period, and the prenumbering of documents helps to ensure that a transaction is not recorded more than once or not at all.
9. Safes, vaults, and locked warehouses contribute to the safeguarding of company assets. Cash registers and time clocks contribute to the accuracy and reliability of the accounting records, and electronic burglary systems and sensors help to safeguard assets.
10.
 - (a) Independent internal verification involves the review of data prepared by employees.
 - (b) Maximum benefit is obtained from independent internal verification when:
 - (1) The verification is made periodically or on a surprise basis.
 - (2) The verification is done by an employee who is independent of the personnel responsible for the information.
 - (3) Discrepancies and exceptions are reported to a management level that can take appropriate corrective action.

Questions Chapter 8 (Continued)

11. (a) The concept of reasonable assurance rests on the premise that the costs of establishing control procedures should not exceed their expected benefit.
(b) The human element is an important factor in a system of internal control. A good system can become ineffective through employee fatigue, carelessness, or indifference. Moreover, internal control may become ineffective as a result of collusion.
12. Cash should be reported at \$20,850 (\$8,000 + \$850 + \$12,000).
13. Daily cash counts pertain primarily to the principles of segregation of duties, documentation procedures, and independent internal verification. Daily cash counts also involve the establishment of responsibility for performing the counts.
14. Cash registers are readily visible to the customer. Thus, they prevent the sales clerk from ringing up a lower amount and pocketing the difference. In addition, the customer receives an itemized receipt, and the cash register tape is locked into the register for further verification, providing documentation and enabling independent internal verification.
15. Two mail clerks contribute to a more accurate listing of mail receipts and to the endorsement of all checks "For Deposit Only." In addition, two clerks reduce the likelihood of mail receipts being diverted to personal use.
16. Payment by check contributes to effective internal control over cash disbursements. However, effective control is also possible when small payments are made from petty cash.
17. The procedure and related principle are:
- | <u>Procedure</u> | <u>Principle</u> |
|---|--------------------------------------|
| (1) Treasurer signs checks. | * Establishment of responsibility. |
| (2) Checks imprinted by a machine in indelible ink. | * Physical controls. |
| (3) Comparing check with approved invoice before signing. | * Independent internal verification. |
18. Physical controls apply to cash disbursements when: (a) blank checks are stored in a safe, and access to the safe is restricted to authorized personnel, and (b) a checkwriting machine and indelible ink are used to imprint amounts on checks. Human resource controls apply when the company requires employees to take vacations and conducts background checks.
19. (a) A voucher system is a network of approvals by authorized individuals acting independently to ensure that all disbursements by check are proper.
(b) The internal control principles applicable to a voucher system are: (1) establishment of responsibility, (2) segregation of duties, (3) independent internal verification, and (4) documentation procedures.
20. Electronic funds transfer is a cash disbursement system that uses wire, telephone, or computers to transfer cash from one location to another.

Questions Chapter 8 (Continued)

21. The activities in a petty cash system and the related principles are:
- (a) (1) Establishing the fund. * Establishment of responsibility for custody of fund.
 - (2) Making payments from the fund. * Documentation procedures because the custodian must use a prenumbered petty cash receipt.
 - (3) Replenishing the fund. * Independent internal verification because the request for replenishment must be approved before the check is written.
- (b) Journal entries are required for a petty cash fund when it is established and replenished. Entries are also required when the size of the fund is increased or decreased.
22. Yes. A bank contributes significantly to internal control over cash because it: (1) safeguards cash on deposit, (2) minimizes the amount of currency that must be kept on hand, and (3) provides a double record of all bank transactions.
23. The lack of agreement between the balances may be due to either:
- (1) Time lags—a check written in July does not clear the bank until August.
 - (2) Errors—a check for \$110 is recorded by the depositor at \$101.
24. The four steps are: (1) determine deposits in transit, (2) determine outstanding checks, (3) discover any errors made, and (4) trace bank memoranda.
25. (a) An NSF check occurs when the checkwriter's bank balance is less than the amount of the check.
- (b) In a bank reconciliation, a customer's NSF check is deducted from the balance per books.
- (c) An NSF check results in an adjusting entry in the company's books, as a debit to Accounts Receivable and a credit to Cash.
26. (a) Yes. Cash equivalents are highly liquid investments that can be converted into a specific amount of cash with maturities of three months or less when purchased. Cash equivalents may be reported with cash in the current assets section of the balance sheet.
- (b) Cash restricted for a special purpose should be reported as a current or noncurrent asset depending on when the cash is expected to be used.
27. PepsiCo reports cash and cash equivalents of \$910 million in its 2007 consolidated balance sheet.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 8-1

- 1. Financial Pressure**
- 2. Rationalization**
- 3. Financial Pressure**
- 4. Opportunity**

BRIEF EXERCISE 8-2

- 1. True.**
- 2. True.**
- 3. False. The Sarbanes-Oxley Act of 2002 requires U.S. corporations to maintain an adequate system of internal control.**

BRIEF EXERCISE 8-3

The purposes of internal control are to:

- 1. Safeguard a company's assets from employee theft, robbery, and unauthorized use. An application for Ready Parking is the use of a cash register to safeguard assets.**
- 2. Enhance the accuracy and reliability of a company's accounting records by reducing the risk of errors (unintentional mistakes) and irregularities (intentional mistakes and misrepresentations) in the accounting process. An application for Ready Parking is preparation of a bank reconciliation.**
- 3. Increase efficiency of operations**
- 4. Ensure compliance with laws and regulations.**

All of these purposes are important to the success of any business endeavor.

BRIEF EXERCISE 8-4

1. Segregation of duties.
2. Independent internal verification.
3. Documentation procedures.

BRIEF EXERCISE 8-5

1. Physical controls.
2. Human resource controls.
3. Independent internal verification.
4. Segregation of duties.
5. Establishment of responsibility.

BRIEF EXERCISE 8-6

1.	Cash	6,840.75	
	Cash Over and Short	50.75	
	Sales Revenue		6,891.50
2.	Cash	6,919.82	
	Cash Over and Short		28.32
	Sales Revenue		6,891.50

BRIEF EXERCISE 8-7

Cash (\$1,125.74 – \$150.00)	975.74	
Cash Over and Short	15.09	
Sales Revenue		990.83

BRIEF EXERCISE 8-8

1. Documentation procedures.
2. Independent internal verification.
3. Physical controls.
4. Establishment of responsibility.
5. Segregation of duties.

BRIEF EXERCISE 8-9

Mar. 20	Postage Expense.....	52	
	Freight-out.....	26	
	Travel Expense	10	
	Cash Over and Short.....	5	
	Cash.....		93

BRIEF EXERCISE 8-10

1. A check provides documentary evidence of the payment of a specified sum of money to a designated payee.
2. A bank statement provides a double record of a depositor's bank transactions. It also is used in making periodic independent bank reconciliations.

BRIEF EXERCISE 8-11

1. Outstanding checks—deducted from cash balance per bank.
2. Bank service charge—deducted from cash balance per books.
3. Collection of note by bank—added to cash balance per books.
4. Deposits in transit—added to cash balance per bank.

BRIEF EXERCISE 8-12

1. The reconciling items per the books, items (2) and (3) above, will require adjustment on the books of the depositor.
2. The other reconciling items, deposits in transit and outstanding checks, do not require adjustment by the bank. When these items reach the bank, the bank balance will automatically adjust itself.

BRIEF EXERCISE 8-13

Cash balance per bank	\$7,420
Add: Deposits in transit	<u>1,120</u>
	8,540
Less: Outstanding checks	<u>762</u>
Adjusted cash balance per bank	<u>\$7,778</u>

BRIEF EXERCISE 8-14

Cash balance per books	\$8,500
Add: Interest earned	<u>40</u>
	8,540
Less: Charge for printing company checks	<u>35</u>
Adjusted cash balance per books	<u>\$8,505</u>

BRIEF EXERCISE 8-15

Quirk Company should report Cash in Bank and Payroll Bank account as current assets. Plant Expansion Fund Cash should be reported as a noncurrent asset, assuming the fund is not expected to be used during the next year.

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 8-1

1. Violates the control activity of *documentation procedures*. Source documents should be promptly forwarded to the accounting department so accounting entries can be made. This control activity helps to ensure timely recording of sales transactions and contributes directly to the accuracy and reliability of the accounting records.

DO IT! 8-1 (Continued)

2. Violates the control activity of *segregation of duties*. Different individuals should be responsible for related activities, such as these three related purchasing activities. Many abuses could occur: placing orders with friends and getting kickbacks; performing cursory counts and inspections of delivered goods; approving fictitious invoices for payment.
3. Violates the control activity of *establishment of responsibility*. Dick's would be unable to determine who was responsible for a cash shortage; this lapse could even encourage employee theft.

DO IT! 8-2

All mail receipts should be opened in the presence of two mail clerks. Those mail clerks should immediately stamp each check "For Deposit Only." The mail clerks should prepare, in duplicate, a list of the checks received each day. The checks and prelist should be sent on to the cashier's department each day, and the cashier should deposit the checks daily. The duplicate prelist should be sent to the treasurer's department and used to confirm that all receipts were deposited and recorded.

DO IT! 8-3

Aug. 1	Petty Cash	100	
	Cash		100
30	Postage Expense	31	
	Office Supplies.....	42	
	Miscellaneous Expense	16	
	Cash Over and Short.....	2	
	Cash (\$100 – \$9).....		91

Linus should treat the reconciling items as follows:

- 1. Outstanding checks: Deduct from balance per bank.**
- 2. A deposit in transit: Add to balance per bank.**
- 3. The bank charged to our account a check written by another company: Add to balance per bank.**
- 4. A debit memorandum for a bank service charge: Deduct from balance per books.**

SOLUTIONS TO EXERCISES

EXERCISE 8-1

1. **Establishment of responsibility.** The counter clerk is responsible for handling cash. Other employees are responsible for making the pizzas.
2. **Segregation of duties.** Employees who make the pizzas do not handle cash.
3. **Documentation procedures.** The counter clerk uses your order invoice (ticket) in registering the sale on the cash register. The cash register produces a tape of all sales.
4. **Physical controls.** A cash register is used to record the sale.
5. **Independent internal verification.** The counter clerk, in handling the pizza, compares the size of the pizza with the size indicated on the order.
6. **Human resource controls.** No visible application possible.

EXERCISE 8-2

Procedure	(a)		(b)
	Weakness	Principle	Recommended Change
1.	Cash is not adequately protected from theft.	Physical controls.	Cash should be stored in a safe until it is deposited in bank.
2.	Inability to establish responsibility for cash with a specific clerk.	Establishment of responsibility.	There should be separate cash drawers and register codes for each clerk.

EXERCISE 8-2 (Continued)

Procedure	(a)		(b)
	Weakness	Principle	Recommended Change
3.	The accountant should not handle cash.	Segregation of duties.	The cashier's department should make the deposits.
4.	Cash is not independently counted.	Independent internal verification.	A cashier office supervisor should count cash.
5.	Cashiers are not bonded.	Human resource controls.	All cashiers should be bonded.

EXERCISE 8-3

Procedure	(a)		(b)
	Weakness	Principle	Recommended Change
1.	The bank reconciliation is not independently prepared.	Independent internal verification.	Someone with no other cash responsibilities should prepare the bank reconciliation.
2.	The approval and payment of bills is done by the same individual.	Segregation of duties.	The store manager should approve bills for payment and the treasurer should sign and issue checks.
3.	Checks are not stored in a secure area.	Physical controls.	Checks should be stored in a safe or locked file drawer.

EXERCISE 8-3 (Continued)

Procedure	(a)		(b)
	Weakness	Principle	Recommended Change
4.	After payment, bills are simply filed in a folder.	Documentation procedures.	Bills should be stamped paid before being places in the folder.
5.	Checks are not prenumbered.	Documentation procedures.	Checks should be prenumbered and subsequently accounted for.

EXERCISE 8-4

(a) Weaknesses

1. Checks are not prenumbered.
2. The purchasing agent signs checks.
3. Unissued checks are stored in unlocked file cabinet.
4. After payment, bills are simply filed in a folder.
5. After payment, the invoice is filed.
6. The purchasing agent records payments in cash disbursements journal.

(b) Suggested Improvement

- Use prenumbered checks.
- Only the treasurer's department personnel should sign checks.
- Unissued checks should be stored in a locked file cabinet with access restricted to authorized personnel.
- Bills should be stamped PAID before being placed in the folder.
- The invoice should be stamped PAID.
- Only accounting department personnel should record cash disbursements.

EXERCISE 8-4 (Continued)

(a) Weaknesses

7. The treasurer records the checks in cash disbursements journal.

8. The treasurer reconciles the bank statement.

(b) Suggested Improvement

Same as answer to No. 6 above.

An internal auditor should reconcile the bank statement.

(b) To: Treasurer, Hutchingson Company

From: Accounting Student

I have reviewed your cash disbursements system and suggest that you make the following improvements:

1. Hutchingson Company should use prenumbered checks. These should be stored in a locked file cabinet or safe with access restricted to authorized personnel.
2. The purchasing department should approve bills for payment. The treasurer's department should prepare and sign the checks. The invoices should be stamped paid so that they cannot be paid twice.
3. Only the accounting department personnel should record cash disbursements.
4. An internal auditor should reconcile the bank statement.

If you have any questions about implementing these suggestions, please contact me.

EXERCISE 8-5

<u>Procedure</u>	<u>IC good or weak?</u>	<u>Related internal control principle</u>
1.	Weak	Establishment of Responsibility
2.	Good	Independent Internal Verification
3.	Weak	Segregation of Duties
4.	Good	Segregation of Duties
5.	Weak	Documentation Procedures

EXERCISE 8-6

<u>Procedure</u>	<u>IC good or weak?</u>	<u>Related internal control principle</u>
1.	Good	Human Resource Controls
2.	Weak	Establishment of Responsibility
3.	Weak	Segregation of Duties
4.	Good	Independent Internal Verification
5.	Good	Physical Controls

EXERCISE 8-7

May 1	Petty Cash	100.00	
	Cash.....		100.00
June 1	Delivery Expense	31.25	
	Postage Expense	39.00	
	Miscellaneous Expense	25.00	
	Cash Over and Short	2.00	
	Cash.....		97.25
July 1	Delivery Expense	21.00	
	Entertainment Expense	51.00	
	Miscellaneous Expense	24.75	
	Cash		96.75
July 10	Petty Cash	50.00	
	Cash		50.00

EXERCISE 8-8

Mar. 1	Petty Cash.....	100	
	Cash		100
15	Postage Expense.....	39	
	Freight-out	21	
	Miscellaneous Expense	11	
	Travel Expense.....	24	
	Cash Over and Short.....	2	
	Cash		97
20	Petty Cash.....	50	
	Cash		50

EXERCISE 8-9

(a)	Cash balance per bank statement		\$3,560.20
	Add: Deposits in transit		<u>530.00</u>
			4,090.20
	Less: Outstanding checks.....		<u>930.00</u>
	Adjusted cash balance per bank.....		<u>\$3,160.20</u>
	Cash balance per books.....		\$3,875.20
	Less: NSF check.....	\$690.00	
	Bank service charge.....	<u>25.00</u>	<u>715.00</u>
	Adjusted cash balance per books		<u>\$3,160.20</u>
(b)	Accounts Receivable.....	690.00	
	Cash		690.00
	Miscellaneous Expense.....	25.00	
	Cash		25.00

EXERCISE 8-10

The outstanding checks are as follows:

<u>No.</u>	<u>Amount</u>
255	\$ 820
260	890
264	<u>560</u>
Total	<u>\$2,270</u>

EXERCISE 8-11

(a) **FAMILY VIDEO COMPANY**
Bank Reconciliation
July 31

Cash balance per bank statement	\$7,263
Add: Deposits in transit.....	<u>1,500</u>
	8,763
Less: Outstanding checks	<u>591</u>
Adjusted cash balance per bank.....	<u>\$8,172</u>
 Cash balance per books	 \$7,284
Add: Collection of note receivable (\$900 plus accrued interest \$36, less collection fee \$20)	 <u>916</u>
	8,200
Less: Bank service charge	<u>28</u>
Adjusted cash balance per books	<u>\$8,172</u>

(b) July 31	Cash.....	916	
	Miscellaneous Expense	20	
	Notes Receivable.....		900
	Interest Revenue.....		36
 31	Miscellaneous Expense	28	
	Cash.....		28

EXERCISE 8-12

(a) **ROBERTSON COMPANY**
Bank Reconciliation
September 30

Cash balance per bank statement		\$16,422
Add: Deposits in transit		<u>4,450</u>
		20,872
Less: Outstanding checks.....		<u>2,383</u>
Adjusted cash balance per bank.....		<u>\$18,489</u>
Cash balance per books.....		\$17,404
Add: Collection of note receivable (\$1,500 + \$30)	\$ 1,530	
Interest earned	<u>45</u>	<u>1,575</u>
		18,979
Less: NSF check.....	425	
Safety deposit box rent	<u>65</u>	<u>490</u>
Adjusted cash balance per books		<u>\$18,489</u>

(b) Sept. 30	Cash	1,530	
	Notes Receivable		1,500
	Interest Revenue		30
30	Cash	45	
	Interest Revenue		45
30	Miscellaneous Expense.....	65	
	Cash		65
30	Accounts Receivable—J. E. Hoover.....	425	
	Cash		425

EXERCISE 8-13

(a) Deposits in transit:		
Deposits per books in July.....		\$15,750
Less: Deposits per bank in July	\$15,600	
Deposits in transit, June 30	<u>(720)</u>	
July receipts deposited in July		<u>14,880</u>
Deposits in transit, July 31		<u>\$ 870</u>

EXERCISE 8-13 (Continued)

(b) Outstanding checks:

Checks per books in July		\$17,200
Less: Checks clearing bank in July	\$16,400	
Outstanding checks, June 30	<u>(680)</u>	
July checks cleared in July		<u>15,720</u>
Outstanding checks, July 31		<u>\$ 1,480</u>

(c) Deposits in transit:

Deposits per bank statement in September	\$26,700
Add: Deposits in transit, September 30	<u>2,100</u>
Total deposits to be accounted for	28,800
Less: Deposits per books	<u>25,400</u>
Deposits in transit, August 31	<u>\$ 3,400</u>

(d) Outstanding checks:

Checks clearing bank in September	\$25,000
Add: Outstanding checks, September 30	<u>2,100</u>
Total checks to be accounted for	27,100
Less: Cash disbursements per books	<u>23,700</u>
Outstanding checks, August 31	<u>\$ 3,400</u>

EXERCISE 8-14

(a) Cash and cash equivalents should be reported at \$93,500.

Cash in bank	\$47,000
Cash on hand	12,000
Petty cash	500
Highly liquid investments	<u>34,000</u>
	<u>\$93,500</u>

(b) “Cash in plant expansion fund” should be reported as part of long-term investments (a noncurrent asset). “Receivables from customers” should be reported as accounts receivable in the current assets. “Stock investments” should also be reported in the current assets.

(c) Lipkus should disclose in the financial statements the details about the compensating balances. These are generally minimum cash balances the bank requires the borrower to maintain. They are a restriction on the use of cash that may affect the company’s liquidity.

SOLUTIONS TO PROBLEMS

PROBLEM 8-1A

Principles

Application to Cash Disbursements

Establishment of responsibility.

Only the treasurer and assistant treasurer are authorized to sign checks.

Segregation of duties.

Invoices must be approved by both the purchasing agent and the receiving department supervisor. Payment can only be made by the treasurer or assistant treasurer, and the check signers do not record the cash disbursement transactions.

Documentation procedures.

Checks are prenumbered. Following payment, invoices are stamped PAID.

Physical controls.

Blank checks are kept in a safe in the treasurer's office. Only the treasurer and assistant treasurer have access to the safe. A checkwriting machine is used in writing checks.

Independent internal verification.

The check signer compares the check with the approved invoice prior to issue. Bank and book balances are reconciled monthly by the assistant chief accountant.

Human resource controls.

All employees who handle or record cash are bonded.

PROBLEM 8-2A

(a)	July	1	Petty Cash.....	200.00	
			Cash		200.00
		15	Freight-out	94.00	
			Postage Expense.....	42.40	
			Entertainment Expense	46.60	
			Miscellaneous Expense	11.20	
			Cash Over and Short.....	1.80	
			Cash		196.00
		31	Freight-out	82.10	
			Charitable Contributions Expense	45.00	
			Postage Expense.....	25.50	
			Miscellaneous Expense	39.40	
			Cash		192.00
	Aug.	15	Freight-out	75.60	
			Entertainment Expense	43.00	
			Postage Expense.....	33.00	
			Miscellaneous Expense	37.00	
			Cash Over and Short.....		1.60
			Cash		187.00
		16	Petty Cash.....	100.00	
			Cash		100.00
		31	Postage Expense.....	140.00	
			Travel Expense.....	95.60	
			Freight-out	47.10	
			Cash Over and Short.....	1.30	
			Cash		284.00

(b)

Petty Cash

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		CP	200		200
Aug. 16		CP	100		300

PROBLEM 8-2A (Continued)

(c) The internal control features of a petty cash fund include:

- (1) A custodian is responsible for the fund.**
- (2) A prenumbered petty cash receipt signed by the custodian and the individual receiving payment is required for each payment from the fund.**
- (3) The treasurer's office examines all payments and stamps supporting documents to indicate they were paid when the fund is replenished.**
- (4) Surprise counts can be made at any time to determine whether the fund is intact.**

PROBLEM 8-3A

(a)

JAMES LOGAN COMPANY **Bank Reconciliation** **May 31, 2010**

Cash balance per bank statement		\$6,404.60
Add: Deposit in transit.....	\$1,916.15	
Bank error—Bridgetown check.....	<u>800.00</u>	<u>2,716.15</u>
		9,120.75
Less: Outstanding checks		<u>576.25</u>
Adjusted cash balance per bank.....		<u>\$8,544.50</u>
Cash balance per books		\$6,781.50
Add: Collection of note receivable		
(\$2,500 note plus \$80 interest		
less \$20 fee).....		<u>2,560.00</u>
		9,341.50
Less: NSF check.....	\$ 680.00	
Error in May 12 deposit		
(\$886.15 – \$836.15).....	50.00	
Error in recording check No. 1181	27.00*	
Check printing charge.....	<u>40.00</u>	<u>797.00</u>
Adjusted cash balance per books		<u>\$8,544.50</u>

*\$685 – \$658

(b) May 31	Cash.....	2,560	
	Miscellaneous Expense	20	
	Notes Receivable.....		2,500
	Interest Revenue.....		80
31	Accounts Receivable—S. Grifton	680	
	Cash.....		680
31	Sales	50	
	Cash.....		50
31	Accounts Payable—B. Trest.....	27	
	Cash.....		27
31	Miscellaneous Expense	40	
	Cash.....		40

PROBLEM 8-4A

(a) **BACKHAUS COMPANY**
Bank Reconciliation
December 31, 2010

Cash balance per bank statement		\$20,154.30
Add: Deposits in transit		<u>1,690.40</u>
		21,844.70
Less: Outstanding checks		
No. 3470.....	\$ 720.10	
No. 3474.....	1,050.00	
No. 3478.....	621.30	
No. 3481.....	807.40	
No. 3484.....	798.00	
No. 3486.....	<u>1,889.50</u>	<u>5,886.30</u>
Adjusted cash balance per bank		<u>\$15,958.40</u>
Cash balance per books.....		\$12,485.20
Add: Note collected by bank		
(\$4,000 note plus \$160 interest		
less \$15 fee)		<u>4,145.00</u>
		16,630.20
Less: NSF check	\$ 572.80	
Error in recording check No. 3485.....	90.00*	
Error in 12-21 deposit		
(\$2,954 – \$2,945)	<u>9.00</u>	<u>671.80</u>
Adjusted cash balance per books		<u>\$15,958.40</u>
*\$540.80 – \$450.80		

(b) Dec. 31	Cash.....	4,145.00	
	Miscellaneous Expense.....	15.00	
	Notes Receivable		4,000.00
	Interest Revenue		160.00
31	Accounts Receivable—D. Chagnon	572.80	
	Cash.....		572.80
31	Accounts Payable	90.00	
	Cash.....		90.00
31	Accounts Receivable	9.00	
	Cash.....		9.00

PROBLEM 8-5A

(a)

HAVERMAN COMPANY
Bank Reconciliation
July 31, 2010

Cash balance per bank statement			\$24,514
Add: Deposits in transit (1)			<u>9,400</u>
			33,914
Less: Outstanding checks (2)	\$ 8,460		
Bank error (\$255 – \$155)	<u>100</u>		<u>8,560</u>
Adjusted cash balance per bank			<u>\$25,354</u>
 Cash balance per books			\$21,850
Add: Collection of note receivable by bank			
(\$3,400 note plus \$70 interest)	\$ 3,470		
Book error (\$320 – \$230)	<u>90</u>		<u>3,560</u>
			25,410
Less: Check printing charge			<u>56</u>
Adjusted cash balance per books			<u>\$25,354</u>
 (1) July receipts per books			\$81,400
July deposits per bank	\$79,000		
Less: Deposits in transit,			
June 30	<u>7,000</u>		<u>72,000</u>
Deposits in transit, July 31			<u>\$ 9,400</u>
 (2) Disbursements per books			
in July			\$77,150
Less: Book error			<u>90</u>
Total disbursements to			
be accounted for			77,060
Checks clearing bank			
in July		\$74,700	
Add: Bank error	\$ 100		
Less: June 30			
outstanding checks	<u>6,200</u>	<u>6,100</u>	<u>68,600</u>
Outstanding checks,			
July 31			<u>\$ 8,460</u>

PROBLEM 8-5A (Continued)

(b)	July 31	Cash	3,470	
		Notes Receivable		3,400
		Interest Revenue		70
	31	Cash	90	
		Accounts Payable.....		90
	31	Miscellaneous Expense.....	56	
		Cash		56

Tom has created a situation that leaves many opportunities for undetected theft. Here is a list of some of the deficiencies in internal control. You may find others.

- 1. Documentation procedures. The tickets were unnumbered. By numbering the tickets, the students could have been held more accountable for the tickets. See number 3 below.**
- 2. Physical controls and establishment of responsibility. The tickets were left in an unlocked box on his desk. Instead, Tom should have assigned control of the tickets to one individual, in a locked box which that student alone had control over.**
- 3. Documentation procedures. No record was kept of which students took tickets to sell or how many they took. In combination with items 1 and 2 above, the student assigned control over the tickets should have kept a record of which tickets were issued to each student for resale. (Note: This problem could have been largely avoided if the tickets had only been sold at the door on the day of the dance.)**
- 4. Documentation procedures. There was no control over unsold tickets. This deficiency made it possible for students to sell the tickets, keep the cash, and tell Tom that they had disposed of the unsold tickets. Instead, students should have been required to return the unsold tickets to the student maintaining control over tickets, and the cash to Tom. In each case, the students should have been issued a receipt for the cash they turned in and the tickets they returned.**
- 5. Establishment of responsibility. Inadequate control over the cash box. In effect, it was operated like a petty cash fund, but too many people had the key. Instead, Tom should have had the key and dispersed funds when necessary for purchases.**
- 6. Documentation procedures. Instead of receipts, students simply wrote notes saying how they used the funds. Instead, it should have been required that they provided a valid receipt.**

PROBLEM 8-6A (Continued)

- 7. Segregation of duties. Luke Gilmor counted the funds, made out the deposit slip, and took the funds to the bank. This made it possible for Luke Gilmor to take some of the money and deposit the rest since there was no external check on his work. Tom should have counted the funds, with someone observing him. Then he could have made out the deposit slip and had Luke Gilmor deposit the funds.**
- 8. Documentation procedures. Tom did not receive a receipt from Obnoxious Ed. Without a receipt, there is no way to verify how much Obnoxious Ed was actually paid. For example, it is possible that he was only paid \$100 and that Tom took the rest.**
- 9. Segregation of duties. Mel Harris was collecting tickets and receiving cash for additional tickets sold. Instead, there should have been one person selling tickets at the door and a second person collecting tickets.**

(a) Principles

Application to Discount Theater

Establishment of responsibility.

Only cashiers are authorized to sell tickets. Only the manager and cashier can handle cash.

Segregation of duties.

The duties of receiving cash and admitting customers are assigned to the cashier and to the usher. The manager maintains custody of the cash, and the company accountant records the cash.

Documentation procedures.

Tickets are prenumbered. Cash count sheets are prepared. Deposit slips are prepared.

Physical controls.

A safe is used for the storage of cash and a machine is used to issue tickets.

Independent internal verification.

Cash counts are made by the manager at the end of each cashier's shift. Daily comparisons are made by the company treasurer.

Human resource controls.

Shifts are rotated among the cashiers.

(b) Actions by the usher and cashier to misappropriate cash might include:

- (1) Instead of tearing the tickets, the usher could return the tickets to the cashier who could resell them, and the two could divide the cash.**
- (2) The cashier could issue a lower price ticket than paid for and the usher would admit the customer. The difference between the ticket issued and the cash received could be divided between the usher and cashier.**

PROBLEM 8-2B

(a)	July	1	Petty Cash	100.00	
			Cash		100.00
		15	Freight-out.....	51.00	
			Postage Expense	20.50	
			Entertainment Expense	23.10	
			Miscellaneous Expense	4.10	
			Cash		96.90
			Cash Over and Short		1.80
		31	Freight-out.....	43.50	
			Charitable Contributions Expense.....	20.00	
			Postage Expense	20.10	
			Miscellaneous Expense	12.30	
			Cash		95.90
	Aug.	15	Freight-out.....	40.20	
			Entertainment Expense	21.00	
			Postage Expense	14.00	
			Miscellaneous Expense	19.80	
			Cash Over and Short	3.00	
			Cash		98.00
		16	Petty Cash	50.00	
			Cash		50.00
		31	Freight-out.....	74.00	
			Entertainment Expense	43.20	
			Freight-out.....	17.70	
			Cash Over and Short	2.10	
			Cash		137.00

(b)

Petty Cash

Date	Explanation	Ref.	Debit	Credit	Balance
July 1		CP	100		100
Aug. 16		CP	50		150

PROBLEM 8-2B (Continued)

(c) The internal control features of a petty cash fund include:

- (1) A custodian is responsible for the fund.**
- (2) A prenumbered petty cash receipt signed by the custodian and the individual receiving payment is required for each payment from the fund.**
- (3) The treasurer's office examines all payments and stamps supporting documents to indicate they were paid when the fund is replenished.**
- (4) Surprise counts can be made at any time to determine whether the fund is intact.**

PROBLEM 8-3B

(a) **WOLVERINE GENETICS COMPANY**
Bank Reconciliation
May 31, 2010

Cash balance per bank statement		\$13,332
Add: Deposit in transit	\$2,100	
Bank error—Carr check.....	<u>900</u>	<u>3,000</u>
		16,332
Less: Outstanding checks.....		<u>1,225</u>
Adjusted cash balance per bank.....		<u>\$15,107</u>
Cash balance per books.....		\$13,287
Add: Collection of note receivable (\$4,000 note plus \$80 interest less \$25 fee)		<u>4,055</u>
		17,342
Less: NSF check	\$1,308	
Error in May 12 deposit	100	
Error in recording check No. 1181	792*	
Check printing charge	<u>35</u>	<u>2,235</u>
Adjusted cash balance per books		<u>\$15,107</u>

*\$911 – \$119

(b) May 31	Cash.....	4,055	
	Miscellaneous Expense.....	25	
	Notes Receivable		4,000
	Interest Revenue		80
31	Accounts Receivable—Bo Sclembech.....	1,308	
	Cash		1,308
31	Sales	100	
	Cash		100
31	Accounts Payable—G. Fischer	792	
	Cash		792
31	Miscellaneous Expense.....	35	
	Cash		35

PROBLEM 8-4B**(a)****CHAPIN COMPANY
Bank Reconciliation
November 30, 2010**

Balance per bank statement.....		\$ 9,100
Add: Deposits in transit.....		<u>1,541</u>
		10,641
Less: Outstanding checks		
No. 2451	\$700	
No. 2472	270	
No. 2478	300	
No. 2482	350	
No. 2484	460	
No. 2485	525	
No. 2487	210	
No. 2488	<u>635</u>	<u>3,450</u>
Adjusted cash balance per bank.....		<u>\$ 7,191</u>
Balance per books		\$ 5,958
Add: Note collected by bank		
(\$1,300 note plus \$91 interest		
less \$16 fee).....		<u>1,375</u>
		7,333
Less: Check printing charge	\$ 34	
Error in recording check No. 2479.....	90*	
Error in 11-21 deposit		
(\$1,642 – \$1,624).....	<u>18</u>	<u>142</u>
Adjusted cash balance per books		<u>\$ 7,191</u>

***\$980 – \$890**

PROBLEM 8-4B (Continued)

(b)	Nov. 30	Cash.....	1,375	
		Miscellaneous Expense	16	
		Notes Receivable		1,300
		Interest Revenue		91
	30	Miscellaneous Expense	34	
		Cash.....		34
	30	Accounts Payable	90	
		Cash.....		90
	30	Accounts Receivable	18	
		Cash.....		18

PROBLEM 8-5B

(a)

BUMMER COMPANY
Bank Reconciliation
August 31, 2010

Cash balance per bank statement			\$16,856
Add: Deposits in transit (1)	\$ 5,129		
Bank error (\$277 – \$275)	<u>2</u>	<u>5,131</u>	
		21,987	
Less: Outstanding checks (2)		<u>4,156</u>	
Adjusted cash balance per bank		<u>\$17,831</u>	
 Cash balance per books			\$13,215
Add: Collection of note receivable by bank			
(\$4,400 note plus \$105 interest)	\$ 4,505		
Book error (\$430 – \$340)	90		
Interest earned	<u>41</u>	<u>4,636</u>	
		17,851	
Less: Safety deposit box rent		<u>20</u>	
Adjusted cash balance per books		<u>\$17,831</u>	
 (1) August receipts per books			\$50,050
August deposits per bank	\$47,521		
Less: Deposits in transit, July 31	<u>2,600</u>	<u>44,921</u>	
Deposits in transit, August 31		<u>\$ 5,129</u>	
 (2) Disbursements per books in			
August			\$47,794
Less: Book error		<u>90</u>	
Total disbursements to be			
accounted for			47,704
Checks clearing bank in			
August		\$46,475	
Less: Bank error	\$ 2		
July 31 outstanding			
checks	<u>2,925</u>	<u>2,927</u>	<u>43,548</u>
Outstanding checks,			
August 31			<u>\$ 4,156</u>

PROBLEM 8-5B (Continued)

(b)	Aug. 31	Cash.....	4,505	
		Notes Receivable		4,400
		Interest Revenue		105
	31	Cash.....	41	
		Interest Revenue		41
	31	Cash.....	90	
		Accounts Payable		90
	31	Miscellaneous Expense	20	
		Cash.....		20

PROBLEM 8-6B

(a)

GAZARRA COMPANY
Bank Reconciliation
October 31, 2010

Balance per bank statement.....		\$15,453.00
Plus: Undeposited receipts.....		<u>3,226.18</u>
		18,679.18
Less: Outstanding checks		
<u>No.</u>	<u>Amount</u>	
62	\$107.74	
183	127.50	
284	215.26	
<u>No.</u>	<u>Amount</u>	
862	\$162.10	
863	192.78	
864	140.49	<u>945.87</u>
Adjusted balance per bank		<u>\$17,733.31</u>
Cash balance per books		\$18,608.81
Add: Bank credit (collection of note receivable).....		<u>340.00</u>
Adjusted balance per books (before theft).....		18,948.81
Theft.....		<u>1,215.50*</u>
Adjusted balance per books.....		<u>\$17,733.31</u>

*\$18,948.81 – \$17,733.31

(b) The cashier attempted to cover the theft of \$1,215.56 by:

1. Not listing as outstanding three checks totaling \$450.50 (No. 62, \$107.74; No. 183, \$127.50; and No. 284, \$215.26).
2. Underfooting the outstanding checks listed by \$85.06 (The correct total is \$495.37.)
3. Subtracting the \$340 bank credit from the book balance instead of adding it to the book balance, thereby concealing \$680 of the theft.

PROBLEM 8-6B (Continued)

- (c) 1. The principle of independent internal verification has been violated because the cashier prepared the bank reconciliation.**
- 2. The principle of segregation of duties has been violated because the cashier had access to the accounting records and also prepared the bank reconciliation.**

- (a) In the Independent Auditors' Report, it states that "consolidated financial statements referred to above [including the statement of cash flows] present fairly, in all material respects, the financial position of PepsiCo Company as of December 29, 2007 and December 30, 2006, and the results of its operations and its cash flows for each of the three years in the period ended December 29, 2007, in conformity with accounting principles generally accepted in the United States of America."
- (b) Cash and cash equivalents are reported at \$910 million for 2007 and \$1,651 million for 2006.
- (c) Cash equivalents are defined as "investments with original maturities of three months or less which we do not intend to rollover beyond three months."
- (d) PepsiCo's management states that "our system of internal control is based on the control criteria framework of the Committee of Sponsoring Organizations of the Treadway Commission published in their report titled are *Internal Control—Integrated Framework*. The system is designed to provide reasonable assurance that transactions are executed as authorized and accurately recorded; that assets are safeguarded; and that accounting records are sufficiently reliable to permit the preparation of financial statements that conform in all material respects with accounting principles generally accepted in the U.S. We maintain disclosure controls and procedures designed to ensure that information required to be disclosed in reports under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the specified time periods. We monitor these internal controls through self-assessments and an ongoing program of internal audits. Our internal controls are reinforced through our Worldwide Code of Conduct, which sets forth our commitment to conduct business with integrity, and within both the letter and the spirit of the law."

	<u>PepsiCo</u>	<u>Coca-Cola</u>
(a) (1)	\$910 million	\$4,093 million
(2)	\$741 million decrease	\$1,653 million increase
(3)	\$6,934 million	\$7,150 million

(b) Both companies generated over 6.5 billion dollars from operating activities. This cash is used for investing and financing activities. Both companies use the cash provided by operating activities to purchase land, buildings and equipment, to make acquisitions of other companies, to buy back their stock, and to pay dividends. Both companies have large cash balances at the end of 2007 and are capable of generating huge amounts of cash.

- (a) The system of internal control should be evaluated by: (1) responsible individuals from a particular university unit, (2) internal auditors, and (3) university management.**
- (b) Reconciliations ensure accuracy and completeness of transactions. In particular, a reconciliation ensures that all cash received is: (1) properly deposited in university bank accounts and (2) recorded accurately in the financial records. The reconciliation should be reviewed by the department manager.**
- (c) Some examples given of physical controls are a safe, vault, locked doors, campus police, computer passwords, and card key systems.**
- (d) Two ways to accomplish inventory counts are: (1) annual complete inventory or (2) cycle counting programs.**

- (a) The weaknesses in internal accounting control over collections are:
- (1) Each usher could take cash from the collection plates enroute to the basement office.
 - (2) The head usher counts the cash alone.
 - (3) The head usher's notation of the count is left in the safe.
 - (4) The financial secretary counts the cash alone.
 - (5) The financial secretary withholds \$150 to \$200 per week.
 - (6) The cash is vulnerable to robbery when kept in the safe overnight.
 - (7) Checks are made payable to "cash."
 - (8) The financial secretary has custody of the cash, maintains church records, and prepares the bank reconciliation.
- (b) The improvements should include the following:
- (1) The ushers should transfer their cash collections to a cash pouch (or bag) held by the head usher. The transfer should be witnessed by a member of the finance committee.
 - (2) The head usher and finance committee member should take the cash to the office. The cash should be counted by the head usher and the financial secretary in the presence of the finance committee member.
 - (3) Following the count, the financial secretary should prepare a deposit slip in duplicate for the total cash received, and the secretary should immediately deposit the cash in the bank's night deposit vault.
 - (4) At the end of each month, a member of the finance committee should prepare the bank reconciliation.
- (c) The policies that should be changed are:
- (1) Members should make checks payable to the church.
 - (2) A petty cash fund should be established for the financial secretary to be used for weekly cash expenditures and requests for replenishment of the fund should be sent to the chairperson of the finance committee for approval.
 - (3) The financial secretary should be bonded.
 - (4) The financial secretary should be required to take an annual vacation.

**Mr. Jerry Mays
Manhattan Company
Main Street, USA**

Dear Mr. Mays:

During our audit of your financial statements, we reviewed the internal controls over cash receipts. The weaknesses we discovered and our suggested improvements are listed below.

<u>Weaknesses</u>	<u>Suggested Improvement</u>
1. A list of checks received is not prepared by the person who opens the mail.	This list should be prepared so that it can later be compared with the daily cash summary. While this procedure does not assure that all checks will be listed, it does allow the company to verify that all checks on the list did get deposited.
2. Mail is opened by only one person.	When this occurs, there is no assurance that all incoming checks are forwarded to the cashier's department.
3. The cashier is allowed to open the mail.	Under this arrangement, it is possible for the cashier to open the mail, prepare the cash summary and make the bank deposit. This involves no segregation of duties as the cashier controls the cash from the time it is received until it is deposited in the bank.
4. The accounts receivable clerk is allowed to open the mail.	Again, there is poor segregation of duties. In this case, the clerk could writeoff a customer's account as uncollectible and then misappropriate the collection when it's received.

Weaknesses

Suggested Improvement

5. Mail receipts are deposited weekly.	This makes the receipts vulnerable to robbery and to misappropriation. The receipts should be deposited intact daily.

We would be pleased to discuss the weaknesses and our recommended improvements with you, at your convenience.

Yours sincerely,

**Croix, Marais, and Kale
Certified Public Accountants**

- (a) You, as assistant controller, may suffer some negative effects from Gena Schmitt, the financial vice-president, if you don't follow her instructions. Maybe the insurance company will react the way Gena suggests, but probably not.

If you comply and falsify the June 30 cash balance by holding the cash receipts book open for one day, you will suffer personally by sacrificing your integrity. If you are found out, you could be prosecuted for preparing a fraudulent report. The insurance company, as the lender and creditor, is deceived.

- (b) Holding the cash receipts book open in order to overstate the cash balance is a fraudulent, deceitful, unethical action. The financial vice-president should not encourage such behavior and a controller should not follow such instructions.
- (c) (1) You can follow the vice-president's instructions and misstate the cash balance—wrong! (2) You can advise the vice-president against holding the books open, prepare an accurate report, and have the vice-president or the president discuss the situation with the insurance company. It can be explained that the low cash balance was only temporary. Honesty is still the best policy.

Answers are provided to students on the government website as they complete the ID Theft Faceoff quiz.

CHAPTER 9

Accounting for Receivables

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the different types of receivables.	1, 2	1	3			
2. Explain how companies recognize accounts receivable.	3	2	4	1, 2	1A, 3A, 4A, 6A, 7A	1B, 3B, 4B, 6B, 7B
3. Distinguish between the methods and bases companies use to value accounts receivable.	4, 5, 6, 7, 8	3, 4, 5, 6, 7	5, 8	3, 4, 5, 6	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
4. Describe the entries to record the disposition of accounts receivable.	9, 10, 11	8	9	7, 8, 9	6A, 7A	6B, 7B
5. Compute the maturity date of and interest on notes receivable.	12, 13, 14, 15, 16	9, 10		10, 11, 12, 13	6A, 7A	6B, 7B
6. Explain how companies recognize notes receivable.		11		10, 11, 12	7A	7B
7. Describe how companies value notes receivable.					7A	7B
8. Describe the entries to record the disposition of notes receivable.	17			12, 13	6A, 7A	6B, 7B
9. Explain the statement presentation and analysis of receivables.	18, 19, 20	3, 12		14	1A, 6A	1B, 6B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare journal entries related to bad debts expense.	Simple	15–20
2A	Compute bad debts amounts.	Moderate	20–25
3A	Journalize entries to record transactions related to bad debts.	Moderate	20–30
4A	Journalize transactions related to bad debts.	Moderate	20–30
5A	Journalize entries to record transactions related to bad debts.	Moderate	20–30
6A	Prepare entries for various notes receivable transactions.	Moderate	40–50
7A	Prepare entries for various receivable transactions.	Complex	50–60
1B	Prepare journal entries related to bad debts expense.	Simple	15–20
2B	Compute bad debts amounts.	Moderate	20–25
3B	Journalize entries to record transactions related to bad debts.	Moderate	20–30
4B	Journalize transactions related to bad debts.	Moderate	20–30
5B	Journalize entries to record transactions related to bad debts.	Moderate	20–30
6B	Prepare entries for various notes receivable transactions.	Moderate	40–50
7B	Prepare entries for various receivable transactions.	Complex	50–60

WEYGANDT ACCOUNTING PRINCIPLES 9E**CHAPTER 9****ACCOUNTING FOR RECEIVABLES**

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	1–2
BE2	2	AP	Simple	5–7
BE3	3, 9	AN	Simple	4–6
BE4	3	AP	Simple	4–6
BE5	3	AP	Simple	4–6
BE6	3	AP	Simple	2–4
BE7	3	AN	Simple	4–6
BE8	4	AP	Simple	6–8
BE9	5	AP	Simple	8–10
BE10	5	AP	Moderate	8–10
BE11	6	AP	Simple	2–4
BE12	9	AP	Simple	4–6
DI1	3	AP	Simple	2–4
DI2	4	AP	Simple	4–6
DI3	5, 8	AP	Simple	6–8
DI4	9	AN	Simple	4–6
EX1	2	AP	Simple	8–10
EX2	2	AP	Simple	8–10
EX3	3	AN	Simple	8–10
EX4	3	AN	Simple	6–8
EX5	3	AP	Simple	6–8
EX6	3	AP	Simple	6–8
EX7	4	AP	Simple	4–6
EX8	4	AP	Simple	6–8
EX9	4	AP	Simple	6–8
EX10	5, 6	AN	Simple	8–10
EX11	5, 6	AN	Simple	6–8
EX12	5, 6, 8	AP	Moderate	10–12
EX13	5, 8	AP	Simple	8–10
EX14	9	AP	Simple	8–10

ACCOUNTING FOR RECEIVABLES (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	2, 3, 9	AN	Simple	15–20
P2A	3	AN	Moderate	20–25
P3A	2, 3	AN	Moderate	20–30
P4A	2, 3	AN	Moderate	20–30
P5A	3	AN	Moderate	20–30
P6A	2, 4, 5, 8, 9	AN	Moderate	40–50
P7A	2, 4–8	AP	Complex	50–60
P1B	2, 3, 9	AN	Simple	15–20
P2B	3	AN	Moderate	20–25
P3B	2, 3	AN	Moderate	20–30
P4B	2, 3	AN	Moderate	20–30
P5B	3	AN	Moderate	20–30
P6B	2, 4, 5, 8, 9	AN	Moderate	40–50
P7B	2, 4–8	AP	Complex	50–60
BYP1	3	E	Moderate	20–25
BYP2	9	AN, E	Simple	10–15
BYP3	8	AP	Simple	10–15
BYP4	4	AN	Moderate	20–30
BYP5	3	E	Simple	10–15
BYP6	3	E	Simple	10–15
BYP7	4	E	Simple	15–20

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the different types of receivables.	Q9-2	Q9-1 BE9-1				
2. Explain how companies recognize accounts receivable.			Q9-3 BE9-2 E9-1	P9-1A P9-3A P9-4A P9-6A P9-1B P9-4B P9-6B		
3. Distinguish between the methods and bases used to value accounts receivable.	Q9-8	Q9-4 Q9-5 Q9-6	BE9-4 BE9-5 BE9-6 DI9-1 E9-5	Q9-7 BE9-3 BE9-7 E9-3 E9-4 P9-1A P9-2A P9-3A P9-4A P9-5A P9-1B P9-2B P9-3B P9-4B P9-5B		
4. Describe the entries to record the disposition of accounts receivable.	Q9-9	Q9-10	Q9-11 BE9-8 DI9-2 E9-7	E9-8 E9-9 P9-7A P9-7B	P9-6A P9-6B	
5. Compute the maturity date of and interest on notes receivable.	Q9-13	Q9-12 Q9-16	Q9-14 Q9-15 BE9-9 BE9-10 DI9-3	E9-12 E9-13 P9-7A P9-7B P9-6B	E9-10 E9-11	
6. Explain how companies recognize notes receivable.			BE9-11 P9-7A	P9-7B E9-12 E9-11		
7. Describe how companies value notes receivable.			P9-7A P9-7B			
8. Describe the entries to record the disposition of notes receivable.		Q9-17	DI9-3 E9-12 E9-13	P9-7A P9-7B P9-6B		
9. Explain the statement presentation and analysis of receivables.	Q9-18		Q9-19 Q9-20 BE9-12 E9-14	BE9-3 DI9-4 P9-1A P9-6A	P9-1B P9-6B	
Broadening Your Perspective			Exploring the Web	Decision Making Across the Organization Comparative Analysis		All About You Financial Reporting Comparative Analysis Ethics Case Communication

ANSWERS TO QUESTIONS

1. Accounts receivable are amounts owed by customers on account. They result from the sale of goods and services. Notes receivable represent claims that are evidenced by formal instruments of credit.
2. Other receivables include nontrade receivables such as interest receivable, loans to company officers, advances to employees, and income taxes refundable.
3. Accounts Receivable 40
Interest Revenue 40
4. The essential features of the allowance method of accounting for bad debts are:
 - (1) Uncollectible accounts receivable are estimated and matched against revenue in the same accounting period in which the revenue occurred.
 - (2) Estimated uncollectibles are debited to Bad Debts Expense and credited to Allowance for Doubtful Accounts through an adjusting entry at the end of each period.
 - (3) Actual uncollectibles are debited to Allowance for Doubtful Accounts and credited to Accounts Receivable at the time the specific account is written off.
5. Jerry Gatewood should realize that the decrease in cash realizable value occurs when estimated uncollectibles are recognized in an adjusting entry. The write-off of an uncollectible account reduces both accounts receivable and the allowance for doubtful accounts by the same amount. Thus, cash realizable value does not change.
6. The two bases of estimating uncollectibles are: (1) percentage-of-sales and (2) percentage-of-receivables. The percentage-of-sales basis establishes a percentage relationship between the amount of credit sales and expected losses from uncollectible accounts. This method emphasizes the matching of expenses with revenues. Under the percentage-of-receivables basis, the balance in the allowance for doubtful accounts is derived from an analysis of individual customer accounts. This method emphasizes cash realizable value.
7. The adjusting entry under the percentage-of-sales basis is:

Bad Debts Expense	4,100	
Allowance for Doubtful Accounts		4,100

The adjusting entry under the percentage-of-receivables basis is:

Bad Debts Expense	2,300	
Allowance for Doubtful Accounts (\$5,800 – \$3,500)		2,300
8. Under the direct write-off method, bad debt losses are not estimated and no allowance account is used. When an account is determined to be uncollectible, the loss is debited to Bad Debts Expense. The direct write-off method makes no attempt to match bad debts expense to sales revenues or to show the cash realizable value of the receivables in the balance sheet.
9. From its own credit cards, the DeVito Company may realize financing charges from customers who do not pay the balance due within a specified grace period. National credit cards offer the following advantages:
 - (1) The credit card issuer makes the credit investigation of the customer.
 - (2) The issuer maintains individual customer accounts.

- (3) The issuer undertakes the collection process and absorbs any losses from uncollectible accounts.
 - (4) The retailer receives cash more quickly from the credit card issuer than it would from individual customers.
- 10.** The reasons companies are selling their receivables are:
- (1) Receivables may be sold because they may be the only reasonable source of cash.
 - (2) Billing and collection are often time-consuming and costly. It is often easier for a retailer to sell the receivables to another party with expertise in billing and collection matters.
- 11.**
- | | | |
|---|---------|---------|
| Cash..... | 582,000 | |
| Service Charge Expense (3% X \$600,000) | 18,000 | |
| Accounts Receivable | | 600,000 |
- 12.** A promissory note gives the holder a stronger legal claim than one on an accounts receivable. As a result, it is easier to sell to another party. Promissory notes are negotiable instruments, which means they can be transferred to another party by endorsement. The holder of a promissory note also can earn interest.
- 13.** The maturity date of a promissory note may be stated in one of three ways: (1) on demand, (2) on a stated date, and (3) at the end of a stated period of time.
- 14.** The maturity dates are: (a) March 13 of the next year, (b) August 4, (c) July 20, and (d) August 30.
- 15.** The missing amounts are: (a) \$20,000, (b) \$9,000, (c) 8%, and (d) four months.
- 16.** If a financial institution uses 360 days rather than 365 days, it will receive more interest revenue. The reason is that the denominator is smaller, which makes the fraction larger and, therefore, the interest revenue larger.
- 17.** When Cain Company has dishonored a note, the ledger can set up a receivable equal to the face amount of the note plus the interest due. It will then try to collect the balance due, or as much as possible. If there is no hope of collection it will write-off the receivable.
- 18.** Each of the major types of receivables should be identified in the balance sheet or in the notes to the financial statements. Both the gross amount of receivables and the allowance for doubtful accounts should be reported. If collectible within a year or the operating cycle, whichever is longer, these receivables are reported as current assets immediately below short-term investments.
- 19.** Net credit sales for the period are $8.14 \times \$400,000 = \$3,256,000$.
- 20.** PepsiCo's 2007 allowance for doubtful accounts of \$69 million represents 1.5% of its gross receivables of \$4,458 million (See Note 14).

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 9-1

- (a) Accounts receivable.
- (b) Notes receivable.
- (c) Other receivables.

BRIEF EXERCISE 9-2

(a)	Accounts Receivable.....	15,200	
	Sales.....		15,200
(b)	Sales Returns and Allowances	3,800	
	Accounts Receivable.....		3,800
(c)	Cash (\$11,400 – \$228)	11,172	
	Sales Discounts (\$11,400 X 2%)	228	
	Accounts Receivable (\$15,200 – \$3,800)		11,400

BRIEF EXERCISE 9-3

(a)	Bad Debts Expense.....	35,000	
	Allowance for Doubtful Accounts		35,000
(b)	Current assets		
	Cash		\$ 90,000
	Accounts receivable	\$600,000	
	Less: Allowance for doubtful		
	Accounts	<u>35,000</u>	565,000
	Merchandise inventory		130,000
	Prepaid expenses		<u>7,500</u>
	Total current assets		<u>\$792,500</u>

BRIEF EXERCISE 9-4

(a)	Allowance for Doubtful Accounts	5,400	
	Accounts Receivable—Ristau		5,400

(b)		(1) <u>Before Write-Off</u>	(2) <u>After Write-Off</u>
	Accounts receivable	\$700,000	\$694,600
	Allowance for doubtful accounts	<u>54,000</u>	<u>48,600</u>
	Cash realizable value	<u>\$646,000</u>	<u>\$646,000</u>

BRIEF EXERCISE 9-5

	Accounts Receivable—Ristau	5,400	
	Allowance for Doubtful Accounts		5,400
	Cash.....	5,400	
	Accounts Receivable—Ristau		5,400

BRIEF EXERCISE 9-6

	Bad Debts Expense [(\$800,000 – \$45,000) X 2%].....	15,100	
	Allowance for Doubtful Accounts		15,100

BRIEF EXERCISE 9-7

(a)	Bad Debts Expense [(\$450,000 X 1%) – \$1,500]	3,000	
	Allowance for Doubtful Accounts.....		3,000
(b)	Bad Debts Expense [(\$450,000 X 1%) + \$800] = \$5,300		

BRIEF EXERCISE 9-8

(a)	Cash (\$150 – \$6)	144	
	Service Charge Expense (\$150 X 4%)	6	
	Sales		150
(b)	Cash (\$60,000 – \$1,800).....	58,200	
	Service Charge Expense (\$60,000 X 3%).....	1,800	
	Accounts Receivable		60,000

BRIEF EXERCISE 9-9

<u>Interest</u>	<u>Maturity Date</u>
(a) \$800	August 9
(b) \$875	October 12
(c) \$200	July 11

BRIEF EXERCISE 9-10

<u>Maturity Date</u>	<u>Annual Interest Rate</u>	<u>Total Interest</u>
(a) May 31	9%	\$9,000
(b) August 1	8%	\$ 600
(c) September 7	10%	\$6,000

BRIEF EXERCISE 9-11

Jan. 10	Accounts Receivable	13,600	
	Sales		13,600
Feb. 9	Notes Receivable.....	13,600	
	Accounts Receivable		13,600

BRIEF EXERCISE 9-12

Accounts Receivable Turnover Ratio:

$$\frac{\$20\text{B}}{(\$2.7\text{B} + \$2.8\text{B}) \div 2} = \frac{\$20\text{B}}{\$2.75\text{B}} = 7.3 \text{ times}$$

Average Collection Period for Accounts Receivable:

$$\frac{365 \text{ days}}{7.3 \text{ times}} = 50 \text{ days}$$

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 9-1

The following entry should be prepared to bring the balance in the Allowance for Doubtful Accounts up from \$6,100 credit to \$21,700 credit (7% X \$310,000):

Bad Debts Expense	15,600	
Allowance for Doubtful Accounts.....		15,600
(To record estimate of uncollectible accounts)		

DO IT! 9-2

To speed up the collection of cash, Ronald could sell its accounts receivable to a factor. Assuming the factor charges Ronald a 2% service charge, it would make the following entry:

Cash.....	980,000	
Service Charge Expense	20,000	
Accounts Receivable		1,000,000
(To record sale of receivables to factor)		

DO IT! 9-3

- (a) The maturity date is September 30. When the life of a note is expressed in terms of months, you find the date it matures by counting the months from the date of issue. When a note is drawn on the last day of a month, it matures on the last day of a subsequent month.
- (b) The interest to be received at maturity is \$248:
 Face X Rate X Time = Interest
 \$6,200 X 12% X 4/12 = \$248

The entry recorded by Galen Wholesalers at the maturity date is:

Cash.....	6,448	
Notes Receivable		6,200
Interest Revenue		248
(To record collection of Picard note)		

DO IT! 9-4

(a)

$$\begin{array}{rclcl} \text{Net credit sales} & \div & \text{Average net} & = & \text{Accounts receivable} \\ & & \text{accounts receivable} & & \text{turnover} \\ \\ \$1,600,000 & \div & \frac{\$101,000 + \$107,000}{2} & = & 15.4 \text{ times} \end{array}$$

(b)

$$\begin{array}{rclcl} \text{Days in year} & \div & \text{Accounts receivable} & = & \text{Average collection} \\ & & \text{turnover} & & \text{period in days} \\ \\ 365 & \div & 15.4 \text{ times} & = & 23.7 \text{ days} \end{array}$$

SOLUTIONS TO EXERCISES

EXERCISE 9-1

March 1	Accounts Receivable—CC Company	3,000	
	Sales		3,000
3	Sales Returns and Allowances	500	
	Accounts Receivable—CC Company		500
9	Cash	2,450	
	Sales Discounts	50	
	Accounts Receivable—CC Company		2,500
15	Accounts Receivable	400	
	Sales		400
31	Accounts Receivable	6	
	Interest Revenue		6

EXERCISE 9-2

(a) Jan. 6	Accounts Receivable—Cortez	9,000	
	Sales		9,000
16	Cash (\$9,000 – \$180)	8,820	
	Sales Discounts (2% X \$9,000)	180	
	Accounts Receivable—Cortez		9,000
(b) Jan. 10	Accounts Receivable—Dawes	9,000	
	Sales		9,000
Feb. 12	Cash	5,000	
	Accounts Receivable—Dawes		5,000
Mar. 10	Accounts Receivable—Dawes	80	
	Interest Revenue		
	[2% X (\$9,000 – \$5,000)]		80

EXERCISE 9-3

(a)	Dec. 31	Bad Debts Expense	1,400	
		Accounts Receivable—Fell		1,400
(b) (1)	Dec. 31	Bad Debts Expense		
		$[(\$840,000 - \$30,000) \times 1\%]$	8,100	
		Allowance for Doubtful		
		Accounts		8,100
(2)	Dec. 31	Bad Debts Expense	9,900	
		Allowance for Doubtful Accounts		
		$[(\$120,000 \times 10\%) - \$2,100]$		9,900
(c) (1)	Dec. 31	Bad Debts Expense		
		$[(\$840,000 - \$30,000) \times .75\%]$	6,075	
		Allowance for Doubtful		
		Accounts		6,075
(2)	Dec. 31	Bad Debts Expense	7,400	
		Allowance for Doubtful Accounts		
		$[(\$120,000 \times 6\%) + \$200]$		7,400

EXERCISE 9-4

(a)	<u>Accounts Receivable</u>	<u>Amount</u>	<u>%</u>	<u>Estimated Uncollectible</u>
	1–30 days	\$60,000	2.0	\$1,200
	31–60 days	17,600	5.0	880
	61–90 days	8,500	30.0	2,550
	Over 90 days	7,000	50.0	3,500
				<u>\$8,130</u>
(b)	Mar. 31	Bad Debts Expense		6,930
		Allowance for Doubtful Accounts		
		$(\$8,130 - \$1,200)$		6,930

EXERCISE 9-5

Allowance for Doubtful Accounts	13,000	
Accounts Receivable		13,000
Accounts Receivable	1,800	
Allowance for Doubtful Accounts		1,800
Cash.....	1,800	
Accounts Receivable		1,800
Bad Debts Expense	15,200	
Allowance for Doubtful Accounts		
[\$19,000 – (\$15,000 – \$13,000 + \$1,800)]		15,200

EXERCISE 9-6

December 31, 2010		
Bad Debts Expense (2% X \$400,000).....	8,000	
Allowance for Doubtful Accounts		8,000
May 11, 2011		
Allowance for Doubtful Accounts	1,100	
Accounts Receivable—Frye		1,100
June 12, 2011		
Accounts Receivable—Frye	1,100	
Allowance for Doubtful Accounts		1,100
Cash.....	1,100	
Accounts Receivable—Frye		1,100

EXERCISE 9-7

(a) Mar. 3	Cash (\$680,000 – \$20,400).....	659,600	
	Service Charge Expense		
	(3% X \$680,000).....	20,400	
	Accounts Receivable		680,000
(b) May 10	Cash (\$3,500 – \$140)	3,360	
	Service Charge Expense		
	(4% X \$3,500).....	140	
	Sales		3,500

EXERCISE 9-8

(a)	Apr. 2	Accounts Receivable—Nancy Hansel	1,500	
		Sales		1,500
	May 3	Cash	700	
		Accounts Receivable—Nancy Hansel		700
	June 1	Accounts Receivable—Nancy Hansel	8	
		Interest Revenue [(\$1,500 – \$700) X 1%]		8
(b)	July 4	Cash	194	
		Service Charge Expense (3% X \$200)	6	
		Sales		200

EXERCISE 9-9

(a)	Jan. 15	Accounts Receivable	18,000	
		Sales		18,000
	20	Cash (\$4,300 – \$86)	4,214	
		Service Charge Expense (\$4,300 X 2%)	86	
		Sales		4,300
	Feb. 10	Cash	10,000	
		Accounts Receivable		10,000
	15	Accounts Receivable (\$8,000 X 1%)	80	
		Interest Revenue		80

- (b) Interest Revenue is reported under other revenues and gains.
Service Charge Expense is a selling expense.

EXERCISE 9-10

		2010		
Nov. 1	Notes Receivable	15,000		
	Cash		15,000	
Dec. 11	Notes Receivable	6,750		
	Sales		6,750	
16	Notes Receivable	4,000		
	Accounts Receivable—Reber		4,000	
31	Interest Receivable	295		
	Interest Revenue*		295	

***Calculation of interest revenue:**

Givens's note:	$\$15,000 \times 10\% \times 2/12 = \$250$
Countryman's note:	$6,750 \times 8\% \times 20/360 = 30$
Reber's note:	$4,000 \times 9\% \times 15/360 = 15$
Total accrued interest	<u>\$295</u>

		2011		
Nov. 1	Cash	16,500		
	Interest Receivable		250	
	Interest Revenue*		1,250	
	Notes Receivable		15,000	
	*($\$15,000 \times 10\% \times 10/12$)			

EXERCISE 9-11

		2010		
May 1	Notes Receivable	7,500		
	Accounts Receivable—Julia			
	Gonzalez		7,500	
Dec. 31	Interest Receivable	500		
	Interest Revenue			
	($\$7,500 \times 10\% \times 8/12$)		500	
31	Interest Revenue	500		
	Income Summary		500	

EXERCISE 9-11 (Continued)

		2011	
May 1	Cash	8,250	
	Notes Receivable		7,500
	Interest Receivable		500
	Interest Revenue		
	($\$7,500 \times 10\% \times 4/12$)		250

EXERCISE 9-12

4/1/10	Notes Receivable	20,000	
	Accounts Receivable—Wilson		20,000
7/1/10	Notes Receivable	25,000	
	Cash.....		25,000
12/31/10	Interest Receivable	1,800	
	Interest Revenue		
	($\$20,000 \times 12\% \times 9/12$).....		1,800
	Interest Receivable	1,250	
	Interest Revenue		
	($\$25,000 \times 10\% \times 6/12$)		1,250
4/1/11	Cash.....	22,400	
	Notes Receivable		20,000
	Interest Receivable		1,800
	Interest Revenue		
	($\$20,000 \times 12\% \times 3/12 = \$600$).....		600
	Accounts Receivable	26,875	
	Notes Receivable		25,000
	Interest Receivable		1,250
	Interest Revenue		
	($\$25,000 \times 10\% \times 3/12 = \$625$).....		625

EXERCISE 9-13

(a)	May 2	Notes Receivable	7,600	
		Cash		7,600
(b)	Nov. 2	Accounts Receivable—Everhart Inc.....	7,942	
		Notes Receivable		7,600
		Interest Revenue (\$7,600 X 9% X 1/2).....		342
		(To record the dishonor of Everhart Inc. note with expectation of collection)		
(c)	Nov. 2	Allowance for Doubtful Accounts	7,600	
		Notes Receivable		7,600
		(To record the dishonor of Everhart Inc. note with no expectation of collection)		

EXERCISE 9-14

(a)	Beginning accounts receivable.....	\$ 100,000
	Net credit sales	1,000,000
	Cash collections.....	(900,000)
	Accounts written off.....	(30,000)
	Ending accounts receivable	<u>\$ 170,000</u>
(b)	$\$1,000,000 / [(\$100,000 + \$170,000) / 2] = \underline{7.41}$	
(c)	$365 / 7.41 = \underline{49.3 \text{ days}}$	

SOLUTIONS TO PROBLEMS

PROBLEM 9-1A

(a)	1.	Accounts Receivable.....	3,200,000	
		Sales		3,200,000
	2.	Sales Returns and Allowances	50,000	
		Accounts Receivable.....		50,000
	3.	Cash	2,810,000	
		Accounts Receivable.....		2,810,000
	4.	Allowance for Doubtful Accounts	90,000	
		Accounts Receivable.....		90,000
	5.	Accounts Receivable.....	24,000	
		Allowance for Doubtful Accounts		24,000
		Cash	24,000	
		Accounts Receivable.....		24,000

(b)

Accounts Receivable				Allowance for Doubtful Accounts			
Bal.	960,000	(2)	50,000	(4)	90,000	Bal.	80,000
(1)	3,200,000	(3)	2,810,000			(5)	24,000
(5)	24,000	(4)	90,000				
		(5)	24,000				
Bal.	1,210,000					Bal.	14,000

PROBLEM 9-1A (Continued)

(c)	Balance before adjustment [see (b)].....	\$ 14,000
	Balance needed	<u>115,000</u>
	Adjustment required	<u>\$101,000</u>

The journal entry would therefore be as follows:

Bad Debts Expense	101,000	
Allowance for Doubtful Accounts.....		101,000

(d)
$$\frac{\$3,200,000 - \$50,000}{(\$880,000 + \$1,095,000) \div 2} = \frac{\$3,150,000}{\$987,500} = 3.19 \text{ times}$$

PROBLEM 9-2A

- (a) \$33,000.**
- (b) \$44,000 ($\$2,200,000 \times 2\%$).**
- (c) \$46,500 [$(\$825,000 \times 6\%) - \$3,000$].**
- (d) \$52,500 [$(\$825,000 \times 6\%) + \$3,000$].**
- (e) The weakness of the direct write-off method is two-fold. First, it does not match expenses with revenues. Second, the accounts receivable are not stated at cash realizable value at the balance sheet date.**

PROBLEM 9-3A

(a)	Dec. 31	Bad Debts Expense.....	30,610	
		Allowance for Doubtful Accounts		
		(\$42,610 – \$12,000)		30,610

(a) & (b)

Bad Debts Expense

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
Dec. 31	Adjusting		30,610		30,610

Allowance for Doubtful Accounts

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
Dec. 31	Balance				12,000
31	Adjusting			30,610	42,610
2011					
Mar. 31			1,000		41,610
May 31				1,000	42,610

(b)		2011			
		(1)			
	Mar. 31	Allowance for Doubtful Accounts.....		1,000	
		Accounts Receivable.....			1,000
		(2)			
	May 31	Accounts Receivable.....		1,000	
		Allowance for Doubtful Accounts			1,000
	31	Cash		1,000	
		Accounts Receivable.....			1,000

(c)		2011			
	Dec. 31	Bad Debts Expense.....	29,400		
		Allowance for Doubtful Accounts			
		(\$28,600 + \$800)			29,400

PROBLEM 9-4A

(a) Total estimated bad debts

		Number of Days Outstanding				
	Total	0–30	31–60	61–90	91–120	Over 120
Accounts receivable	\$200,000	\$77,000	\$46,000	\$39,000	\$23,000	\$15,000
% uncollectible		2%	5%	8%	10%	15%
Estimated Bad debts	\$ 11,510	\$ 1,540	\$ 2,300	\$ 3,120	\$ 2,300	\$ 2,250

(b)	Bad Debts Expense.....	19,510	
	 Allowance for Doubtful Accounts		
	 [\$11,510 + \$8,000]		19,510
(c)	Allowance for Doubtful Accounts	5,000	
	 Accounts Receivable		5,000
(d)	Accounts Receivable.....	5,000	
	 Allowance for Doubtful Accounts.....		5,000
	Cash	5,000	
	 Accounts Receivable		5,000

- (e)** If Wall Inc. used 3% of total accounts receivable rather than aging the individual accounts the bad debt expense adjustment would be \$14,000 $[(\$200,000 \times 3\%) + \$8,000]$. The rest of the entries would be the same as they were when aging the accounts receivable.

Aging the individual accounts rather than applying a percentage to the total accounts receivable should produce a more accurate allowance account and bad debts expense.

PROBLEM 9-5A

(a) The allowance method. Since the balance in the allowance for doubtful accounts is given, they must be using this method because the account would not exist if they were using the direct write-off method.

(b) (1)	Dec. 31	Bad Debts Expense		
		(\$11,750 – \$2,000).....	9,750	
		Allowance for Doubtful		
		Accounts		9,750

(2)	Dec. 31	Bad Debts Expense		
		(\$950,000 X 1%).....	9,500	
		Allowance for Doubtful		
		Accounts		9,500

(c) (1)	Dec. 31	Bad Debts Expense		
		(\$11,750 + \$2,000).....	13,750	
		Allowance for Doubtful		
		Accounts		13,750

(2)	Dec. 31	Bad Debts Expense.....	9,500	
		Allowance for Doubtful		
		Accounts		9,500

(d)		Allowance for Doubtful Accounts	3,000	
		Accounts Receivable		3,000

Note: The entry is the same whether the amount of bad debts expense at the end of 2010 was estimated using the percentage of receivables or the percentage of sales method.

(e)		Bad Debts Expense	3,000	
		Accounts Receivable		3,000

(f) Allowance for Doubtful Accounts is a contra-asset account. It is subtracted from the gross amount of accounts receivable so that accounts receivable is reported at its cash realizable value.

PROBLEM 9-6A

(a)	Oct. 7	Accounts Receivable	6,900	
		Sales		6,900
	12	Cash (\$900 – \$27)	873	
		Service Charge Expense		
		(\$900 X 3%)	27	
		Sales		900
	15	Accounts Receivable	460	
		Interest Revenue.....		460
	15	Cash	8,107	
		Notes Receivable.....		8,000
		Interest Receivable		
		(\$8,000 X 8% X 45/360)		80
		Interest Revenue		
		(\$8,000 X 8% X 15/360)		27
	24	Accounts Receivable—Hughey	9,150	
		Notes Receivable.....		9,000
		Interest Receivable		
		(\$9,000 X 10% X 36/360)		90
		Interest Revenue		
		(\$9,000 X 10% X 24/360)		60
	31	Interest Receivable		
		(\$16,000 X 9% X 1/12).....	120	
		Interest Revenue.....		120

(b)

Notes Receivable

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			33,000
15				8,000	25,000
24				9,000	16,000

PROBLEM 9-6A (Continued)**Accounts Receivable**

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 7			6,900		6,900
15			460		7,360
24			9,150		16,510

Interest Receivable

Date	Explanation	Ref.	Debit	Credit	Balance
Oct. 1	Balance	✓			170
15				80	90
24				90	0
31			120		120

(c) Current assets

Notes receivable	\$16,000
Accounts receivable.....	16,510
Interest receivable.....	120
Total receivables	<u>\$32,630</u>

PROBLEM 9-7A

Jan. 5	Accounts Receivable—Dedonder Company	20,000	
	Sales.....		20,000
20	Notes Receivable	20,000	
	Accounts Receivable—Dedonder Company		20,000
Feb. 18	Notes Receivable	8,000	
	Sales.....		8,000
Apr. 20	Cash (\$20,000 + \$450)	20,450	
	Notes Receivable		20,000
	Interest Revenue (\$20,000 X 9% X 3/12)		450
30	Cash (\$25,000 + \$1,000).....	26,000	
	Notes Receivable		25,000
	Interest Revenue (\$25,000 X 12% X 4/12).....		1,000
May 25	Notes Receivable	4,000	
	Accounts Receivable—Jenks Inc.....		4,000
Aug. 18	Cash (\$8,000 + \$360).....	8,360	
	Notes Receivable		8,000
	Interest Revenue (\$8,000 X 9% X 6/12)		360
25	Accounts Receivable—Jenks Inc. (\$4,000 + \$70).....	4,070	
	Notes Receivable		4,000
	Interest Revenue (\$4,000 X 7% X 3/12)		70
Sept. 1	Notes Receivable	12,000	
	Sales.....		12,000

PROBLEM 9-1B

(a)	1.	Accounts Receivable	2,400,000	
		Sales		2,400,000
	2.	Sales Returns and Allowances.....	45,000	
		Accounts Receivable		45,000
	3.	Cash.....	2,250,000	
		Accounts Receivable		2,250,000
	4.	Allowance for Doubtful Accounts	12,000	
		Accounts Receivable		12,000
	5.	Accounts Receivable	3,000	
		Allowance for Doubtful Accounts		3,000
		Cash.....	3,000	
		Accounts Receivable		3,000

Accounts Receivable				Allowance for Doubtful Accounts			
Bal.	250,000	(2)	45,000	(4)	12,000	Bal.	15,000
(1)	2,400,000	(3)	2,250,000			(5)	3,000
(5)	3,000	(4)	12,000				
		(5)	3,000				
Bal.	343,000					Bal.	6,000

(c)	Balance before adjustment [see (b)].....	\$ 6,000
	Balance needed	<u>22,000</u>
	Adjustment required	<u>\$16,000</u>

The journal entry would therefore be as follows:

Bad Debts Expense	16,000	
Allowance for Doubtful Accounts.....		16,000

(d)
$$\frac{\$2,400,000 - \$45,000}{(\$321,000 + \$235,000) \div 2} = \frac{\$2,355,000}{\$278,000} = 8.47 \text{ times}$$

PROBLEM 9-2B

- (a) \$22,150.**
- (b) \$22,000 $(\$1,100,000 \times 2\%)$.**
- (c) \$18,140 $[(\$369,000 \times 6\%) - \$4,000]$.**
- (d) \$24,140 $[(\$369,000 \times 6\%) + \$2,000]$.**
- (e) There are two major weaknesses with the direct write-off method. First, it does not match expenses with the associated revenues. Second, the accounts receivable are not stated at cash realizable value at the balance sheet date.**

PROBLEM 9-3B

(a)	Dec. 31	Bad Debts Expense.....	38,570	
		Allowance for Doubtful Accounts		
		(\$54,570 – \$16,000)		38,570

(a) & (b)

Bad Debts Expense

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
Dec. 31	Adjusting		38,570		38,570

Allowance for Doubtful Accounts

Date	Explanation	Ref.	Debit	Credit	Balance
2010					
Dec. 31	Balance				16,000
31	Adjusting			38,570	54,570
2011					
Mar. 1			1,900		52,670
May 1				1,900	54,570

(b)		2011			
		(1)			
Mar. 1	Allowance for Doubtful Accounts			1,900	
	Accounts Receivable.....				1,900

		(2)			
May 1	Accounts Receivable.....			1,900	
	Allowance for Doubtful Accounts				1,900
	1 Cash			1,900	
	Accounts Receivable.....				1,900

(c)		2011			
Dec. 31	Bad Debts Expense.....			44,300	
	Allowance for Doubtful Accounts				
	(\$42,300 + \$2,000).....				44,300

PROBLEM 9-4B

(a) Total estimated bad debts

		Number of Days Outstanding				
	Total	0–30	31–60	61–90	91–120	Over 120
Accounts receivable	\$375,000	\$220,000	\$90,000	\$40,000	\$10,000	\$15,000
% uncollectible		1%	4%	5%	8%	10%
Estimated Bad debts	\$ 10,100	\$ 2,200	\$ 3,600	\$ 2,000	\$ 800	\$ 1,500

(b) Bad Debts Expense..... 7,100
 Allowance for Doubtful Accounts
 (\$10,100 – \$3,000)..... 7,100

(c) Allowance for Doubtful Accounts..... 1,600
 Accounts Receivable..... 1,600

(d) Accounts Receivable..... 700
 Allowance for Doubtful Accounts..... 700

Cash 700
 Accounts Receivable..... 700

(e) When an allowance account is used, an adjusting journal entry is made at the end of each accounting period. This entry satisfies the matching principle by recording the bad debts expense in the period in which the sales occur.

PROBLEM 9-5B

(a)	(1)	Dec. 31	Bad Debts Expense		
			(\$12,500 – \$1,100).....	11,400	
			Allowance for Doubtful		
			Accounts		11,400
	(2)	Dec. 31	Bad Debts Expense		
			(\$600,000 X 2%).....	12,000	
			Allowance for Doubtful		
			Accounts		12,000
(b)	(1)	Dec. 31	Bad Debts Expense		
			(\$12,500 + \$1,100).....	13,600	
			Allowance for Doubtful		
			Accounts		13,600
	(2)	Dec. 31	Bad Debts Expense.....	12,000	
			Allowance for Doubtful		
			Accounts		12,000
(c)	Allowance for Doubtful Accounts			3,200	
	Accounts Receivable				3,200

Note: The entry is the same whether the amount of bad debts expense at the end of 2010 was estimated using the percentage of receivables or the percentage of sales method.

(d)	Bad Debts Expense	3,200	
	Accounts Receivable		3,200
- (e) The advantages of the allowance method over the direct write-off method are:
- (1) It attempts to match bad debts expense related to uncollectible accounts receivable with sales revenues on the income statement.
 - (2) It attempts to show the cash realizable value of the accounts receivable on the balance sheet.

PROBLEM 9-6B

(a)	July	5	Accounts Receivable	7,200	
			Sales		7,200
		14	Cash (\$1,000 – \$30).....	970	
			Service Charge Expense		
			(\$1,000 X 3%)	30	
			Sales		1,000
		14	Accounts Receivable	510	
			Interest Revenue.....		510
		15	Cash	12,200	
			Notes Receivable.....		12,000
			Interest Receivable		
			(\$12,000 X 10% X 45/360).....		150
			Interest Revenue		
			(\$12,000 X 10% X 15/360).....		50
		25	Accounts Receivable	30,450	
			Notes Receivable.....		30,000
			Interest Receivable		
			(\$30,000 X 9% X 36/360)		270
			Interest Revenue		
			(\$30,000 X 9% X 24/360)		180
		31	Interest Receivable		
			(\$15,000 X 12% X 1/12)	150	
			Interest Revenue.....		150

(b)

Notes Receivable

Date	Explanation	Ref.	Debit	Credit	Balance
July 1	Balance	✓			57,000
15				12,000	45,000
25				30,000	15,000

PROBLEM 9-6B (Continued)**Accounts Receivable**

Date	Explanation	Ref.	Debit	Credit	Balance
July 5			7,200		7,200
14			510		7,710
25			30,450		38,160

Interest Receivable

Date	Explanation	Ref.	Debit	Credit	Balance
July 1	Balance	✓			420
15				150	270
25				270	0
31	Adjusting		150		150

(c) Current assets

Notes receivable	\$15,000
Accounts receivable.....	38,160
Interest receivable.....	150
Total receivables	<u>\$53,310</u>

PROBLEM 9-7B

Jan.	5	Accounts Receivable—Kandle Company	10,800	
		Sales.....		10,800
Feb.	2	Notes Receivable	10,800	
		Accounts Receivable—Kandle Company		10,800
	12	Notes Receivable	13,500	
		Sales.....		13,500
	26	Accounts Receivable—Barrel Co.....	7,000	
		Sales.....		7,000
Apr.	5	Notes Receivable	7,000	
		Accounts Receivable—Barrel Co.....		7,000
	12	Cash (\$13,500 + \$225)	13,725	
		Notes Receivable		13,500
		Interest Revenue (\$13,500 X 10% X 2/12).....		225
June	2	Cash (\$10,800 + \$360)	11,160	
		Notes Receivable		10,800
		Interest Revenue (\$10,800 X 10% X 4/12).....		360
July	5	Accounts Receivable—Barrel Co. (\$7,000 + \$140)	7,140	
		Notes Receivable		7,000
		Interest Revenue (\$7,000 X 8% X 3/12)		140
	15	Notes Receivable	12,000	
		Sales.....		12,000
Oct.	15	Allowance for Doubtful Accounts	12,000	
		Notes Receivable		12,000

(a)

SEK COMPANY
Accounts Receivable Aging Schedule
May 31, 2010

	Proportion of Total	Amount in Category	Probability of Non- Collection	Estimated Uncollectible Amount
Not yet due	.620	\$ 868,000	.02	\$17,360
Less than 30 days past due	.200	280,000	.04	11,200
30 to 60 days past due	.090	126,000	.06	7,560
61 to 120 days past due	.050	70,000	.09	6,300
121 to 180 days past due	.025	35,000	.25	8,750
Over 180 days past due	.015	21,000	.70	14,700
	<u>1.000</u>	<u>\$1,400,000</u>		<u>\$65,870</u>

(b)

SEK COMPANY
Analysis of Allowance for Doubtful Accounts
May 31, 2010

June 1, 2009 balance.....	\$ 29,500
Bad debts expense accrual (\$2,900,000 X .045).....	<u>130,500</u>
Balance before write-offs of bad accounts	160,000
Write-offs of bad accounts.....	<u>102,000</u>
Balance before year-end adjustment	58,000
Estimated uncollectible amount	<u>65,870</u>
Additional allowance needed	<u>\$ 7,870</u>

Bad Debts Expense	7,870	
Allowance for Doubtful Accounts.....		7,870

**(c) 1. Steps to Improve the
Accounts Receivable Situation**

Establish more selective credit-granting policies, such as more restrictive credit requirements or more thorough credit investigations.

Establish a more rigorous collection policy either through external collection agencies or by its own personnel.

Charge interest on overdue accounts. Insist on cash on delivery (cod) or cash on order (coo) for new customers or poor credit risks.

**2. Risks and
Costs Involved**

This policy could result in lost sales and increased costs of credit evaluation. The company may be all but forced to adhere to the prevailing credit-granting policies of the office equipment and supplies industry.

This policy may offend current customers and thus risk future sales. Increased collection costs could result from this policy.

This policy could result in lost sales and increased administrative costs.

(a) (1) Accounts receivable turnover ratio

<u>PepsiCo</u>	<u>Coca-Cola</u>
$\frac{\$39,474}{(\$3,725 + \$4,389) \div 2}$	$\frac{\$28,857}{(\$2,587 + \$3,317) \div 2}$
$\frac{\$39,474}{\$4,057} = 9.7 \text{ times}$	$\frac{\$28,857}{\$2,952} = 9.8 \text{ times}$

(2) Average collection period

$$\frac{365}{9.7} = 37.6 \text{ days}$$

$$\frac{365}{9.8} = 37.2 \text{ days}$$

- (b) Both companies have reasonable accounts receivable turnovers and collection periods of slightly greater than 37 days. This collection period probably approximates their credit terms that they provide to customers.**

(a) Benefits of Factoring Receivables

Factoring is a flexible financial solution that can help your business be more competitive while improving your cash flow, credit rating, and supplier discounts. Unlike traditional bank financing, factoring relies on the financial strength and credit worthiness of your customers, not you. You can use factoring services as much as you want or as little as you want. There are no obligations, no minimums, and no maximums. Here are the most common reasons businesses use factoring services:

Offer better terms to win more business. With factoring you can attract more business by offering better terms on your invoices. Most companies negotiate on price to win business in a competitive market, but with factoring you can negotiate with terms instead of price. To your customers, better terms can be more attractive than better prices. When using attractive terms to win business, you can build the cost of factoring into your costs of goods and services.

Example: A new customer may choose to do business with your company because you can offer NET 30 or NET 45 terms while your competitor (who isn't factoring) requires payment up front but has a 3% better price. If you factor the subsequent invoice at a discount of 3%, you have leveraged factoring services to win the business at no extra cost and improved your cash flow at the same time.

Improve cash flow without additional debt. Eliminate long billing cycles. Receive cash for your outstanding invoices in 24 hours or less. No new debt is created. Factoring is not a loan. This allows you to preserve your financial leverage to take on new debt.

Customer Credit Services. Reduce bad debt expense, streamline credit approvals for new customers, improve decision-making on new business, and reduce administrative costs.

Accounts Receivable Management. Reduce administrative costs, improve customer relationships, improve receivable turns, improve accounting, and redirect critical resources to marketing and production.

Flexibility. Factor as much as you want or as little as you want. You decide. No obligations. No binding contracts. There are no minimums and no maximums in the amount you can factor. Funding is based on the strength of your customers.

- (b)** Factoring fees are based on a per Diem Rate. The factor will assess the risk of the particular situation and determine a discount rate. This usually ranges from 3% to 9% of the gross invoices sold, and is the fee for the duties the factor assumes and the cost of using their money. The sooner a receivable is paid, the lower the discount rate.
- (c)** Upon approval, the factor will advance the manufacturer 70%–90% of the total value of their invoices. This percentage is called the Advance Rate, and the cash is often delivered within 24 hours after an application is received.

The rest of the cash minus the factor's fees is then returned to the manufacturer as the receivables are collected. If the manufacturer's customers pay slowly, the discount rates that apply grow accordingly larger.

(a)	2010	2009	2008
Net credit sales.....	<u>\$500,000</u>	<u>\$600,000</u>	<u>\$400,000</u>
Credit and collection expenses			
Collection agency fees.....	\$ 2,450	\$ 2,500	\$ 2,400
Salary of accounts receivable clerk	4,100	4,100	4,100
Uncollectible accounts	8,000	9,600	6,400
Billing and mailing costs.....	2,500	3,000	2,000
Credit investigation fees	750	900	600
Total.....	<u>\$ 17,800</u>	<u>\$ 20,100</u>	<u>\$ 15,500</u>
Total expenses as a percentage of net credit sales	<u>3.56%</u>	<u>3.35%</u>	<u>3.88%</u>
(b) Average accounts receivable (5%).....	<u>\$ 25,000</u>	<u>\$ 30,000</u>	<u>\$ 20,000</u>
Investment earnings (8%).....	<u>\$ 2,000</u>	<u>\$ 2,400</u>	<u>\$ 1,600</u>
Total credit and collection expenses per above	\$ 17,800	\$ 20,100	\$ 15,500
Add: Investment earnings*	2,000	2,400	1,600
Net credit and collection expenses.....	<u>\$ 19,800</u>	<u>\$ 22,500</u>	<u>\$ 17,100</u>
Net expenses as a percentage of net credit sales	<u>3.96%</u>	<u>3.75%</u>	<u>4.28%</u>

*The investment earnings on the cash tied up in accounts receivable is an additional expense of continuing the existing credit policies.

- (c) The analysis shows that the credit card fee of 4% of net credit sales will be higher than the percentage cost of credit and collection expenses in each year before considering the effect of earnings from other investment opportunities. However, after considering investment earnings, the credit card fee of 4% will be less than the company's percentage cost if annual net credit sales are less than \$500,000.

Finally, the decision hinges on: (1) the accuracy of the estimate of investment earnings, (2) the expected trend in credit sales, and (3) the effect the new policy will have on sales. Nonfinancial factors include the effects on customer relationships of the alternative credit policies and whether the Maynes want to continue with the problem of handling their own accounts receivable.

Of course, this solution will differ from student to student. Important factors to look for would be definitions of the methods, how they are similar and how they differ. Also, look for use of good sentence structure, correct spelling, etc.

Example:

Dear Rene,

The three methods you asked about are methods of dealing with uncollectible accounts receivable. Two of them, percentage-of-sales and percentage-of-receivables, are “allowance” methods used to estimate the amount uncollectible. Under the percentage-of-sales basis, management establishes a percentage relationship between the amount of credit sales and expected losses from uncollectible accounts. This is based on past experience and anticipated credit policy. The percentage is then applied to either total credit sales or net credit sales of the current year. This basis of estimating emphasizes the matching of expenses with revenues.

Under the percentage-of-receivables basis, management establishes a percentage relationship between the amount of receivables and expected losses from uncollectible accounts. Customer accounts are classified by the length of time they have been unpaid. This basis emphasizes cash realizable value of receivables and is therefore deemed a “balance sheet” approach.

The direct write-off method does not estimate losses and an allowance account is not used. Instead, when an account is determined to be uncollectible, it is written off directly to Bad Debts Expense. Unless bad debt losses are insignificant, this method is not acceptable for financial reporting purposes.

Sincerely,

- (a) The stakeholders in this situation are:
- ▶ The president of Ruiz Co.
 - ▶ The controller of Ruiz Co.
 - ▶ The stockholders.
- (b) Yes. The controller is posed with an ethical dilemma—should he/she follow the president’s “suggestion” and prepare misleading financial statements (understated net income) or should he/she attempt to stand up to and possibly anger the president by preparing a fair (realistic) income statement.
- (c) Ruiz Co.’s growth rate should be a product of fair and accurate financial statements, not vice versa. That is, one should not prepare financial statements with the objective of achieving or sustaining a predetermined growth rate. The growth rate should be a product of management and operating results, not of creative accounting.

- (a) There are a number of sources that compare features of credit cards. Here are three: www.creditcards.com/, www.federalreserve.gov/pubs/shop/, and www.creditorweb.com/.
- (b) Here are some of the features you should consider: annual percentage rate, credit limit, annual fees, billing and due dates, minimum payment, penalties and fees, premiums received (airlines miles, hotel discounts etc.), and cash rebates.
- (c) Answer depends on present credit card and your personal situation.

CHAPTER 10

Plant Assets, Natural Resources, and Intangible Assets

ASSIGNMENT CLASSIFICATION TABLE

Study Objectives	Questions	Brief Exercises	Do It!	Exercises	A Problems	B Problems
1. Describe how the cost principle applies to plant assets.	1, 2, 3	1, 2	1	1, 2, 3	1A	1B
2. Explain the concept of depreciation.	4, 5		2	4		
3. Compute periodic depreciation using different methods.	6, 7, 21, 22, 23	3, 4, 5, 6	6	5, 6, 7	2A, 3A, 4A, 5A	2B, 3B, 4B, 5B
4. Describe the procedure for revising periodic depreciation.	8	7	7, 8	8	4A	4B
5. Distinguish between revenue and capital expenditures, and explain the entries for each.	9, 24	8				
6. Explain how to account for the disposal of a plant asset.	10, 11	9, 10		9, 10	5A, 6A	5B, 6B
7. Compute periodic depletion of natural resources.	12, 13	11		11		
8. Explain the basic issues related to accounting for intangible assets.	14, 15, 16, 17, 18, 19	12		12, 13	7A, 8A	7B, 8B
9. Indicate how plant assets, natural resources, and intangible assets are reported.	20, 25	13, 14		14	5A, 7A, 9A	5B, 7B, 9B
*10. Explain how to account for the exchange of plant assets.	26, 27	15, 16		15, 16		

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Determine acquisition costs of land and building.	Simple	20–30
2A	Compute depreciation under different methods.	Simple	30–40
3A	Compute depreciation under different methods.	Moderate	30–40
4A	Calculate revisions to depreciation expense.	Moderate	20–30
5A	Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.	Moderate	40–50
6A	Record disposals.	Simple	30–40
7A	Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.	Moderate	30–40
8A	Prepare entries to correct errors made in recording and amortizing intangible assets.	Moderate	30–40
9A	Calculate and comment on asset turnover ratio.	Moderate	5–10
1B	Determine acquisition costs of land and building.	Simple	20–30
2B	Compute depreciation under different methods.	Simple	30–40
3B	Compute depreciation under different methods.	Moderate	30–40
4B	Calculate revisions to depreciation expense.	Moderate	20–30
5B	Journalize a series of equipment transactions related to purchase, sale, retirement, and depreciation.	Moderate	40–50
6B	Record disposals.	Simple	30–40
7B	Prepare entries to record transactions related to acquisition and amortization of intangibles; prepare the intangible assets section.	Moderate	30–40
8B	Prepare entries to correct errors made in recording and amortizing intangible assets.	Moderate	30–40
9B	Calculate and comment on asset turnover ratio.	Moderate	5–10

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 10
PLANT ASSETS, NATURAL RESOURCES,
AND INTANGIBLE ASSETS

Number	SO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	2–4
BE2	1	AP	Simple	1–2
BE3	3	AP	Simple	2–4
BE4	3	E	Moderate	4–6
BE5	3	AP	Simple	4–6
BE6	3	AP	Simple	2–4
BE7	4	AN	Moderate	4–6
BE8	5	AP	Simple	2–4
BE9	6	AP	Simple	4–6
BE10	6	AP	Simple	4–6
BE11	7	AP	Simple	4–6
BE12	8	AP	Simple	2–4
BE13	9	AP	Simple	4–6
BE14	9	AP	Simple	2–4
BE15	10	AP	Simple	4–6
BE16	10	AP	Simple	4–6
DI1	1	C	Simple	4–6
DI2	2	AP	Simple	2–4
DI3	6	AP	Simple	6–8
DI4	7, 8	K	Simple	2–4
EX1	1	C	Simple	6–8
EX2	1	AP	Simple	4–6
EX3	1	AP	Simple	4–6
EX4	2	C	Simple	4–6
EX5	3	AP	Simple	6–8
EX6	3	AP	Simple	8–10
EX7	3	AP	Simple	10–12
EX8	4	AN	Moderate	8–10

PLANT ASSETS, NATURAL RESOURCES, AND INTANGIBLE ASSETS (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX9	6	AP	Moderate	8–10
EX10	6	AP	Moderate	10–12
EX11	7	AP	Simple	6–8
EX12	8	AP	Simple	4–6
EX13	8	AP	Simple	8–10
EX14	9	AP	Simple	2–4
EX15	10	AP	Moderate	8–10
EX16	10	AP	Moderate	8–10
P1A	1	C	Simple	20–30
P2A	3	AP	Simple	30–40
P3A	3	AN	Moderate	30–40
P4A	3, 4	AP	Moderate	20–30
P5A	3, 6, 9	AP	Moderate	40–50
P6A	6	AP	Simple	30–40
P7A	8, 9	AP	Moderate	30–40
P8A	8	AP	Moderate	30–40
P9A	9	AN	Moderate	5–10
P1B	1	C	Simple	20–30
P2B	3	AP	Simple	30–40
P3B	3	AN	Moderate	30–40
P4B	3, 4	AP	Moderate	20–30
P5B	3, 6, 9	AP	Moderate	40–50
P6B	6	AP	Simple	30–40
P7B	8, 9	AP	Moderate	30–40
P8B	8	AP	Moderate	30–40
P9B	9	AN	Moderate	5–10
BYP1	3, 8	AN	Simple	15–20
BYP2	9	AN, E	Simple	10–15
BYP3	2, 3	C	Simple	10–15
BYP4	3	AP, E	Moderate	20–25
BYP5	3	C	Simple	5–10
BYP6	4	E	Simple	10–15
BYP7	8	E	Simple	5–10

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Describe how the cost principle applies to plant assets.		Q10-1 E10-1 Q10-2 P10-1A Q10-3 P10-1B DI10-1	BE10-1 E10-2 BE10-2 E10-3			
2. Explain the concept of depreciation.	Q10-5	Q10-4 E10-4	DI10-2			
3. Compute periodic depreciation using different methods.		Q10-6 Q10-23 Q10-7 Q10-21 Q10-22	BE10-3 E10-6 P10-5A BE10-5 E10-7 P10-2B BE10-6 P10-2A P10-4B E10-5 P10-4A P10-5B	P10-3A P10-3B		BE10-4
4. Describe the procedure for revising periodic depreciation.		Q10-8	P10-4A P10-4B	BE10-7 E10-8		
5. Distinguish between revenue and capital expenditures, and explain the entries for each.		Q10-9 Q10-24	BE10-8			
6. Explain how to account for the disposal of a plant asset.	Q10-10	Q10-11	BE10-9 E10-9 P10-6A BE10-10 E10-10 P10-5B DI10-3 P10-5A P10-6B			
7. Compute periodic depletion of natural resources.	Q10-12 DI10-4	Q10-13	BE10-11 E10-11			
8. Explain the basic issues related to accounting for intangible assets.	Q10-18	Q10-14 Q10-17 Q10-15 Q10-19 Q10-16 DI10-4	BE10-12 P10-7A P10-8B E10-12 P10-8A E10-13 P10-7B			
9. Indicate how plant assets, natural resources, and intangible assets are reported.	Q10-25		Q10-20 E10-14 P10-5B BE10-13 P10-5A P10-7B BE10-14 P10-7A	P10-9A P10-9B		
*10. Explain how to account for the exchange of plant assets.	Q10-26	Q10-27	BE10-15 E10-15 BE10-16 E10-16			
Broadening Your Perspective		Exploring the Web Communication	Decision Making Across the Organization	Financial Reporting Comp. Analysis		Comp. Analysis Decision Making Across the Organization Ethics Case All About You

ANSWERS TO QUESTIONS

1. For plant assets, the cost principle means that cost consists of all expenditures necessary to acquire the asset and make it ready for its intended use.
2. Examples of land improvements include driveways, parking lots, fences, and underground sprinklers.
3.
 - (a) When only the land is to be used, all demolition and removal costs of the building less any proceeds from salvaged materials are necessary expenditures to make the land ready for its intended use.
 - (b) When both the land and building are to be used, necessary costs of the building include remodeling expenditures and the cost of replacing or repairing the roofs, floors, wiring, and plumbing.
4. You should explain to the president that depreciation is a process of allocating the cost of a plant asset to expense over its service (useful) life in a rational and systematic manner. Recognition of depreciation is not intended to result in the accumulation of cash for replacement of the asset.
5.
 - (a) Salvage value, also called residual value, is the expected value of the asset at the end of its useful life.
 - (b) Salvage value is used in determining depreciation in each of the methods except the declining-balance method.
6.
 - (a) Useful life is expressed in years under the straight-line method and in units of activity under the units-of-activity method.
 - (b) The pattern of periodic depreciation expense over useful life is constant under the straight-line method and variable under the units-of-activity method.
7. The effects of the three methods on annual depreciation expense are: Straight-line—constant amount; units of activity—varying amount; declining-balance—decreasing amounts.
8. A revision of depreciation is made in current and future years but not retroactively. The rationale is that continual restatement of prior periods would adversely affect confidence in the financial statements.
9. Revenue expenditures are ordinary repairs made to maintain the operating efficiency and productive life of the asset. Capital expenditures are additions and improvements made to increase operating efficiency, productive capacity, or useful life of the asset. Revenue expenditures are recognized as expenses when incurred; capital expenditures are generally debited to the plant asset affected.
10. In a sale of plant assets, the book value of the asset is compared to the proceeds received from the sale. If the proceeds of the sale exceed the book value of the plant asset, a gain on disposal occurs. If the proceeds of the sale are less than the book value of the plant asset sold, a loss on disposal occurs.
11. The plant asset and its accumulated depreciation should continue to be reported on the balance sheet without further depreciation adjustment until the asset is retired. Reporting the asset and related accumulated depreciation on the balance sheet informs the reader of the financial statements that the asset is still in use. However, once an asset is fully depreciated, even if it is still being used, no additional depreciation should be taken. In no situation can the accumulated depreciation on the plant asset exceed its cost.

Questions Chapter 10 (Continued)

12. Natural resources consist of underground deposits of oil, gas, and minerals, and standing timber. These long-lived productive assets have two distinguishing characteristics: they are physically extracted in operations, and they are replaceable only by an act of nature.
13. Depletion is the allocation of the cost of natural resources to expense in a rational and systematic manner over the resource's useful life. It is computed by multiplying the depletion cost per unit by the number of units extracted and sold.
14. The terms depreciation, depletion, and amortization are all concerned with allocating the cost of an asset to expense over the periods benefited. Depreciation refers to allocating the cost of a plant asset to expense, depletion to recognizing the cost of a natural resource as expense, and amortization to allocating the cost of an intangible asset to expense.
15. The intern is not correct. The cost of an intangible asset should be amortized over that asset's useful life (the period of time when operations are benefited by use of the asset). In addition, some intangibles have indefinite lives and therefore are not amortized at all.
16. The favorable attributes which could result in goodwill include exceptional management, desirable location, good customer relations, skilled employees, high-quality products, and harmonious relations with labor unions.
17. Goodwill is the value of many favorable attributes that are intertwined in the business enterprise. Goodwill can be identified only with the business as a whole and, unlike other assets, cannot be sold separately. Goodwill can only be sold if the entire business is sold. And, if goodwill appears on the balance sheet, it means the company has purchased another company for more than the fair market value of its net assets.
18. Goodwill is recorded only when there is a transaction that involves the purchase of an entire business. Goodwill is the excess of cost over the fair market value of the net assets (assets less liabilities) acquired. The recognition of goodwill without an exchange transaction would lead to subjective valuations which would reduce the reliability of financial statements.
19. Research and development costs present several accounting problems. It is sometimes difficult to assign the costs to specific projects, and there are uncertainties in identifying the extent and timing of future benefits. As a result, the FASB requires that research and development costs be recorded as an expense when incurred.
20. McDonald's asset turnover ratio is computed as follows:

$$\frac{\text{Net sales}}{\text{Average total assets}} = \frac{\$20.5 \text{ billion}}{\$28.9 \text{ billion}} = .71 \text{ times}$$

21. Since Resco uses the straight-line depreciation method, its depreciation expense will be lower in the early years of an asset's useful life as compared to using an accelerated method. Yapan's depreciation expense in the early years of an asset's useful life will be higher as compared to the straight-line method. Resco's net income will be higher than Yapan's in the first few years of the asset's useful life. And, the reverse will be true late in an asset's useful life.

Questions Chapter 10 (Continued)

- 22.** Yes, the tax regulations of the IRS allow a company to use a different depreciation method on the tax return than is used in preparing financial statements. Lopez Corporation uses an accelerated depreciation method for tax purposes to minimize its income taxes and thereby the cash outflow for taxes.
- 23.** By selecting a longer estimated useful life, May Corp. is spreading the plant asset's cost over a longer period of time. The depreciation expense reported in each period is lower and net income is higher. Won's choice of a shorter estimated useful life will result in higher depreciation expense reported in each period and lower net income.
- 24.** Expensing these costs will make current period income lower but future period income higher because there will be no additional depreciation expense in future periods. If the costs are ordinary repairs, they should be expensed.
- 25.** PepsiCo's 2007 note 4 shows the following classifications and amounts for its property, plant, and equipment (in millions):

Land and improvements	\$ 864
Buildings and improvements	4,577
Machinery & equipment, including fleet and software	14,471
Construction in progress	1,984
Accumulated depreciation	<u>(10,668)</u>
	<u>\$ 11,228</u>

- 26.** When assets are exchanged, the gain or loss on disposal is computed as the difference between the book value and the fair market value of the asset given up at the time of exchange.
- 27.** Yes, Tatum should recognize a gain equal to the difference between the fair market value of the old machine and its book value. If the fair market value of the old machine is less than its book value, Tatum should recognize a loss equal to the difference between the two amounts.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 10-1

All of the expenditures should be included in the cost of the land. Therefore, the cost of the land is \$81,000, or (\$70,000 + \$3,000 + \$2,500 + \$2,000 + \$3,500).

BRIEF EXERCISE 10-2

The cost of the truck is \$31,900 (cash price \$30,000 + sales tax \$1,500 + painting and lettering \$400). The expenditures for insurance and motor vehicle license should not be added to the cost of the truck.

BRIEF EXERCISE 10-3

Depreciable cost of \$36,000, or (\$42,000 – \$6,000). With a four-year useful life, annual depreciation is \$9,000, or (\$36,000 ÷ 4). Under the straight-line method, depreciation is the same each year. Thus, depreciation is \$9,000 for both the first and second years.

BRIEF EXERCISE 10-4

It is likely that management requested this accounting treatment to boost reported net income. Land is not depreciated; thus, by reporting land at \$120,000 above its actual value the company increased yearly income by \$6,000, $\left(\frac{\$120,000}{20 \text{ years}} \right)$ or the reduction in depreciation expense. This practice is not ethical because management is knowingly misstating asset values.

BRIEF EXERCISE 10-5

The declining balance rate is 50%, or (25% X 2) and this rate is applied to book value at the beginning of the year. The computations are:

	<u>Book Value</u>	X	<u>Rate</u>	=	<u>Depreciation</u>
Year 1	\$42,000		50%		\$21,000
Year 2	(\$42,000 – \$21,000)		50%		\$10,500

BRIEF EXERCISE 10-6

The depreciation cost per unit is 22 cents per mile computed as follows:

Depreciable cost $(\$33,500 - \$500) \div 150,000 = \$0.22$
Year 1 30,000 miles X \$0.22 = \$6,600
Year 2 20,000 miles X \$0.22 = \$4,400

BRIEF EXERCISE 10-7

Book value, 1/1/10	\$20,000
Less: Salvage value.....	<u>2,000</u>
Depreciable cost	<u>\$18,000</u>
Remaining useful life.....	<u>4 years</u>
Revised annual depreciation $(\$18,000 \div 4)$	<u>\$ 4,500</u>

BRIEF EXERCISE 10-8

1. Repair Expense.....	45	
Cash.....		45
2. Delivery Truck	400	
Cash.....		400

BRIEF EXERCISE 10-9

(a) Accumulated Depreciation—Delivery		
Equipment	41,000	
Delivery Equipment.....		41,000
(b) Accumulated Depreciation—Delivery		
Equipment	39,000	
Loss on Disposal	2,000	
Delivery Equipment.....		41,000

BRIEF EXERCISE 10-9 (Continued)

Cost of delivery equipment	\$41,000
Less accumulated depreciation	<u>39,000</u>
Book value at date of disposal	2,000
Proceeds from sale	<u>0</u>
Loss on disposal	<u>\$ 2,000</u>

BRIEF EXERCISE 10-10

(a) Depreciation Expense—Office Equipment	5,250	
Accumulated Depreciation—Office Equipment		5,250
(b) Cash	20,000	
Accumulated Depreciation—Office Equipment	47,250	
Loss on Disposal	4,750	
Office Equipment		72,000

Cost of office equipment	\$72,000
Less accumulated depreciation	<u>47,250*</u>
Book value at date of disposal	24,750
Proceeds from sale	<u>20,000</u>
Loss on disposal	<u>\$ 4,750</u>

*\$42,000 + \$5,250

BRIEF EXERCISE 10-11

- (a) Depletion cost per unit = $\$7,000,000 \div 35,000,000 = \$0.20$ depletion cost per ton
 $\$0.20 \times 6,000,000 = \$1,200,000$

Depletion Expense	1,200,000	
Accumulated Depletion		1,200,000
(b) Ore mine	\$7,000,000	
Less: Accumulated depletion	<u>1,200,000</u>	\$5,800,000

BRIEF EXERCISE 10-12

(a)	Amortization Expense—Patent (\$120,000 ÷ 10)	12,000	
	Patents		12,000
(b)	Intangible Assets		
	Patents		\$108,000

BRIEF EXERCISE 10-13

SPAIN COMPANY
Balance Sheet (partial)
December 31, 2010

Property, plant, and equipment			
Coal mine	\$ 500,000		
Less: Accumulated depletion.....	<u>108,000</u>	\$392,000	
Buildings	1,100,000		
Less: Accumulated depreciation	<u>650,000</u>	<u>450,000</u>	
Total property, plant, and equipment.....			\$842,000
Intangible assets			
Goodwill.....			410,000

BRIEF EXERCISE 10-14

$$\$61.5 \div \left(\frac{\$37.3 + \$44.6}{2} \right) = 1.50 \text{ times}$$

*BRIEF EXERCISE 10-15

Delivery Equipment (new).....	24,000	
Accumulated Depreciation—Delivery Equipment	30,000	
Loss on Disposal	12,000	
Delivery Equipment (old)		61,000
Cash		5,000

***BRIEF EXERCISE 10-15 (Continued)**

Fair market value of old delivery equipment	\$19,000
Cash paid	<u>5,000</u>
Cost of delivery equipment	<u>\$24,000</u>

Fair market value of old delivery equipment	\$19,000
Book value of old delivery equipment (\$61,000 – \$30,000)	<u>31,000</u>
Loss on disposal	<u>\$12,000</u>

***BRIEF EXERCISE 10-16**

Delivery Equipment (new)	43,000	
Accumulated Depreciation—Delivery Equipment.....	30,000	
Gain on Disposal		7,000
Delivery Equipment (old)		61,000
Cash.....		5,000

Fair market value of old delivery equipment	\$38,000
Cash paid	<u>5,000</u>
Cost of new delivery equipment	<u>\$43,000</u>

Fair market value of old delivery equipment	\$38,000
Book value of old delivery equipment (\$61,000 – \$30,000)	<u>31,000</u>
Gain on disposal	<u>\$ 7,000</u>

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 10-1

The following four items are expenditures necessary to acquire the truck and get it ready for use:

Negotiated purchase price	\$24,000
Installation of special shelving	1,100
Painting and lettering	900
Sales tax	<u>1,300</u>
Total paid	<u>\$27,300</u>

Thus, the cost of the truck is \$27,300. The payments for the motor vehicle license and for the insurance are operating costs and are expensed in the first year of the truck's life.

DO IT! 10-2

$$\text{Depreciation expense} = \frac{\text{Cost} - \text{Salvage}}{\text{Useful life}} = \frac{\$15,000 - \$1,000}{8 \text{ years}} = \$1,750$$

The entry to record the first year's depreciation would be:

Depreciation Expense	1,750	
Accumulated Depreciation		1,750
(To record annual depreciation on mower)		

DO IT! 10-3

(a) Sale of truck for cash at a gain:

Cash	26,000	
Accumulated Depreciation—Truck	28,000	
Truck		50,000
Gain on Disposal		4,000

DO IT! 10-3 (Continued)

(b) Sale of truck for cash at a loss:

Cash.....	15,000	
Loss on Disposal	7,000	
Accumulated Depreciation—Truck	28,000	
Truck		50,000

DO IT! 10-4

1. Intangible assets
2. Amortization
3. Franchise
4. Research and development costs
5. Goodwill

SOLUTIONS TO EXERCISES

EXERCISE 10-1

- (a) Under the cost principle, the acquisition cost for a plant asset includes all expenditures necessary to acquire the asset and make it ready for its intended use. For example, the cost of factory machinery includes the purchase price, freight costs paid by the purchaser, insurance costs during transit, and installation costs.
- (b)
1. Land
 2. Factory Machinery
 3. Delivery Equipment
 4. Land Improvements
 5. Delivery Equipment
 6. Factory Machinery
 7. Prepaid Insurance
 8. License Expense

EXERCISE 10-2

1. Factory Machinery
2. Truck
3. Factory Machinery
4. Land
5. Prepaid Insurance
6. Land Improvements
7. Land Improvements
8. Land
9. Building

EXERCISE 10-3

(a) Cost of land

Cash paid	\$80,000
Net cost of removing warehouse (\$8,600 – \$1,700).....	6,900
Attorney's fee	1,100
Real estate broker's fee	5,000
Total	<u>\$93,000</u>

- (b) The architect's fee (\$7,800) should be debited to the Building account. The cost of the driveways and parking lot (\$14,000) should be debited to Land Improvements.

EXERCISE 10-4

1. False. Depreciation is a process of *cost allocation*, not *asset valuation*.
2. True.
3. False. The book value of a plant asset *may be quite different* from its market value.
4. False. Depreciation applies to three classes of plant assets: land *improvements*, buildings, and equipment.
5. False. Depreciation does not apply to *land* because its usefulness and revenue-producing ability generally remain intact over time.
6. True.
7. False. Recognizing depreciation on an asset *does not result* in an accumulation of cash for replacement of the asset.
8. True.
9. False. Depreciation expense is reported on the income statement, and *accumulated depreciation is reported as a deduction from plant assets on the balance sheet*.
10. False. *Three* factors affect the computation of depreciation: cost, useful life, and salvage value (*also called residual value*).

EXERCISE 10-5

- (a) Depreciation cost per unit is \$1.60 per mile
[$(\$168,000 - \$8,000) \div 100,000$].

Year	Computation		Annual Depreciation Expense	End of Year	
	Units of Activity X	Depreciation Cost/Unit		Accumulated Depreciation	Book Value
2010	26,000	\$1.60	\$41,600	\$ 41,600	\$126,400
2011	32,000	1.60	51,200	92,800	75,200
2012	25,000	1.60	40,000	132,800	35,200
2013	17,000	1.60	27,200	160,000	8,000

EXERCISE 10-6

- (a) Straight-line method:

$$\left(\frac{\$120,000 - \$12,000}{5} \right) = \$21,600 \text{ per year.}$$

$$2010 \text{ depreciation} = \$21,600 \times 3/12 = \underline{\$5,400}.$$

- (b) Units-of-activity method:

$$\left(\frac{\$120,000 - \$12,000}{10,000} \right) = \$10.80 \text{ per hour.}$$

$$2010 \text{ depreciation} = 1,700 \text{ hours} \times \$10.80 = \underline{\$18,360}.$$

- (c) Declining-balance method:

$$2010 \text{ depreciation} = \$120,000 \times 40\% \times 3/12 = \underline{\$12,000}.$$

$$\text{Book value January 1, 2011} = \$120,000 - \$12,000 = \underline{\$108,000}.$$

$$2011 \text{ depreciation} = \$108,000 \times 40\% = \underline{\$43,200}.$$

EXERCISE 10-7

- (a) (1) 2010: $(\$30,000 - \$2,000)/8 = \underline{\$3,500}$
 2011: $(\$30,000 - \$2,000)/8 = \underline{\$3,500}$
- (2) $(\$30,000 - \$2,000)/100,000 = \$0.28$ per mile
 2010: $15,000 \times \$0.28 = \underline{\$4,200}$
 2011: $12,000 \times \$0.28 = \underline{\$3,360}$
- (3) 2010: $\$30,000 \times 25\% = \underline{\$7,500}$
 2011: $(\$30,000 - \$7,500) \times 25\% = \underline{\$5,625}$

(b) (1)	Depreciation Expense.....	3,500	
	Accumulated Depreciation—Delivery Truck.....		3,500
(2)	Delivery Truck		\$30,000
	Less: Accumulated Depreciation.....		<u>3,500</u>
			<u>\$26,500</u>

EXERCISE 10-8

(a) Type of Asset	Building	Warehouse
Book value, 1/1/10	\$686,000	\$75,000
Less: Salvage value	<u>37,000</u>	<u>3,600</u>
Depreciable cost	<u>\$649,000</u>	<u>\$71,400</u>
Remaining useful life in years	<u>44</u>	<u>15</u>
Revised annual depreciation	<u>\$ 14,750</u>	<u>\$ 4,760</u>

(b) Dec. 31	Depreciation Expense—Building	14,750	
	Accumulated Depreciation—		
	Building		14,750

EXERCISE 10-9

Jan.	1	Accumulated Depreciation—Machinery	62,000	
		Machinery		62,000
June	30	Depreciation Expense	4,000	
		Accumulated Depreciation—Computer (\$40,000 X 1/5 X 6/12)		4,000
	30	Cash	14,000	
		Accumulated Depreciation—Computer (\$40,000 X 3/5 = \$24,000; \$24,000 + \$4,000)	28,000	
		Gain on Disposal [\$14,000 – (\$40,000 – \$28,000)]		2,000
		Computer		40,000
Dec.	31	Depreciation Expense	6,000	
		Accumulated Depreciation—Truck [((\$39,000 – \$3,000) X 1/6)]		6,000
	31	Loss on Disposal	9,000	
		Accumulated Depreciation—Truck [((\$39,000 – \$3,000) X 5/6)]	30,000	
		Delivery Truck		39,000

EXERCISE 10-10

(a)	Cash	28,000	
	Accumulated Depreciation—Equipment [((\$50,000 – \$5,000) X 3/5)]	27,000	
	Equipment		50,000
	Gain on Disposal		5,000
(b)	Depreciation Expense [((\$50,000 – \$5,000) X 1/5 X 4/12)]	3,000	
	Accumulated Depreciation—Equipment		3,000
	Cash	28,000	
	Accumulated Depreciation—Equipment (\$27,000 + \$3,000)	30,000	
	Equipment		50,000
	Gain on Disposal		8,000

EXERCISE 10-10 (Continued)

(c)	Cash	11,000	
	Accumulated Depreciation—Equipment.....	27,000	
	Loss on Disposal	12,000	
	Equipment		50,000
(d)	Depreciation Expense		
	$[(\$50,000 - \$5,000) \div 5 \times 9/12]$	6,750	
	Accumulated Depreciation—Equipment.....		6,750
	Cash	11,000	
	Accumulated Depreciation—Equipment		
	$(\$27,000 + \$6,750)$	33,750	
	Loss on Disposal	5,250	
	Equipment		50,000

EXERCISE 10-11

(a)	Dec. 31	Depletion Expense	90,000	
		Accumulated Depletion		
		$(100,000 \times \$0.90)$		90,000
	Cost	(a)	\$720,000	
	Units estimated	(b)	800,000 tons	
	Depletion cost per unit $[(a) \div (b)]$		\$0.90	

- (b) The costs pertaining to the unsold units are reported in current assets as part of inventory $(20,000 \times \$0.90 = \$18,000)$.

EXERCISE 10-12

Dec. 31	Amortization Expense—Patent	12,000	
	Patents $(\$90,000 \div 5 \times 8/12)$		12,000

Note: No entry is made to amortize goodwill because it has an indefinite life.

EXERCISE 10-13

1/2/10	Patents.....	560,000	
	Cash.....		560,000
4/1/10	Goodwill	360,000	
	Cash.....		360,000
	(Part of the entry to record purchase of another company)		
7/1/10	Franchise	440,000	
	Cash.....		440,000
9/1/10	Research and Development Expense	185,000	
	Cash.....		185,000
12/31/10	Amortization Expense—Patent (\$560,000 ÷ 7)	80,000	
	Amortization Expense—Franchise [((\$440,000 ÷ 10) X 1/2)].....	22,000	
	Patents		80,000
	Franchise.....		22,000

Ending balances, 12/31/10:

Patent = \$480,000 (\$560,000 – \$80,000).

Goodwill = \$360,000

Franchise = \$418,000 (\$440,000 – \$22,000).

R&D expense = \$185,000

EXERCISE 10-14

$$\text{Asset turnover ratio} = \frac{\$4,900,000}{\$1,400,000} = 3.5 \text{ times}$$

***EXERCISE 10-15**

(a) Trucks (new)	53,000	
Accumulated Depreciation—Trucks (old).....	22,000	
Loss on Disposal.....	6,000	
Trucks (old)		64,000
Cash.....		17,000

Cost of old trucks	\$64,000
Less: Accumulated depreciation	<u>22,000</u>
Book value	42,000
Fair market value of old trucks	<u>36,000</u>
Loss on disposal	<u>\$ 6,000</u>

Fair market value of old trucks	\$36,000
Cash paid	<u>17,000</u>
Cost of new trucks	<u>\$53,000</u>

(b) Machine (new)	12,000	
Accumulated Depreciation—Machine (old).....	4,000	
Gain on Disposal		1,000
Machine (old)		12,000
Cash.....		3,000

Cost of old machine	\$12,000
Less: Accumulated depreciation	<u>4,000</u>
Book value	8,000
Fair market value of old machine	<u>9,000</u>
Gain on disposal	<u>\$ 1,000</u>

Fair market value of old machine	\$ 9,000
Cash paid	<u>3,000</u>
Cost of new machine	<u>\$12,000</u>

***EXERCISE 10-16**

(a)	Delivery Truck (new).....	4,000	
	Loss on Disposal	3,000	
	Accumulated Depreciation—Delivery		
	Truck (old)	15,000	
	Delivery Truck (old).....		22,000

Cost of old truck	\$22,000
Less: Accumulated depreciation	<u>15,000</u>
Book value	7,000
Fair market value of old truck	<u>4,000</u>
Loss on disposal	<u>\$ 3,000</u>

(b)	Delivery Truck (new).....	4,000	
	Accumulated Depreciation—Delivery		
	Trucks (old).....	8,000	
	Delivery Truck (old).....		10,000
	Gain on Disposal		2,000

Cost of old truck	\$10,000
Less: Accumulated depreciation	<u>8,000</u>
Book value	2,000
Fair market value of old truck	<u>4,000</u>
Gain on Disposal	<u>\$ 2,000</u>

Cost of new delivery truck*	<u>\$ 4,000</u>

*Fair value of old truck

SOLUTIONS TO PROBLEMS

PROBLEM 10-1A

Item	Land	Building	Other Accounts
1	\$ 4,000		
2		\$700,000	
3			\$ 5,000 Property Taxes Expense
4	145,000		
5		35,000	
6		10,000	
7	2,000		
8			14,000 Land Improvements
9	15,000		
10	(3,500)		
	<u>\$162,500</u>	<u>\$745,000</u>	

PROBLEM 10-2A

(a)

<u>Year</u>	<u>Computation</u>	<u>Accumulated Depreciation 12/31</u>
BUS 1		
2008	\$ 90,000 X 20% = \$18,000	\$ 18,000
2009	\$ 90,000 X 20% = \$18,000	36,000
2010	\$ 90,000 X 20% = \$18,000	54,000
BUS 2		
2008	\$120,000 X 50% = \$60,000	\$ 60,000
2009	\$ 60,000 X 50% = \$30,000	90,000
2010	\$ 30,000 X 50% = \$15,000	105,000
BUS 3		
2009	24,000 miles X \$.60* = \$14,400	\$ 14,400
2010	34,000 miles X \$.60 = \$20,400	34,800

*\$72,000 ÷ 120,000 miles = \$.60 per mile.

(b)

<u>Year</u>	<u>Computation</u>	<u>Expense</u>
BUS 2		
(1) 2008	\$120,000 X 50% X 9/12 = \$45,000	<u>\$45,000</u>
(2) 2009	\$75,000 X 50% = \$37,500	<u>\$37,500</u>

PROBLEM 10-3A

(a) (1)	Purchase price	\$ 38,000
	Sales tax	1,700
	Shipping costs	150
	Insurance during shipping	80
	Installation and testing	70
	Total cost of machine	<u>\$ 40,000</u>

Machine	40,000
Cash	40,000

(2)	Recorded cost	\$ 40,000
	Less: Salvage value	<u>5,000</u>
	Depreciable cost	\$ 35,000
	Years of useful life	<u>÷ 5</u>
	Annual depreciation	<u>\$ 7,000</u>

Depreciation Expense	7,000
Accumulated Depreciation	7,000

(b) (1)	Recorded cost	160,000
	Less: Salvage value	<u>10,000</u>
	Depreciable cost	\$150,000
	Years of useful life	<u>÷ 4</u>
	Annual depreciation	<u>\$ 37,500</u>

(2) Book Value at Beginning of Year	DDB Rate	Annual Depreciation Expense	Accumulated Depreciation
\$160,000	50%*	\$80,000	\$ 80,000
80,000	50%	40,000	120,000
40,000	50%	20,000	140,000
20,000	50%	10,000	150,000

*100% ÷ 4-year useful life = 25% X 2 = 50%.

PROBLEM 10-3A (Continued)

- (3) Depreciation cost per unit = $(\$160,000 - \$10,000)/125,000$ units = \$1.20 per unit.

Annual Depreciation Expense

2010:	\$1.20 X 45,000 = \$54,000
2011:	1.20 X 35,000 = 42,000
2012:	1.20 X 25,000 = 30,000
2013:	1.20 X 20,000 = 24,000

- (c) The declining-balance method reports the highest amount of depreciation expense the first year while the straight-line method reports the lowest. In the fourth year, the straight-line method reports the highest amount of depreciation expense while the declining-balance method reports the lowest.

These facts occur because the declining-balance method is an accelerated depreciation method in which the largest amount of depreciation is recognized in the early years of the asset's life. If the straight-line method is used, the same amount of depreciation expense is recognized each year. Therefore, in the early years less depreciation expense will be recognized under this method than under the declining-balance method while more will be recognized in the later years.

The amount of depreciation expense recognized using the units-of-activity method is dependent on production, so this method could recognize more or less depreciation expense than the other two methods in any year depending on output.

No matter which of the three methods is used, the same total amount of depreciation expense will be recognized over the four-year period.

PROBLEM 10-4A

Year	Depreciation Expense	Accumulated Depreciation
2008	\$13,500^(a)	\$13,500
2009	13,500	27,000
2010	10,800^(b)	37,800
2011	10,800	48,600
2012	10,800	59,400
2013	12,800^(c)	72,200
2014	12,800	85,000

$$\text{(a) } \frac{\$90,000 - \$9,000}{6 \text{ years}} = \$13,500$$

$$\text{(b) } \frac{\text{Book value} - \text{Salvage value}}{\text{Remaining useful life}} = \frac{\$63,000 - \$9,000}{5 \text{ years}} = \$10,800$$

$$\text{(c) } \frac{\$30,600 - \$5,000}{2 \text{ years}} = \$12,800$$

PROBLEM 10-5A

(a)	Apr.	1	Land.....	2,130,000	
			Cash.....		2,130,000
	May	1	Depreciation Expense	26,000	
			Accumulated Depreciation— Equipment (\$780,000 X 1/10 X 4/12).....		26,000
		1	Cash.....	450,000	
			Accumulated Depreciation— Equipment.....	338,000	
			Equipment		780,000
			Gain on Disposal		8,000
			Cost	\$780,000	
			Accum. depreciation— equipment	<u>338,000</u>	
			[((\$780,000 X 1/10 X 4) + \$26,000)]		
			Book value	442,000	
			Cash proceeds	<u>450,000</u>	
			Gain on disposal	<u>\$ 8,000</u>	
	June	1	Cash.....	1,500,000	
			Land		400,000
			Gain on Disposal		1,100,000
	July	1	Equipment	2,000,000	
			Cash.....		2,000,000
	Dec.	31	Depreciation Expense	50,000	
			Accumulated Depreciation— Equipment (\$500,000 X 1/10).....		50,000
		31	Accumulated Depreciation— Equipment.....	500,000	
			Equipment		500,000

PROBLEM 10-5A (Continued)

Cost	\$500,000
Accum. depreciation— equipment (\$500,000 X 1/10 X 10)	500,000
Book value	<u>\$ 0</u>

(b)	Dec. 31	Depreciation Expense	570,000	
		Accumulated Depreciation— Buildings		570,000
		(\$28,500,000 X 1/50)		
	31	Depreciation Expense	4,772,000	
		Accumulated Depreciation— Equipment		4,772,000
		(\$46,720,000* X 1/10)	\$4,672,000	
		[((\$2,000,000 X 1/10) X 6/12]	<u>100,000</u>	
			<u>\$4,772,000</u>	

*((\$48,000,000 – \$780,000 – \$500,000)

(c) **JIMENEZ COMPANY** **Partial Balance Sheet** **December 31, 2011**

Plant Assets*			
Land			\$ 5,730,000
Buildings	\$28,500,000		
Less: Accumulated depreciation— buildings	<u>12,670,000</u>		15,830,000
Equipment	48,720,000		
Less: Accumulated depreciation— equipment	<u>9,010,000</u>		<u>39,710,000</u>
Total plant assets			<u>\$61,270,000</u>

*See T-accounts which follow.

PROBLEM 10-5A (Continued)**Land**

Bal.	4,000,000	June 1	400,000
Apr. 1	2,130,000		
Bal.	5,730,000		

Buildings

Bal.	28,500,000		
Bal.	28,500,000		

Accumulated Depreciation—Buildings

	Bal.	12,100,000
	Dec. 31 adj.	570,000
	Bal.	12,670,000

Equipment

Bal.	48,000,000	May 1	780,000
July 1	2,000,000	Dec. 31	500,000
Bal.	48,720,000		

Accumulated Depreciation—Equipment

May 1	338,000	Bal.	5,000,000
Dec. 31	500,000	May 1	26,000
		Dec. 31	50,000
		Dec. 31 adj.	4,772,000
		Bal.	9,010,000

PROBLEM 10-6A

(a) Accumulated Depreciation—Office			
Furniture	50,000		
Loss on Disposal.....	25,000		
Office Furniture.....			75,000
(b) Cash.....			
	21,000		
Accumulated Depreciation—Office			
Furniture	50,000		
Loss on Disposal.....	4,000		
Office Furniture.....			75,000
(c) Cash.....			
	31,000		
Accumulated Depreciation—Office			
Furniture	50,000		
Gain on Disposal			6,000
Office Furniture.....			75,000

PROBLEM 10-7A

(a)	Jan. 2	Patents.....	45,000	
		Cash.....		45,000
	Jan.— June	Research and Development Expense	140,000	
		Cash.....		140,000
	Sept. 1	Advertising Expense.....	50,000	
		Cash.....		50,000
	Oct. 1	Franchise	100,000	
		Cash.....		100,000

(b)	Dec. 31	Amortization Expense—Patents	12,000	
		Patents..... $[(\$70,000 \times 1/10) + (\$45,000 \times 1/9)]$		12,000
	31	Amortization Expense—Franchise	5,300	
		Franchise		5,300
		$[(\$48,000 \times 1/10) +$ $(\$100,000 \times 1/50 \times 3/12)]$		

(c) Intangible Assets			
	Patents (\$115,000 cost – \$19,000 amortization) (1).....		\$ 96,000
	Franchise (\$148,000 cost – \$24,500 amortization) (2)		<u>123,500</u>
	Total intangible assets.....		<u>\$219,500</u>

(1) Cost (\$70,000 + \$45,000); amortization (\$7,000 + \$12,000).

(2) Cost (\$48,000 + \$100,000); amortization (\$19,200 + \$5,300).

PROBLEM 10-8A

1.	Research and Development Expense	136,000	
	Patents		136,000
	Patents	6,800	
	Amortization Expense—Patents		
	[\$9,800 – (\$60,000 X 1/20)]		6,800
2.	Goodwill	920	
	Amortization Expense—Goodwill		920

Note: Goodwill should not be amortized because it has an indefinite life unlike Patents.

PROBLEM 10-9A

- (a)
- | | <u>Lebo</u> | <u>Ritter</u> |
|----------------------|---|---|
| Asset turnover ratio | $\frac{\$1,200,000}{\$2,500,000} = .48 \text{ times}$ | $\frac{\$1,080,000}{\$2,000,000} = .54 \text{ times}$ |
- (b) Based on the asset turnover ratio, Ritter is more effective in using assets to generate sales. Its asset turnover ratio is almost 13% higher than Lebo's ratio.

PROBLEM 10-1B

<u>Item</u>	<u>Land</u>	<u>Building</u>	<u>Other Accounts</u>	
1	\$ 5,000			
2			\$ 7,500	Property Taxes Expense
3		\$500,000		
4		19,000		
5	100,000			
6			18,000	Land Improvements
7		9,000		
8			6,000	Land Improvements
9	17,000			
10	(3,500)			
	<u>\$118,500</u>	<u>\$528,000</u>		

PROBLEM 10-2B

(a)			
Year	Computation	Accumulated Depreciation 12/31	
MACHINE 1			
2007	$\$100,000 \times 10\% = \$10,000$	\$10,000	
2008	$\$100,000 \times 10\% = \$10,000$	20,000	
2009	$\$100,000 \times 10\% = \$10,000$	30,000	
2010	$\$100,000 \times 10\% = \$10,000$	40,000	
MACHINE 2			
2008	$\$150,000 \times 25\% = \$37,500$	\$37,500	
2009	$\$112,500 \times 25\% = \$28,125$	65,625	
2010	$\$84,375 \times 25\% = \$21,094$	86,719	
MACHINE 3			
2010	$2,000 \times (\$85,000 \div 25,000) = \$6,800$	\$ 6,800	

(b)			
	Year	Depreciation Computation	Expense
MACHINE 2			
(1)	2008	$\$150,000 \times 25\% \times 8/12 = \$25,000$	<u>\$25,000</u>
(2)	2009	$\$125,000 \times 25\% = \$31,250$	<u>\$31,250</u>

PROBLEM 10-3B

(a) (1)	Purchase price	\$ 55,000
	Sales tax	2,750
	Shipping costs	100
	Insurance during shipping	75
	Installation and testing	75
	Total cost of machine	<u>\$ 58,000</u>

Machine	58,000
Cash	58,000

(2)	Recorded cost	\$ 58,000
	Less: Salvage value	5,000
	Depreciable cost	<u>\$ 53,000</u>
	Years of useful life	÷ 4
	Annual depreciation	<u>\$ 13,250</u>

Depreciation Expense	13,250
Accumulated Depreciation	13,250

(b) (1)	Recorded cost	\$100,000
	Less: Salvage value	10,000
	Depreciable cost	<u>\$90,000</u>
	Years of useful life	÷ 4
	Annual depreciation	<u>\$ 22,500</u>

(2)	Book Value at Beginning of Year	DDB Rate	Annual Depreciation Expense	Accumulated Depreciation
2010	\$100,000	50%*	\$50,000	\$50,000
2011	50,000	50%	25,000	75,000
2012	25,000	50%	12,500	87,500
2013	12,500	50%	2,500**	90,000

*100% ÷ 4-year useful life = 25% X 2 = 50%.

**\$12,500 – \$10,000 = \$2,500.

PROBLEM 10-3B (Continued)

- (3) Depreciation cost per unit = $(\$100,000 - \$10,000)/25,000$ units = \$3.60 per unit.

Annual Depreciation Expense

2010:	$\$3.60 \times 5,500 = \$19,800$
2011:	$3.60 \times 7,000 = 25,200$
2012:	$3.60 \times 8,000 = 28,800$
2013:	$3.60 \times 4,500 = 16,200$

- (c) The straight-line method reports the lowest amount of depreciation expense the first year while the declining-balance method reports the highest. In the fourth year, the declining-balance method reports the lowest amount of depreciation expense while the straight-line method reports the highest.

These facts occur because the declining-balance method is an accelerated depreciation method in which the largest amount of depreciation is recognized in the early years of the asset's life. If the straight-line method is used, the same amount of depreciation expense is recognized each year. Therefore, in the early years less depreciation expense will be recognized under this method than under the declining-balance method while more will be recognized in the later years.

The amount of depreciation expense recognized using the units-of-activity method is dependent on production, so this method could recognize more or less depreciation expense than the other two methods in any year depending on output.

No matter which of the three methods is used, the same total amount of depreciation expense will be recognized over the four-year period.

PROBLEM 10-4B

Year	Depreciation Expense	Accumulated Depreciation
2008	\$30,000^(a)	\$ 30,000
2009	30,000	60,000
2010	24,000^(b)	84,000
2011	24,000	108,000
2012	24,000	132,000
2013	31,500^(c)	163,500
2014	31,500	195,000

$$\text{(a) } \frac{\$200,000 - \$20,000}{6 \text{ years}} = \$30,000$$

$$\text{(b) } \frac{\text{Book value} - \text{Salvage value}}{\text{Remaining useful life}} = \frac{\$140,000 - \$20,000}{5 \text{ years}} = \$24,000$$

$$\text{(c) } \frac{\$68,000 - \$5,000}{2 \text{ years}} = \$31,500$$

PROBLEM 10-5B

(a)	Apr.	1	Land.....	1,200,000	
			Cash.....		1,200,000
	May	1	Depreciation Expense	14,000	
			Accumulated Depreciation— Equipment.....		14,000
			(\$420,000 X 1/10 X 4/12)		
		1	Cash.....	240,000	
			Accumulated Depreciation— Equipment.....	182,000	
			Equipment		420,000
			Gain on Disposal		2,000
			Cost	\$420,000	
			Accum. depreciation— equipment	182,000	
			[((\$420,000 X 1/10 X 4) + \$14,000)]		
			Book value	238,000	
			Cash proceeds	240,000	
			Gain on disposal	<u>\$ 2,000</u>	
	June	1	Cash.....	1,000,000	
			Land.....		340,000
			Gain on Disposal		660,000
	July	1	Equipment	1,100,000	
			Cash.....		1,100,000
	Dec.	31	Depreciation Expense	30,000	
			Accumulated Depreciation— Equipment.....		30,000
			(\$300,000 X 1/10)		
		31	Accumulated Depreciation— Equipment.....	300,000	
			Equipment		300,000

PROBLEM 10-5B (Continued)

Cost	\$300,000
Accum. depreciation— equipment	300,000
($\\$300,000 \times 1/10 \times 10$)	
Book value	<u>\$ 0</u>

(b) Dec. 31	Depreciation Expense	400,000	
	Accumulated Depreciation— Buildings		400,000
	($\\$20,000,000 \times 1/50$)		
31	Depreciation Expense	2,983,000	
	Accumulated Depreciation— Equipment		2,983,000
	($\\$29,280,000^* \times 1/10$)	\$2,928,000	
	[($\\$1,100,000 \times 1/10$) $\times 6/12$]	<u>55,000</u>	
		<u>\$2,983,000</u>	

***($\$30,000,000 - \$420,000 - \$300,000$)**

(c) STARKEY COMPANY Partial Balance Sheet December 31, 2011

Plant Assets*		
Land		\$ 2,860,000
Buildings	\$20,000,000	
Less: Accumulated depreciation— buildings	<u>8,400,000</u>	11,600,000
Equipment	30,380,000	
Less: Accumulated depreciation— equipment	<u>6,545,000</u>	<u>23,835,000</u>
Total plant assets		<u>\$38,295,000</u>

***See T-accounts which follow.**

PROBLEM 10-5B (Continued)**Land**

Bal.	2,000,000	June 1	340,000
Apr. 1	1,200,000		
Bal.	2,860,000		

Buildings

Bal.	20,000,000		
Bal.	20,000,000		

Accumulated Depreciation—Buildings

	Bal.	8,000,000
	Dec. 31 adj.	400,000
	Bal.	8,400,000

Equipment

Bal.	30,000,000	May 1	420,000
July 1	1,100,000	Dec. 31	300,000
Bal.	30,380,000		

Accumulated Depreciation—Equipment

May 1	182,000	Bal.	4,000,000
Dec. 31	300,000	May 1	14,000
		Dec. 31	30,000
		Dec. 31 adj.	2,983,000
		Bal.	6,545,000

PROBLEM 10-6B

(a) Accumulated Depreciation—Delivery			
Equipment.....	26,000		
Loss on Disposal.....	14,000		
Delivery Equipment			40,000
(b) Cash.....			
	29,000		
Accumulated Depreciation—Delivery			
Equipment.....	26,000		
Gain on Disposal			15,000
Delivery Equipment			40,000
(c) Cash.....			
	10,000		
Accumulated Depreciation—Delivery			
Equipment.....	26,000		
Loss on Disposal.....	4,000		
Delivery Equipment			40,000

PROBLEM 10-7B

(a)	Jan. 2	Patents.....	45,000	
		Cash.....		45,000
	Jan.— June	Research and Development Expense	230,000	
		Cash.....		230,000
	Sept. 1	Advertising Expense.....	125,000	
		Cash.....		125,000
	Oct. 1	Copyright	200,000	
		Cash.....		200,000

(b)	Dec. 31	Amortization Expense—Patents	15,000	
		Patents.....		15,000
		[($\$100,000 \times 1/10$) + ($\$45,000 \times 1/9$)]		
	31	Amortization Expense—Copyright.....	7,000	
Copyright			7,000	
[($\$60,000 \times 1/10$) + ($\$200,000 \times 1/50 \times 3/12$)]				

(c) Intangible Assets				
		Patents ($\$145,000$ cost – $\$25,000$ amortization) (1).....		\$120,000
		Copyright ($\$260,000$ cost – $\$31,000$ amortization) (2)		<u>229,000</u>
		Total intangible assets.....		<u>\$349,000</u>

(1) Cost ($\$100,000 + \$45,000$); amortization ($\$10,000 + \$15,000$).

(2) Cost ($\$60,000 + \$200,000$); amortization ($\$24,000 + \$7,000$).

- (d) The intangible assets of the company consist of two patents and two copyrights. One patent with a total cost of $\$145,000$ is being amortized in two segments ($\$100,000$ over 10 years and $\$45,000$ over 9 years); the other patent was obtained at no recordable cost. A copyright with a cost of $\$60,000$ is being amortized over 10 years; the other copyright with a cost of $\$200,000$ is being amortized over 50 years.

PROBLEM 10-8B

1.	Research and Development Expense	110,000	
	Patents		110,000
	Patents	5,500	
	Amortization Expense—Patents		
	[\$8,000 – (\$50,000 X 1/20)]		5,500
2.	Goodwill	2,000	
	Amortization Expense—Goodwill		2,000

Note: Goodwill should not be amortized because it has an indefinite life unlike Patents.

PROBLEM 10-9B

- (a)
- | | <u>McLead Corp.</u> | <u>Gene Corp.</u> |
|----------------------|--|---|
| Asset turnover ratio | $\frac{\$1,100,000}{\$1,000,000} = 1.10 \text{ times}$ | $\frac{\$990,000}{\$1,050,000} = .94 \text{ times}$ |
- (b) Based on the asset turnover ratio, McLead Corp. is more effective in using assets to generate sales. Its asset turnover ratio is 17% higher than Gene's asset turnover ratio.

CHAPTER 10 COMPREHENSIVE PROBLEM SOLUTION

(a) 1. Equipment	13,800	
Cash.....		13,800
2. Depreciation Expense—Equipment.....	450	
Accumulated Depreciation—Equipment		450
Cash.....	3,500	
Accumulated Depreciation—Equipment.....	2,250	
Equipment		5,000
Gain on Disposal		750
3. Accounts Receivable	9,000	
Sales		9,000
Cost of Goods Sold.....	6,300	
Merchandise Inventory.....		6,300
4. Bad Debts Expense	3,500	
Allowance for Doubtful Accounts.....		3,500
5. Interest Receivable (\$10,000 X .08 X 9/12)	600	
Interest Revenue.....		600
6. Insurance Expense (\$3,600 X 4/6).....	2,400	
Prepaid Insurance		2,400
7. Depreciation Expense—Building.....	4,000	
Accumulated Depreciation—Building.....		4,000
8. Depreciation Expense—Equipment.....	9,900	
Accumulated Depreciation—Equipment		
[($\$60,000 - \$5,000$) – ($\$55,000 \times .10$)] ÷ 5		9,900
9. Depreciation Expense—Equipment.....	1,600	
Accumulated Depreciation—Equipment		
[($\$13,800 - \$1,800$) ÷ 5] X 8/12.....		1,600

COMPREHENSIVE PROBLEM (Continued)

10. Amortization Expense—Patents.....	900	
Patent.....		900
11. Salaries Expense	2,200	
Salaries Payable.....		2,200
12. Unearned Rent ($\$6,000 \div 3$)	2,000	
Rent Revenue.....		2,000
13. Interest Expense ($\$11,000 + \$35,000$) X .09.....	4,140	
Interest Payable.....		4,140

COMPREHENSIVE PROBLEM (Continued)**(b)**

WINTERSCHID COMPANY
Trial Balance
December 31, 2010

	<u>Debits</u>	<u>Credits</u>
Cash	\$ 17,700	
Accounts Receivable	45,800	
Notes Receivable	10,000	
Interest Receivable	600	
Merchandise Inventory	29,900	
Prepaid Insurance	1,200	
Land	20,000	
Building	150,000	
Equipment	68,800	
Patent	8,100	
Allowance for Doubtful Accounts		\$ 4,000
Accumulated Depreciation—Building		54,000
Accumulated Depreciation—Equipment		33,700
Accounts Payable		27,300
Salaries Payable		2,200
Unearned Rent		4,000
Notes Payable (short-term)		11,000
Interest Payable		4,140
Notes Payable (long-term)		35,000
Winterschid, Capital		113,600
Winterschid, Drawing	12,000	
Sales		909,000
Interest Revenue		600
Rent Revenue		2,000
Gain on Disposal		750
Bad Debts Expense	3,500	
Cost of Goods Sold	636,300	
Depreciation Expense—Building	4,000	
Depreciation Expense—Equipment	11,950	
Insurance Expense	2,400	
Interest Expense	4,140	
Other Operating Expenses	61,800	
Amortization Expense—Patents	900	
Salaries Expense	112,200	
Total	<u>\$1,201,290</u>	<u>\$1,201,290</u>

COMPREHENSIVE PROBLEM (Continued)

(c) **WINTERSCHID COMPANY**
Income Statement
For the Year Ended December 31, 2010

Sales		\$909,000
Cost of Goods Sold		636,300
Gross Profit		272,700
Operating Expenses		
Salaries Expense	\$112,200	
Other Operating Expenses	61,800	
Depr. Expense—Equipment	11,950	
Depr. Expenses—Building	4,000	
Bad Debts Expense	3,500	
Insurance Expense	2,400	
Amortization Expense—Patents	900	
Total Operating Expense		196,750
Income From Operations		75,950
Other Revenues and Gains		
Rent Revenue	2,000	
Gain on Disposal	750	
Interest Revenue	600	
	3,350	
Other Expenses and Losses		
Interest Expense	4,140	(790)
Net Income		<u>\$ 75,160</u>

WINTERSCHID COMPANY
Owner's Equity Statement
For the Year Ended December 31, 2010

Winterschid, Capital, 1/1/10	\$113,600
Add: Net Income	75,160
	188,760
Less: Drawings	12,000
Winterschid, Capital, 12/31/10	<u>\$176,760</u>

COMPREHENSIVE PROBLEM (Continued)**(d)**

WINTERSCHID COMPANY
Balance Sheet
December 31, 2010

<u>Assets</u>			
Current Assets			
Cash.....		\$17,700	
Accounts Receivable	\$ 45,800		
Allowance for Doubtful Accounts	<u>4,000</u>	41,800	
Notes Receivable		10,000	
Interest Receivable		600	
Merchandise Inventory.....		29,900	
Prepaid Insurance.....		<u>1,200</u>	
Total Current Assets			\$101,200
Property, Plant, and Equipment			
Land.....		20,000	
Building	150,000		
Less Accum. Depr.	<u>54,000</u>	96,000	
Equipment	68,800		
Less Accum. Depr.	<u>33,700</u>	<u>35,100</u>	
Total Plant Assets			151,100
Intangible Assets			
Patent			<u>8,100</u>
Total Assets			<u>\$260,400</u>
<u>Liabilities and Owner's Equity</u>			
Current Liabilities			
Notes Payable (short-term).....		\$11,000	
Accounts Payable		27,300	
Interest Payable		4,140	
Unearned Rent		4,000	
Salaries Payable		<u>2,200</u>	
Total Current Liabilities.....			48,640
Long-term Liabilities			
Notes Payable (long-term)			<u>35,000</u>
Total Liabilities			83,640
Owner's Equity			
Winterschid, Capital			<u>176,760</u>
Total Liabilities and Owner's Equity.....			<u>\$260,400</u>

- (a) Property, plant, and equipment is reported net, book value, on the December 29, 2007, balance sheet at \$11,228,000,000. The cost of the property, plant, and equipment is \$21,896,000,000 as shown in Note 4.
- (b) Depreciation expense is calculated on a straight-line basis over an asset's estimated useful life. (see Note 4).
- (c) Depreciation and amortization expense was:
- | | |
|-------|------------------|
| 2007: | \$1,426,000,000. |
| 2006: | \$1,406,000,000. |
| 2005: | \$1,308,000,000. |
- (d) PepsiCo's capital spending was:
- | | |
|-------|------------------|
| 2007: | \$2,430,000,000. |
| 2006: | \$2,068,000,000. |
- (e) PepsiCo reports amortizable intangible assets, net of \$796,000,000, and nonamortizable intangible assets of \$6,417,000,000. In Note 4, the company indicates that intangible assets consist primarily of brands.

(a)	PepsiCo	Coca-Cola
Asset turnover ratio	$\$39,474 \div \frac{\$34,628 + \$29,930}{2} = 1.22 \text{ times}$	$\$28,857 \div \frac{\$43,269 + \$29,963}{2} = .79 \text{ times}$

- (b) The asset turnover ratio measures how efficiently a company uses its assets to generate sales. It shows the dollars of sales generated by each dollar invested in assets. PepsiCo's asset turnover ratio (1.22) was 54% higher than Coca-Cola (.79). Therefore, it can be concluded that PepsiCo was more efficient during 2007 in utilizing assets to generate sales.

Answers will vary depending on the company selected.

(a) Reimer Company—Straight-line method**Annual Depreciation**

Building $[(\$320,000 - \$20,000) \div 40]$	\$ 7,500
Equipment $[(\$110,000 - \$10,000) \div 10]$	<u>10,000</u>
Total annual depreciation.....	<u>\$17,500</u>

Total accumulated depreciation $(\$17,500 \times 3)$	<u>\$52,500</u>

Lingo Company—Double-declining-balance method

Year	Asset	Computation	Annual Depreciation	Accumulated Depreciation
2008	Building	$\$320,000 \times 5\%$	\$16,000	
	Equipment	$\$110,000 \times 20\%$	<u>22,000</u>	\$38,000
2009	Building	$\$304,000 \times 5\%$	15,200	
	Equipment	$\$88,000 \times 20\%$	<u>17,600</u>	32,800
2010	Building	$\$288,800 \times 5\%$	14,440	
	Equipment	$\$70,400 \times 20\%$	<u>14,080</u>	<u>28,520</u>
				<u>\$99,320</u>

(b)

Year	Reimer Company Net Income	Lingo Company Net Income As Adjusted	Computations for Lingo Company
2008	\$ 84,000	\$ 88,500	$\$68,000 + \$38,000 - \$17,500 = \$88,500$
2009	88,400	91,300	$\$76,000 + \$32,800 - \$17,500 = \$91,300$
2010	<u>90,000</u>	<u>96,020</u>	$\$85,000 + \$28,520 - \$17,500 = \$96,020$
Total net income	<u>\$262,400</u>	<u>\$275,820</u>	

- (c)** As shown above, when the two companies use the same depreciation method, Lingo Company is more profitable than Reimer Company. When the two companies are using different depreciation methods, Lingo Company has more cash than Reimer Company for two reasons:

(1) its earnings are generating more cash than the earnings of Reimer Company, and (2) depreciation expense has no effect on cash. Cash generated by operations can be arrived at by adding depreciation expense to net income. If this is done, it can be seen that Lingo Company's operations generate more cash ($\$229,000 + \$99,320 = \$328,320$) than Reimer Company's ($\$262,400 + \$52,500 = \$314,900$). Based on the above analysis, Mrs. Vogts should buy Lingo Company. It not only is in a better financial position than Reimer Company, but it is also more profitable.

To: Instructor

From: Student

Re: American Exploration Company footnote

American Exploration Company accounts for its oil and gas activities using the successful efforts approach. Under this method, only the costs of successful exploration are included in the cost of the natural resource, and the costs of unsuccessful explorations are expensed.

Depletion is determined using the units-of-activity method. Under this method, a depletion cost per unit is computed based on the total number of units expected to be extracted. Depletion expense for the year is determined by multiplying the units extracted and sold by the depletion cost per unit.

(a) The stakeholders in this situation are:

- ▶ Dennis Harwood, president of Buster Container Company.
- ▶ Shelly McGlone, controller.
- ▶ The stockholders of Buster Container Company.
- ▶ Potential investors in Buster Container Company.

(b) The intentional misstatement of the life of an asset or the amount of the salvage value is unethical for whatever the reason. There is nothing per se unethical about changing the estimate either of the life of an asset or of an asset's salvage value if the change is an attempt to better match cost and revenues and is a better allocation of the asset's depreciable cost over the asset's useful life. In this case, it appears from the controller's reaction that the revisions in the life are intended only to improve earnings and, therefore, are unethical.

The fact that the competition uses a longer life on its equipment is not necessarily relevant. The competition's maintenance and repair policies and activities may be different. The competition may use its equipment fewer hours a year (e.g., one shift rather than two shifts daily) than Buster Container Company.

(c) Income before income taxes in the year of change is increased \$140,000 by implementing the president's proposed changes.

	<u>Old Estimates</u>
Asset cost	\$3,100,000
Estimated salvage	<u>300,000</u>
Depreciable cost	<u>2,800,000</u>
Depreciation per year (1/8)	<u>\$ 350,000</u>
	<u>Revised Estimates</u>
Asset cost	\$3,100,000
Estimated salvage	<u>300,000</u>
Depreciable cost	2,800,000
Depreciation taken to date (\$350,000 X 2)	<u>700,000</u>
	<u>2,100,000</u>
Remaining life in years	10 years
Depreciation per year	<u>\$ 210,000</u>

(a) 1 c 2 b 3 a 4 d 5 c

- (b) For the most part, the value of a brand is not reported on a company's balance sheet. Most companies are required to expense all costs related to the maintenance of a brand name. Also any research and development that went into the development of the related product is generally expensed. The only way significant costs related to the value of the brand are reported on balance sheet is when a company purchases another company that has a significant tradename (brand). In that case, given an objective transaction, companies are able to assign value to the brand and report it on the balance sheet. A conservative approach is used in this area because the value of the brand can be extremely difficult to determine. It should be noted that international rules permit companies to report brand values on their balance sheets.

CHAPTER 11

Current Liabilities and Payroll Accounting

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain a current liability, and identify the major types of current liabilities.	1	1	2, 3	7	1A	1B
2. Describe the accounting for notes payable.	2	2	4, 5	1, 2, 7	1A, 2A	1B, 2B
3. Explain the accounting for other current liabilities.	3, 4	3, 4	6	3, 4, 7	1A	1B
4. Explain the financial statement presentation and analysis of current liabilities.	5	5	7	7, 8, 9	1A	1B
5. Describe the accounting and disclosure requirements for contingent liabilities.	6, 7	6		5, 6, 7	1A	1B
6. Compute and record the payroll for a pay period.	8, 9, 10, 12 13, 14, 15	7, 8		10, 11, 12, 13	3A, 4A, 5A	3B, 4B, 5B
7. Describe and record employer payroll taxes.	9, 10, 11, 15	9		12, 14	3A, 4A, 5A	3B, 4B, 5B
8. Discuss the objectives of internal control for payroll.	16, 17	10				
*9. Identify additional fringe benefits associated with employee compensation.	18, 19, 20, 21, 22	11		15, 16	4A	4B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare current liability entries, adjusting entries, and current liabilities section.	Moderate	30–40
2A	Journalize and post note transactions and show balance sheet presentation.	Moderate	30–40
3A	Prepare payroll register and payroll entries.	Simple	30–40
4A	Journalize payroll transactions and adjusting entries.	Moderate	30–40
5A	Prepare entries for payroll and payroll taxes; prepare W-2 data.	Moderate	30–40
1B	Prepare current liability entries, adjusting entries, and current liabilities section.	Moderate	30–40
2B	Journalize and post note transactions and show balance sheet presentation.	Moderate	30–40
3B	Prepare payroll register and payroll entries.	Simple	30–40
4B	Journalize payroll transactions and adjusting entries.	Moderate	30–40
5B	Prepare entries for payroll and payroll taxes; prepare W-2 data.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 11
CURRENT LIABILITIES AND PAYROLL ACCOUNTING

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	3–5
BE2	2	AP	Simple	2–4
BE3	3	AP	Simple	2–4
BE4	3	AP	Simple	2–4
BE5	4	AP	Simple	2–4
BE6	5	AN	Simple	1–2
BE7	6	AP	Simple	3–5
BE8	6	AP	Simple	3–5
BE9	7	AP	Simple	2–4
BE10	8	C	Simple	2–4
BE11	9	AP	Simple	2–4
DI1	2, 3	C	Simple	6–8
DI2	4, 5	AP	Simple	8–10
DI3	6	AP	Simple	3–5
DI4	7	AP	Simple	3–5
EX1	2	AN	Moderate	8–10
EX2	2	AN	Simple	6–8
EX3	3	AP	Simple	4–6
EX4	3	AN	Simple	6–8
EX5	5	AN	Moderate	8–10
EX6	5	C	Simple	8–10
EX7	1–5	AP	Simple	6–8
EX8	4	AP	Simple	4–6
EX9	4	AP	Simple	6–8
EX10	6	AP	Simple	8–10
EX11	6	AP	Simple	6–8
EX12	6, 7	AP	Moderate	12–15
EX13	6	AP	Moderate	10–12
EX14	7	AP	Simple	6–8

CURRENT LIABILITIES AND PAYROLL ACCOUNTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	9	AN	Simple	3–5
EX16	9	AP	Simple	4–6
P1A	1–5	AN	Moderate	30–40
P2A	2	AN	Moderate	30–40
P3A	6, 7	AN	Simple	30–40
P4A	6, 7, 8	AN	Moderate	30–40
P5A	6, 7	AN	Moderate	30–40
P1B	1–5	AN	Moderate	30–40
P2B	2	AN	Moderate	30–40
P3B	6, 7	AN	Simple	30–40
P4B	6, 7, 9	AN	Moderate	30–40
P5B	6, 7	AN	Moderate	30–40
BYP1	4, 5	C	Simple	10–15
BYP2	4	AN, E	Simple	10–15
BYP3	6, 7	C	Simple	15–20
BYP4	6, 7	E	Moderate	15–20
BYP5	7	C	Simple	10–15
BYP6	8	E	Simple	10–15
BYP7	6, 7	AN	Moderate	15–20

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain a current liability, and identify the major types of current liabilities.		Q11-1 BE11-1	E11-7	P11-1A P11-1B		
2. Describe the accounting for notes payable.		Q11-2 DI11-1	E11-7	BE11-2 E11-1 E11-2 P11-1A	P11-2A P11-1B P11-2B	
3. Explain the accounting for other current liabilities.		DI11-1	Q11-3 Q11-4 BE11-4	BE11-3 E11-7 P11-1A	P11-1B	
4. Explain the financial statement presentation and analysis of current liabilities.		Q11-5	BE11-5 DI11-2 E11-7	P11-1A P11-1B		
5. Describe the accounting and disclosure requirements for contingent liabilities.		Q11-6 Q11-7 E11-6	DI11-2 E11-7	BE11-6 E11-5	P11-1A P11-1B	
6. Compute and record the payroll for a pay period.	Q11-9 Q11-12 Q11-14	Q11-8 Q11-10 Q11-13	BE11-7 BE11-8 DI11-3 E11-10	P11-3A P11-4A P11-5A	P11-3B P11-4B P11-5B	
7. Describe and record employer payroll taxes.	Q11-11	Q11-9 Q11-10 Q11-15	BE11-9 DI11-4 E11-12	P11-3A P11-4A P11-5A	P11-3B P11-4B P11-5B	
8. Discuss the objectives of internal control for payroll.	Q11-17	Q11-16 BE11-10				
*9. Identify additional fringe benefits associated with employee compensation.	Q11-18	Q11-19 Q11-20 Q11-21	BE11-11 E11-16	E11-15 P11-4A P11-4B		
Broadening Your Perspective		Financial Reporting Communication Exploring the Web		Comparative Analysis		Decision Making Across the Organization Ethics Case All About You

ANSWERS TO QUESTIONS

1. Jill is not correct. A current liability is a debt that can reasonably be expected to be paid: (a) from existing current assets or through the creation of other current liabilities and (2) within one year or the operating cycle, whichever is longer.
2. In the balance sheet, Notes Payable of \$40,000 and Interest Payable of \$900 ($\$40,000 \times .09 \times 3/12$) should be reported as current liabilities. In the income statement, Interest Expense of \$900 should be reported under other expenses and losses.
3. (a) Disagree. The company only serves as a collection agent for the taxing authority. It does not report sales taxes as an expense; it merely forwards the amount paid by the customer to the government.
 (b) The entry to record the proceeds is:

Cash.....	7,400	
Sales.....		7,000
Sales Taxes Payable.....		400
4. (a) The entry when the tickets are sold is:

Cash.....	800,000	
Unearned Football Ticket Revenue		800,000

 (b) The entry after each game is:

Unearned Football Ticket Revenue	160,000	
Football Ticket Revenue		160,000
5. Liquidity refers to the ability of a company to pay its maturing obligations and meet unexpected needs for cash. Two measures of liquidity are working capital (current assets – current liabilities) and the current ratio (current assets ÷ current liabilities).
6. A contingent liability is a potential liability that may become an actual liability in the future. Contingent liabilities are only recorded in the accounts if they are probable and the amount is reasonably estimable. Warranty costs are a contingent liability usually recorded in the accounts since they are both probable in incurrence and subject to estimation.
7. If an event is only reasonably possible, then only note disclosure is required. If the possibility of a contingent liability occurring is only remote, then neither recording in the accounts nor note disclosure is required.
8. Gross pay is the amount an employee actually earns. Net pay, the amount an employee is paid, is gross pay reduced by both mandatory and voluntary deductions, such as FICA taxes, union dues, federal income taxes, etc. Gross pay should be recorded as wages or salaries expense.
9. Both employees and employers are required to pay FICA taxes.
10. No. When an employer withholds federal or state income taxes from employee paychecks, the employer is merely acting as a collection agent for the taxing body. Since the employer holds employees' funds, these withholdings are a liability for the employer until they are remitted to the government.

Questions Chapter 11 (Continued)

11. FICA stands for Federal Insurance Contribution Act; FUTA stands for Federal Unemployment Tax Act; and SUTA stands for State Unemployment Tax Act.
12. A W-2 statement contains the employee's name, address, social security number, wages, tips, other compensation, social security taxes withheld, wages subject to social security taxes, and federal, state and local income taxes withheld.
13. Payroll deductions can be classified as either mandatory (required by the government) or voluntary (not required by the government). Mandatory deductions include FICA taxes and income taxes. Examples of voluntary deductions are health and life insurance premiums, pension contributions, union dues, and charitable contributions.
14. The employee earnings record is used in: (1) determining when an employee has earned the maximum earnings subject to FICA taxes, (2) filing state and federal payroll tax returns, and (3) providing each employee with a statement of gross earnings and tax withholdings for the year.
15. (a) The three types of taxes are: (1) FICA, (2) federal unemployment, and (3) state unemployment.
(b) The tax liability accounts are classified as current liabilities in the balance sheet. Payroll tax expense is classified under operating expenses in the income statement.
16. The main internal control objectives associated with payrolls are: (1) to safeguard company assets from unauthorized payments of payrolls and (2) to assure the accuracy and reliability of the accounting records pertaining to payrolls.
17. The four functions associated with payroll are: (1) hiring employees, (2) timekeeping, (3) preparing the payroll, and (4) paying the payroll.
- *18. Two additional types of fringe benefits are:
 - (1) Paid absences—vacation pay, sick pay, and paid holidays.
 - (2) Post-retirement benefits—pensions and health care and life insurance.
- *19. Paid absences refer to compensation paid by employers to employees for vacations, sickness, and holidays. When the payment of such compensation is probable and the amount can be reasonably estimated, a liability should be accrued for paid future absences which employees have earned. When this amount cannot be reasonably estimated, the potential liability should be disclosed.
- *20. Post-retirement benefits consist of payments by employers to retired employees for: (1) pensions and (2) health care and life insurance.
- *21. A 401(K) works as follows: an employee can contribute up to a certain percentage of pay into a 401(K) plan and employers will match a percentage of the employee's contribution.
- *22. A defined contribution plan defines the contribution that an employer will make but not the benefit that the employee will receive. In a defined benefit plan, the employer agrees to pay a defined amount to retirees based on employees meeting certain eligibility standards.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 11-1

- (a) A note payable due in two years is a long-term liability, not a current liability.
- (b) \$30,000 of the mortgage payable is a current maturity of long-term debt. This amount should be reported as a current liability.
- (c) Interest payable is a current liability because it will be paid out of current assets in the near future.
- (d) Accounts payable is a current liability because it will be paid out of current assets in the near future.

BRIEF EXERCISE 11-2

July 1	Cash.....	80,000	
	Notes Payable.....		80,000
Dec. 31	Interest Expense.....	4,000	
	Interest Payable		
	(\$80,000 X 10% X 1/2).....		4,000

BRIEF EXERCISE 11-3

Sales tax payable

- (1) Sales = \$14,800 = (\$15,540 ÷ 1.05)
- (2) Sales taxes payable = \$740 = (\$14,800 X 5%)

Mar. 16	Cash	15,540	
	Sales		14,800
	Sales Taxes Payable.....		740

BRIEF EXERCISE 11-4

Cash.....	720,000	
Unearned Basketball Ticket Revenue		720,000
(To record sale of 4,000 season tickets)		

Unearned Basketball Ticket Revenue	60,000	
Basketball Ticket Revenue.....		60,000
(To record basketball ticket revenues earned)		

BRIEF EXERCISE 11-5

- (a) Working capital = \$3,449,533 – \$1,204,052 = \$2,245,481 (thousand)
(b) Current ratio = \$3,449,533 ÷ \$1,204,052 = 2.86:1

BRIEF EXERCISE 11-6

Dec. 31	Warranty Expense	4,000	
	Estimated Warranty Liability		4,000
	[(1,000 X 5%) X \$80]		

BRIEF EXERCISE 11-7

Gross earnings:			
Regular pay (40 X \$16).....	\$640.00		
Overtime pay (7 X \$24)	<u>168.00</u>		<u>\$808.00</u>
Gross earnings			\$808.00
Less: FICA taxes payable (\$808 X 8%)	\$ 64.64		
Federal income taxes payable	<u>95.00</u>		<u>159.64</u>
Net pay			<u>\$648.36</u>

BRIEF EXERCISE 11-8

Jan. 15	Wages Expense.....	808.00	
	FICA Taxes Payable (\$808 X 8%).....		64.64
	Federal Income Taxes Payable		95.00
	Wages Payable		648.36
Jan. 15	Wages Payable	648.36	
	Cash		648.36

BRIEF EXERCISE 11-9

Jan. 31	Payroll Tax Expense.....	9,940	
	FICA Taxes Payable (\$70,000 X 8%)		5,600
	Federal Unemployment Taxes Payable (\$70,000 X .8%)		560
	State Unemployment Taxes Payable (\$70,000 X 5.4%).....		3,780

BRIEF EXERCISE 11-10

(a) Timekeeping	(c) Preparing the payroll
(b) Hiring employees	(d) Paying the payroll

*BRIEF EXERCISE 11-11

Jan. 31	Vacation Benefits Expense (80 X \$120).....	9,600	
	Vacation Benefits Payable.....		9,600

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 11-1

1. $\$70,000 \times 12\% \times 5/12 = \$3,500$
2. $\$42,000/1.05 = \$40,000$; $\$40,000 \times 5\% = \$2,000$
3. $\$42,000 \times 2/6 = \$14,000$

DO IT! 11-2

(a) Current liabilities

Notes payable due in 2011	\$ 40,000
Accounts payable.....	50,000
Long-term debt due within one year	90,000
Lawsuit liability	85,000
Unearned revenue	70,000
Salaries payable.....	32,000
Utilities payable.....	13,000
Total current liabilities.....	<u>\$380,000</u>

- (b) Working capital = Current assets – Current liabilities = \$570,000 – \$380,000 = \$190,000
Current ratio: Current assets ÷ Current liabilities = \$570,000 ÷ \$380,000 = 1.50:1

DO IT! 11-3

- (a) Net pay: \$60,000 – (8% X \$60,000) – \$14,000 – \$1,600 = \$39,600

(b) Salaries and Wages Expense.....	60,000	
FICA Taxes Payable.....		4,800
Federal Income Taxes Payable.....		14,000
State Income Taxes Payable.....		1,600
Salaries and Wages Payable		39,600

DO IT! 11-4

Payroll Tax Expense	15,620	
FICA Taxes Payable		8,800
Federal Unemployment Taxes Payable		880
State Unemployment Taxes Payable		5,940

SOLUTIONS TO EXERCISES

EXERCISE 11-1

July 1, 2010

Cash	50,000	
Notes Payable		50,000

November 1, 2010

Cash	60,000	
Notes Payable		60,000

December 31, 2010

Interest Expense		
(\$50,000 X 12% X 6/12).....	3,000	
Interest Payable.....		3,000

Interest Expense		
(\$60,000 X 10% X 2/12).....	1,000	
Interest Payable.....		1,000

February 1, 2011

Notes Payable	60,000	
Interest Payable.....	1,000	
Interest Expense	500	
Cash		61,500

April 1, 2011

Notes Payable	50,000	
Interest Payable.....	3,000	
Interest Expense	1,500	
Cash		54,500

EXERCISE 11-2

(a) June 1	Cash.....	90,000	
	Notes Payable.....		90,000
(b) June 30	Interest Expense.....	900	
	Interest Payable		
	[((\$90,000 X 12%) X 1/12)		900
(c) Dec. 1	Notes Payable.....	90,000	
	Interest Payable		
	(\$90,000 X 12% X 6/12)	5,400	
	Cash.....		95,400
(d)	\$5,400		

EXERCISE 11-3

WARKENTINNE COMPANY			
Apr. 10	Cash.....	31,500	
	Sales		30,000
	Sales Taxes Payable		1,500
RIVERA COMPANY			
15	Cash.....	23,540	
	Sales (\$23,540 ÷ 1.07)		22,000
	Sales Taxes Payable		
	(\$23,540 – \$22,000)		1,540

EXERCISE 11-4

(a)	Nov. 30	Cash.....	240,000	
		Unearned Subscriptions		
		(12,000 X \$20).....		240,000
(b)	Dec. 31	Unearned Subscriptions.....	20,000	
		Subscription Revenue		
		(\$240,000 X 1/12).....		20,000
(c)	Mar. 31	Unearned Subscriptions	60,000	
		Subscription Revenue		
		(\$240,000 X 3/12).....		60,000

EXERCISE 11-5

(a) Estimated warranties outstanding:

<u>Month</u>	<u>Estimate</u>	<u>Units Defective</u>	<u>Outstanding</u>
November	900	600	300
December	<u>960</u>	<u>400</u>	<u>560</u>
Total	<u>1,860</u>	<u>1,000</u>	<u>860</u>

Estimated warranty liability—860 X \$20 = \$17,200.

(b)	Warranty Expense (1,860 X \$20).....	37,200	
	Estimated Warranty Liability.....		37,200
	Estimated Warranty Liability.....	20,000	
	Repair Parts, Wages Payable, Cash, etc.....		20,000
(c)	Estimated Warranty Liability (500 X \$20).....	10,000	
	Repair Parts, Wages Payable, Cash, etc.....		10,000

EXERCISE 11-6

- (a) If a contingency is remote (unlikely to occur), it need not be recorded or disclosed.
- (b) Since the contingency is probable and reasonably estimable, the liability should be recorded in the accounts. In addition, the details should be disclosed in the notes to the financial statements. The journal entry is:

Lawsuit Loss	1,000,000	
Lawsuit Liability		1,000,000

- (c) If a contingency is reasonably possible, it need not be recorded, but must be disclosed in the notes to the financial statements.

EXERCISE 11-7

- (a) **JEWETT ONLINE COMPANY**
Partial Balance Sheet

Current liabilities	
Accounts payable	\$ 63,000
Mortgage payable due within one year	30,000
Unearned ticket revenue.....	24,000
Estimated warranty liability	18,000
Sales taxes payable.....	10,000
Interest payable	<u>8,000</u>
Total current liabilities.....	<u>\$153,000</u>

- (b) Jewett Online Company's working capital is \$147,000 and its current ratio is 1.96:1. Although a current ratio of 2:1 has been considered the standard for a good credit rating, many companies operate successfully with a current ratio below 2:1.

EXERCISE 11-8

- (a) Working capital = \$6,755 – \$7,581 = (\$826) million
- (b) Current ratio = \$6,755 ÷ \$7,581 = .89:1

EXERCISE 11-9

(a) Current ratio

$$2006 \quad \$8,946 \div \$7,323 = 1.22:1$$

$$2007 \quad \$9,838 \div \$5,362 = 1.83:1$$

Working capital

$$2006 \quad \$8,946 - \$7,323 = \$1,623 \text{ million}$$

$$2007 \quad \$9,838 - \$5,362 = \$4,476 \text{ million}$$

(b) Current ratio

$$\$9,638 \div \$5,162 = 1.87:1$$

Working capital

$$\$9,638 - \$5,162 = \$4,476 \text{ million}$$

It would make its current ratio increase slightly, but its working capital would remain the same.

EXERCISE 11-10

(a) 1. Regular 40 X \$15.00 = \$600.00

Overtime 2 X \$22.50 = 45.00

Gross earnings \$645.00

2. FICA taxes—\$51.60 = (\$645 X 8%).

3. Federal income taxes \$55.

4. State income taxes \$12.90 = (\$645 X 2%).

5. Net pay \$500.50 = (\$645.00 – \$51.60 – \$55.00 – \$12.90 – \$25.00).

(b) Office Wages Expense	645.00	
FICA Taxes Payable		51.60
Federal Income Taxes Payable		55.00
State Income Taxes Payable		12.90
Health Insurance Payable		25.00
Wages Payable		500.50

EXERCISE 11-11

- C. Ogle** $\$4,000 \times 8\% = \$320$. Ogle's total gross earnings for the year are $\$97,500 = (\$93,500 + \$4,000)$, which is below the $\$100,000$ maximum for FICA taxes.
- D. Delgado** $\$3,900 \times 8\% = \$312$. Delgado's total gross earnings for the year are $\$100,100$. Thus, $\$3,900$ of the gross earnings ($\$4,000 - \$100$) for this pay period are subject to FICA taxes.
- L. Jeter** $\$2,400 \times 8\% = \$192$. Jeter's total gross earnings for the year are $\$101,600$. Thus, only $\$2,400$ of the gross earnings ($\$4,000 - \$1,600$) for this pay period are subject to FICA taxes.
- T. Spivey** $\$0$. Spivey's gross earnings prior to this pay equal the maximum amount subject to FICA taxes. Thus, none of the gross earnings in the December 31 pay period is subject to FICA taxes.

EXERCISE 11-12

(a) See next page.

(b) Jan. 31	Wages Expense	1,837.00	
	FICA Taxes Payable.....		146.96
	Federal Income Taxes Payable.....		129.00
	Health Insurance Payable.....		60.00
	Wages Payable.....		1,501.04
Jan. 31	Payroll Tax Expense.....	260.86	
	FICA Taxes Payable.....		146.96
	Federal Unemployment Taxes Payable ($\$1,837 \times .8\%$).....		14.70
	State Unemployment Taxes Payable ($\$1,837 \times 5.4\%$).....		99.20

(a)

ALVAMAR COMPANY									
Payroll Register									
For the Week Ending January 31									
Earnings					Deductions				
Employee	Total Hours	Regular	Overtime	Gross Pay	FICA Taxes	Federal Income Taxes	Health Insurance	Total	Net Pay
M. Hashmi	46	\$ 480.00	\$108.00	\$ 588.00	\$ 47.04	\$ 34.00	\$10.00	\$ 91.04	\$ 496.96
E. Benson	42	520.00	39.00	559.00	44.72	37.00	25.00	106.72	452.28
K. Kern	44	600.00	90.00	690.00	55.20	58.00	25.00	138.20	551.80
Totals		\$1,600.00	\$237.00	\$1,837.00	\$146.96	\$129.00	\$60.00	\$335.96	\$1,501.04

EXERCISE 11-13

- (a) (1) \$ 1,100 [\$10,000 see (2) below – \$8,900].
(2) \$10,000 (FICA taxes \$800 ÷ 8%).
(3) \$ 300 (\$10,000 X 3%).
(4) \$ 2,340 (\$10,000 – \$7,660).
(5) \$ 6,000 (\$10,000 – \$4,000).

(b)	Feb. 28	Warehouse Wages Expense.....	6,000	
		Store Wages Expense	4,000	
		FICA Taxes Payable		800
		Federal Income Taxes Payable		1,140
		State Income Taxes Payable		300
		Union Dues Payable.....		100
		Wages Payable.....		7,660
	28	Wages Payable	7,660	
		Cash.....		7,660

EXERCISE 11-14

(a)	FICA tax (\$760,000 X 8%).....	\$60,800
	SUTA tax (\$100,000 X 5.4%).....	5,400
	FUTA tax (\$100,000 X 0.8%).....	800
	Total payroll tax	<u>\$67,000</u>
(b)	Payroll Tax Expense.....	67,000
	FICA Taxes Payable.....	60,800
	State Unemployment Taxes Payable	5,400
	Federal Unemployment Taxes Payable	800

***EXERCISE 11-15**

Mar. 31	Vacation Benefits Expense		
	(10 X 2 X \$120).....	2,400	
	Vacation Benefits Payable.....		2,400
31	Pension Expense (\$40,000 X 10%).....	4,000	
	Pension Liability		4,000

***EXERCISE 11-16**

1.	Vacation Benefits Expense.....	12,000	
	Vacation Benefits Payable		
	(20 X 5 X \$120).....		12,000
2.	Pension Expense	100,000	
	Cash		70,000
	Pension Liability		30,000
3.	Vacation Benefits Payable	2,160	
	Cash		
	(18 X 1 X \$120).....		2,160

SOLUTIONS TO PROBLEMS

PROBLEM 11-1A

(a)	Jan. 5	Cash.....	22,680	
		Sales ($\$22,680 \div 108\%$).....		21,000
		Sales Taxes Payable		
		($\$22,680 - \$21,000$).....		1,680
	12	Unearned Service Revenue.....	10,000	
		Service Revenue.....		10,000
	14	Sales Taxes Payable	7,700	
		Cash.....		7,700
	20	Accounts Receivable	43,200	
		Sales		40,000
		Sales Taxes Payable		
		($800 \times \$50 \times 8\%$).....		3,200
	21	Cash.....	18,000	
		Notes Payable.....		18,000
	25	Cash.....	12,420	
		Sales ($\$12,420 \div 108\%$).....		11,500
		Sales Taxes Payable		
		($\$12,420 - \$11,500$).....		920
(b) (1)	Jan. 31	Interest Expense.....	40	
		Interest Payable		40
		($\$18,000 \times 8\% \times 1/12 =$		
		\$120; $\$120 \times 1/3$)		
(2)	Jan. 31	Warranty Expense		
		($\$40,000 \times 7\%$).....	2,800	
		Estimated Warranty		
		Liability.....		2,800

PROBLEM 11-1A (Continued)

(c) Current liabilities

Notes payable	\$18,000
Accounts payable	52,000
Unearned service revenue (\$16,000 – \$10,000)	6,000
Sales taxes payable (\$1,680 + \$3,200 + \$920)	5,800
Estimated warranty liability	2,800
Interest payable	<u>40</u>
Total current liabilities	<u>\$84,640</u>

PROBLEM 11-2A

(a)	Jan. 2	Merchandise Inventory or		
		Purchases.....	30,000	
		Accounts Payable.....		30,000
	Feb. 1	Accounts Payable	30,000	
		Notes Payable		30,000
	Mar. 31	Interest Expense		
		(\$30,000 X 9% X 2/12).....	450	
		Interest Payable		450
	Apr. 1	Notes Payable	30,000	
		Interest Payable	450	
		Cash		30,450
	July 1	Equipment.....	51,000	
		Cash		11,000
		Notes Payable		40,000
	Sept. 30	Interest Expense		
		(\$40,000 X 10% X 3/12)	1,000	
		Interest Payable		1,000
	Oct. 1	Notes Payable	40,000	
		Interest Payable	1,000	
		Cash		41,000
	Dec. 1	Cash	15,000	
		Notes Payable		15,000
	Dec. 31	Interest Expense		
		(\$15,000 X 8% X 1/12).....	100	
		Interest Payable		100

PROBLEM 11-2A (Continued)**(b)****Notes Payable**

4/1	30,000	2/1	30,000
10/1	40,000	7/1	40,000
		12/1	15,000
		12/31 Bal.	15,000

Interest Payable

4/1	450	3/31	450
10/1	1,000	9/30	1,000
		12/31	100
		12/31 Bal.	100

Interest Expense

3/31	450	
9/30	1,000	
12/31	100	
12/31 Bal.	1,550	

(c) Current liabilities

Notes payable	\$15,000	
Interest payable	<u>100</u>	\$15,100

(d) Total interest is \$1,550.

PROBLEM 11-3A

(a)

DEL HARDWARE Payroll Register

For the Week Ending March 15, 2010

Employee	Hours	Earnings			Deductions					Net Pay	Store Wages Expense	Office Wages Expense
		Regular	Over- time	Gross Pay	FICA	Fed.	State	U.F.	Total			
Joe Devena	40	600.00	0	600.00	48.00	72.00	18.00	5.00	143.00	457.00	600.00	
Mary Keener	42	600.00	45.00	645.00	51.60	47.00	19.35	5.00	122.95	522.05	645.00	
Andy Dye	44	520.00	78.00	598.00	47.84	60.00	17.94	8.00	133.78	464.22	598.00	
Kim Shen	46	520.00	117.00	637.00	50.96	61.00	19.11	5.00	136.07	500.93		637.00
Totals		2,240.00	240.00	2,480.00	198.40	240.00	74.40	23.00	535.80	1,944.20	1,843.00	637.00

PROBLEM 11-3A (Continued)

(b)	Mar. 15	Store Wages Expense	1,843.00	
		Office Wages Expense	637.00	
		FICA Taxes Payable		198.40
		Federal Income Taxes Payable		240.00
		State Income Taxes Payable		74.40
		United Fund Contributions Payable		23.00
		Wages Payable		1,944.20
15		Payroll Tax Expense	352.16	
		FICA Taxes Payable (\$2,480 X 8%)		198.40
		Federal Unemployment Taxes Payable (\$2,480 X .8%)		19.84
		State Unemployment Taxes Payable (\$2,480 X 5.4%)		133.92
(c)	Mar. 16	Wages Payable	1,944.20	
		Cash		1,944.20
(d)	Mar. 31	FICA Taxes Payable (\$198.40 + \$198.40)	396.80	
		Federal Income Taxes Payable	240.00	
		Cash		636.80

PROBLEM 11-4A

(a) Jan. 10	Union Dues Payable	870.00	
	Cash		870.00
12	FICA Taxes Payable.....	760.00	
	Federal Income Taxes Payable	1,204.60	
	Cash		1,964.60
15	U.S. Savings Bonds Payable	360.00	
	Cash		360.00
17	State Income Taxes Payable	108.95	
	Cash		108.95
20	Federal Unemployment Taxes Payable.....	288.95	
	State Unemployment Taxes Payable.....	1,954.40	
	Cash		2,243.35
31	Office Salaries Expense	26,600.00	
	Store Wages Expense.....	28,400.00	
	FICA Taxes Payable.....		4,400.00
	Federal Income Taxes Payable.....		2,158.00
	State Income Taxes Payable.....		454.00
	United Fund Contributions Payable.....		1,888.00
	Union Dues Payable		400.00
	Wages Payable.....		45,700.00
	Wages Payable.....	45,700.00	
	Cash		45,700.00

PROBLEM 11-4A (Continued)

(b)	1. Jan.	31	Payroll Tax Expense	7,810.00	
			FICA Taxes Payable		
			(\$55,000 X 8%)		4,400.00
			Federal Unemployment Taxes		
			Payable (\$55,000 X .8%)		440.00
			State Unemployment Taxes		
			Payable (\$55,000 X 5.4%)		2,970.00
*2.		31	Vacation Benefits Expense		
			(\$55,000 X 6%)	3,300.00	
			Vacation Benefits Payable		3,300.00

PROBLEM 11-5A

(a)	Administrative Salaries Expense.....	200,000	
	Electricians' Wages Expense.....	370,000	
	FICA Taxes Payable.....		38,800
	Federal Income Taxes Payable.....		174,400
	State Income Taxes Payable		17,100
	United Fund Contributions Payable.....		27,500
	Hospital Insurance Premiums Payable.....		17,200
	Wages Payable.....		295,000

(b)	Payroll Tax Expense.....	43,255	
	FICA Taxes Payable (\$485,000 X 8%)		38,800
	Federal Unemployment Taxes Payable		
	(\$135,000 X .8%)		1,080
	State Unemployment Taxes Payable		
	(\$135,000 X 2.5%).....		3,375

(c)					
		Wages, Tips, Other Compensation	Federal Income Tax Withheld	State Income Tax Withheld	FICA Wages
	<u>Employee</u>				<u>FICA Tax Withheld</u>
	Jane Eckman	\$59,000	\$28,500	\$1,770 (1)	\$59,000
	Sharon Bishop	26,000	10,200	780 (2)	26,000

(1) \$59,000 X 3%.

(2) \$26,000 X 3%.

PROBLEM 11-1B

(a)	Jan.	1	Cash	20,000	
			Notes Payable		20,000
		5	Cash	9,752	
			Sales ($\$9,752 \div 106\%$)		9,200
			Sales Taxes Payable		
			($\$9,752 - \$9,200$)		552
		12	Unearned Service Revenue	8,000	
			Service Revenue		8,000
		14	Sales Taxes Payable	5,000	
			Cash		5,000
		20	Accounts Receivable	41,976	
			Sales		39,600
			Sales Taxes Payable		
			($900 \times \$44 \times 6\%$)		2,376
		25	Cash	16,536	
			Sales ($\$16,536 \div 106\%$)		15,600
			Sales Taxes Payable		
			($\$16,536 - \$15,600$)		936
(b)	(1)	Jan. 31	Interest Expense	100	
			Interest Payable		
			($\$20,000 \times 6\% \times 1/12$)		100
	(2)	Jan. 31	Warranty Expense		
			($\$39,600 \times 5\%$)	1,980	
			Estimated Warranty Liability		1,980

PROBLEM 11-1B (Continued)

(c) Current liabilities

Notes payable	\$20,000
Accounts payable	30,000
Unearned service revenue (\$12,000 – \$8,000)	4,000
Sales taxes payable (\$552 + \$2,376 + \$936)	3,864
Estimated warranty liability	1,980
Interest payable	<u>100</u>
Total current liabilities	<u>\$59,944</u>

PROBLEM 11-2B

(a)	Jan. 2	Merchandise Inventory or		
		Purchases	20,000	
		Accounts Payable		20,000
	Feb. 1	Accounts Payable	20,000	
		Notes Payable		20,000
	Mar. 31	Interest Expense		
		(\$20,000 X 12% X 2/12).....	400	
		Interest Payable		400
	Apr. 1	Notes Payable	20,000	
		Interest Payable.....	400	
		Cash		20,400
	July 1	Equipment	37,000	
		Cash		12,000
		Notes Payable		25,000
	Sept. 30	Interest Expense		
		(\$25,000 X 10% X 3/12).....	625	
		Interest Payable		625
	Oct. 1	Notes Payable	25,000	
		Interest Payable.....	625	
		Cash		25,625
	Dec. 1	Cash	15,000	
		Notes Payable		15,000
	Dec. 31	Interest Expense		
		(\$15,000 X 12% X 1/12).....	150	
		Interest Payable		150

PROBLEM 11-2B (Continued)**(b)**

Notes Payable			
4/1	20,000	2/1	20,000
10/1	25,000	7/1	25,000
		12/1	15,000
		12/31 Bal.	15,000

Interest Payable			
4/1	400	3/31	400
10/1	625	9/30	625
		12/31	150
		12/31 Bal.	150

Interest Expense			
3/31	400		
9/30	625		
12/31	150		
12/31 Bal.	1,175		

(c) Current liabilities

Notes payable	\$15,000	
Interest payable	<u>150</u>	\$15,150

(d) Total interest is \$1,175.

PROBLEM 11-3B

(a)

JOHN'S DRUG STORE Payroll Register For the Week Ended February 15, 2010

Employee	Hours	Earnings			Deductions				Net Pay	Store Wages Expense	Office Wages Expense
		Regular	Over- time	Gross Pay	FICA	Fed.	State	U.F.			
J. Uddin	39	468.00	0	468.00	37.44	34.00	14.04	0	382.52	468.00	
B. Conway	42	440.00	33.00	473.00	37.84	20.00	14.19	10.00	390.97	473.00	
S. Becker	44	400.00	60.00	460.00	36.80	51.00	13.80	5.00	353.40	460.00	
L. Blum	46	400.00	90.00	490.00	39.20	36.00	14.70	5.00	395.10		490.00
Totals		1,708.00	183.00	1,891.00	151.28	141.00	56.73	20.00	1,521.99	1,401.00	490.00

PROBLEM 11-3B (Continued)

(b)	Feb. 15	Store Wages Expense.....	1,401.00	
		Office Wages Expense	490.00	
		FICA Taxes Payable.....		151.28
		Federal Income Taxes Payable.....		141.00
		State Income Taxes Payable		56.73
		United Fund Payable		20.00
		Wages Payable.....		1,521.99
15		Payroll Tax Expense.....	268.52	
		FICA Taxes Payable (\$1,891 X 8%).....		151.28
		Federal Unemployment Taxes Payable (\$1,891 X .8%).....		15.13
		State Unemployment Taxes Payable (\$1,891 X 5.4%).....		102.11
(c)	Feb. 16	Wages Payable.....	1,521.99	
		Cash.....		1,521.99
(d)	Feb. 28	FICA Taxes Payable (\$151.28 + \$151.28).....	302.56	
		Federal Income Taxes Payable.....	141.00	
		Cash.....		443.56

PROBLEM 11-4B

(a) Jan. 10	Union Dues Payable.....	200	
	Cash		200
12	FICA Taxes Payable	540	
	Federal Income Taxes Payable	1,100	
	Cash		1,640
15	U.S. Savings Bonds Payable	300	
	Cash		300
17	State Income Taxes Payable	210	
	Cash		210
20	Federal Unemployment Taxes Payable	54	
	State Unemployment Taxes Payable	365	
	Cash		419
31	Office Salaries Expense	17,400	
	Store Wages Expense	22,500	
	FICA Taxes Payable		3,192
	Federal Income Taxes Payable		2,540
	State Income Taxes Payable		500
	Union Dues Payable.....		300
	United Way Contributions Payable		1,300
	Wages Payable		32,068
31	Wages Payable	32,068	
	Cash		32,068

PROBLEM 11-4B (Continued)

(b)	1.	Jan. 31	Payroll Tax Expense.....	5,665.80	
			FICA Taxes Payable		
			($\\$39,900 \times 8\%$)		3,192.00
			Federal Unemployment Taxes		
			Payable ($\\$39,900 \times .8\%$)		319.20
			State Unemployment Taxes		
			Payable ($\\$39,900 \times 5.4\%$)		2,154.60
*2.	31		Vacation Benefits Expense		
			($\\$39,900 \times 5\%$).....	1,995	
			Vacation Benefits Payable		1,995

PROBLEM 11-5B

(a)	Administrative Salaries Expense	150,000	
	Electricians' Wages Expense	240,000	
	FICA Taxes Payable		29,600
	Federal Income Taxes Payable		78,000
	State Income Taxes Payable		11,700
	United Fund Contributions Payable		17,000
	Hospital Insurance Premiums Payable		12,000
	Wages Payable		241,700

(b)	Payroll Tax Expense	32,570	
	FICA Taxes Payable (\$370,000 X 8%).....		29,600
	Federal Unemployment Taxes Payable		
	(\$90,000 X .8%).....		720
	State Unemployment Taxes Payable		
	(\$90,000 X 2.5%).....		2,250

(c)					
	Wages,	Federal	State		
	Tips, Other	Income	Income		
	Compensation	Tax	Tax	FICA	FICA Tax
Employee		Withheld	Withheld	Wages	Withheld
R. Lowski	\$50,000	\$18,300	\$1,500 (1)	\$50,000	\$4,000
K. Monez	24,000	4,800	720 (2)	24,000	1,920

(1) \$50,000 X 3%.

(2) \$24,000 X 3%.

- (a) Total current liabilities at December 29, 2007, \$7,753 million. PepsiCo's total current liabilities increased by \$893 (\$7,753 – \$6,860) million over the prior year.
- (b) In Note 2 under the subheading "Commitments and Contingencies," PepsiCo states: "We recognize liabilities for contingencies and commitments when a loss is probable and estimable."
- (c) The components of current liabilities are:

Accounts payable and other current liabilities	\$7,602
Income taxes payable	<u>151</u>
Total current liabilities.....	<u>\$7,753</u>

- (a) PepsiCo's largest current liability was "accounts payable" at \$2,562 million. Its total current liabilities were \$7,753 million. Coca-Cola's largest current liability was "accounts payable and accrued expenses" at \$6,915 million. Its total current liabilities were \$13,225 million.

(b)	(in millions)	<u>PepsiCo</u>	<u>Coca-Cola</u>
(1)	Working capital	\$10,151 – \$7,753 = \$2,398	\$12,105 – \$13,225 = (\$1,120)
(2)	Current ratio	$\frac{\$10,151}{\$7,753} = 1.31:1$	$\frac{\$12,105}{\$13,225} = .92:1$

- (c) Based on this information, it appears that both companies are only narrowly liquid. The working capital levels are low or negative and, the current ratios are very low.

- (a) A worker who performs services for you is your employee if you can control what will be done and how it will be done. This is so even when you give the employee freedom of action. What matters is that you have the right to control the details of how the services are performed. See Pub. 15-A, Employer's Supplemental Tax Guide, for more information on how to determine whether an individual providing services is an independent contractor or an employee.

Generally, people in business for themselves are not employees. For example, doctors, lawyers, veterinarians, construction contractors, and others in an independent trade in which they offer their services to the public are usually not employees. However, if the business is incorporated, corporate officers who work in the business are employees.

- (b) Payments for the services of a child under the age of 18 who works for his or her parent in a trade or business (sole proprietorship or a partnership in which each partner is a parent of the child) are not subject to social security and Medicare taxes. If these services are for work other than in a trade or business, such as domestic work in the parent's private home, they are not subject to social security and Medicare taxes until the child reaches 21.
- (c) Any employee who does not have a social security card can get one by completing Form SS-5, Application for a Social Security Card, and submitting the necessary documentation.
- (d) Tips your employee receives are generally subject to withholding. Your employee must report cash tips to you by the 10th of the month after the month the tips are received. The report should include tips you paid over to the employee for charge customers and tips the employee received directly from customers. No report is required for months when tips are less than \$20. Your employee reports the tips on Form 4070, Employee's Report of Tips to Employer, or on a similar statement.

- (e) In general, you must deposit federal income tax withheld and both the employer and employee social security and Medicare taxes (minus any advance EIC payments). You must deposit by using the Electronic Federal Tax Payment System (EFTPS) or by mailing or delivering a check, money order, or cash to an authorized financial institution or Federal Reserve bank using Form 8109 Federal Tax Deposit Coupon. However, some taxpayers are required to deposit by electronic funds transfer.**

(a)

METCALFE SERVICES INC.

<u>Months</u>	<u>Number of Employees</u>	<u>Days Worked</u>	<u>Daily Rate</u>	<u>Cost</u>
January–March	2	60 (20 X 3)	\$75	\$ 9,000
April–May	3	50 (25 X 2)	75	11,250
June–October	2	90 (18 X 5)	75	13,500
November–December	3	46 (23 X 2)	75	10,350
Total Cost				<u>\$44,100</u>

PERMANENT EMPLOYEES

Salaries (\$21,000 X 2).....		\$42,000
Additional payroll costs		
FICA taxes (8% X \$42,000).....	\$3,360	
Federal unemployment taxes (.8% X \$14,000)	112	
State unemployment taxes (5.4% X \$14,000)	756	
Medical and dental insurance (2 X \$40 X 12).....	960	5,188
		<u>\$47,188</u>

Kensington Processing Company would save \$3,088 (\$47,188 – \$44,100), as shown, by discharging the two employees and accepting the Metcalfe Services Inc. plan.

(b) Donna should consider the following additional factors:

- (1) The effect on the morale of the continuing employees if two employees are terminated.
- (2) The anticipated efficiency of Metcalfe Services Inc. workers compared to the efficiency of the two employees who would be terminated.
- (3) The effect on management control and supervision of using Metcalfe Services Inc. personnel.
- (4) The time that may be required to integrate the different Metcalfe Services Inc. personnel into the Kensington Processing Company's procedures.

Dear Mr. Quaney:

In response to your request, I wish to explain the types of taxes that are involved in determining the payroll and in recording and paying employer payroll taxes.

The taxes that are involved in determining the payroll are as follows:

- 1. FICA taxes.** These taxes were enacted by Congress to provide workers with supplemental retirement, employment disability, and medical benefits. These benefits are financed by a tax levied on employees' earnings. The tax rate and tax base are set by Congress and both change intermittently. Our text uses a rate of 8% on the first \$100,000 of gross earnings. FICA taxes are withheld by the employer and then remitted to the government. These taxes are not an expense to the employer.
- 2. Federal income taxes.** Employers are required to withhold federal income taxes from employees each pay period. The amount depends on the employee's gross earnings, the number of allowances claimed by the employee, and the length of the pay period. The amounts withheld are remitted by the employer to the government. These taxes are not an expense to the employer.
- 3. State and city income taxes.** Where applicable, these income taxes are similar to federal income taxes.

There are three types of payroll taxes that are levied on employers that are recognized as payroll tax expense by the employer.

- 1. FICA taxes.** The employer must match each employee's FICA contribution. The employer's tax is subject to the same rate and maximum earnings applicable to the employee.

- 2. Federal unemployment taxes. These taxes provide benefits to employees who lose their jobs through no fault of their own. The tax is 6.2% on the first \$7,000 of gross earnings paid to each employee during a calendar year. The employer is allowed a maximum credit of 5.4% on the federal rate for contributions to state unemployment taxes.**
- 3. State unemployment taxes. These taxes also provide benefits to employees who lose their jobs. The basic rate is usually 5.4% on the first \$7,000 of wages paid to an employee during the year.**

Very truly yours,

- (a) The stakeholders in this situation are:
- ▶ Daniel Longan, owner and manager.
 - ▶ Sixteen part-time employees of Daniel's.
 - ▶ Gina Watt, public accountant.
- (b) Not withholding federal and state taxes from employees' payroll is both illegal and unethical. Also, not paying FICA taxes, and state and federal unemployment taxes, is illegal and unethical.
- (c) Gina Watt, as Daniel's public accountant, should not be an accomplice to improper payroll deductions and accounting. Gina should constantly remind Daniel of the consequences of his illegal payroll payments and the unrecorded payments. She should advise Daniel that not only is the government deprived of its proper tax revenues, but employees are deprived of social security and possibly Medicare credits as well as workmen's compensation insurance.
- (d) An important internal control principle is to make no payments from cash receipts. All cash receipts should be deposited daily intact in the bank and all disbursements should be made by properly authorized and signed checks.

The answer to these questions depends on the state in which the student resides. It also will be depend on the year chosen, although we expect that the results will be much the same whether they pick any rates between 2007 and 2010. We provide a solution for this problem using the state of Wisconsin as an example. It should be pointed out that certain taxes can be deducted for computing federal income tax but are ignored in our computation.

- (a) Wisconsin state income taxes for a single person with a taxable income of \$60,000 is \$3,701. The tax rate between \$17,680 and \$132,580 is \$950.30 plus 6.5 percent over \$17,680. Therefore the computation is as follows:

$$\begin{array}{rcl}
 (\$60,000 - \$17,680) \times 6.5\% & = & \$2,751 \\
 \text{Base rate} & & \underline{950} \\
 \text{Total state income tax} & & \underline{\underline{\$3,701}}
 \end{array}$$

- (b) The property tax on a \$200,000 home at 2.1% is \$4,200.
- (c) The state gasoline tax in Wisconsin is 32.9 cents per gallon and the federal gasoline tax is 18.4 cents per gallon. Your total taxes on gasoline are computed as follows:
- $$300 \text{ gallons} \times (\$0.329 + \$0.184) = \underline{\underline{\$154}}$$
- (d) In Wisconsin the state sales tax rate is 5% and excludes food and prescription drug purchases. Therefore the sales tax is \$200 (\$4,000 X 5%).
- (e) The social security rate is 7.65% on income of \$60,000 or \$4,590.
- (f) Federal income taxes for a single person with a taxable income of \$60,000 is \$11,558. The tax rate between \$30,650 and \$74,200 is \$4,220 plus 25% over \$30,650. Therefore the computation is as follows:

$$\begin{array}{rcl}
 (\$60,000 - \$30,650) \times 25\% & = & \$ 7,338 \\
 \text{Base rate} & & \underline{4,220} \\
 \text{Total tax} & & \underline{\underline{\$11,558}}
 \end{array}$$

BYP 11-7 (Continued)

The total taxes paid therefore are computed as follows, based on a \$60,000 income amount:

State income tax	\$ 3,701
Property tax on home.....	4,200
Gasoline tax.....	154
Sales tax	200
Social security tax.....	4,590
Federal income tax.....	<u>11,558</u>
Total tax	<u>\$24,403</u>

The percentage of total taxes to income is therefore 41% (\$24,403/\$60,000), given the information above.

CHAPTER 12

Accounting for Partnerships

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the characteristics of the partnership form of business organization.	1, 2, 3, 4, 24		1	1		
2. Explain the accounting entries for the formation of a partnership.	5	1, 2	3	2, 3	1A	1B
3. Identify the bases for dividing net income or net loss.	6, 7, 8, 9, 10	3, 4, 5	5	4, 5	2A	2B
4. Describe the form and content of partnership financial statements.	11		5	6, 7	1A, 2A	1B, 2B
5. Explain the effects of the entries to record the liquidation of a partnership.	12, 13, 14, 15, 16	6		8, 9, 10	3A	3B
*6. Explain the effects of the entries when a new partner is admitted.	17, 18, 19, 20	7, 8		11, 12, 15	4A	4B
*7. Describe the effects of the entries when a partner withdraws from the firm.	21, 22, 23	9, 10		13, 14, 15	5A	5B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare entries for formation of a partnership and a balance sheet.	Simple	20–30
2A	Journalize divisions of net income and prepare a partners' capital statement.	Moderate	30–40
3A	Prepare entries with a capital deficiency in liquidation of a partnership	Moderate	30–40
*4A	Journalize admission of a partner under different assumptions.	Moderate	30–40
*5A	Journalize withdrawal of a partner under different assumptions.	Moderate	30–40
1B	Prepare entries for formation of a partnership and a balance sheet.	Simple	30–40
2B	Journalize divisions of net income and prepare a partners' capital statement.	Moderate	30–40
3B	Prepare entries and schedule of cash payments in liquidation of a partnership.	Moderate	30–40
*4B	Journalize admission of a partner under different assumptions.	Moderate	30–40
*5B	Journalize withdrawal of a partner under different assumptions.	Moderate	30–40

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CHAPTER 12
ACCOUNTING FOR PARTNERSHIPS

Number	SO	BT	Difficulty	Time (min.)
BE1	2	AP	Simple	2–4
BE2	2	AP	Simple	3–5
BE3	3	AP	Simple	4–6
BE4	3	AP	Simple	4–6
BE5	3	AP	Simple	6–8
BE6	5	AP	Simple	2–4
BE7	6	AP	Simple	2–4
BE8	6	AP	Simple	3–5
BE9	7	AP	Simple	2–4
BE10	7	AP	Simple	3–5
DI1	1	C	Simple	2–4
DI2	3	AP	Simple	4–6
DI3	5	AP	Simple	8–10
DI4	5	AP	Moderate	6–8
EX1	1	C	Simple	6–8
EX2	2	AP	Simple	6–8
EX3	2	AP	Simple	4–6
EX4	3	AP	Simple	10–12
EX5	3	AP	Simple	8–10
EX6	4	AP	Simple	6–8
EX7	4	AP	Simple	8–10
EX8	5	AP	Simple	6–8
EX9	5	AP	Simple	6–8
EX10	5	AP	Simple	6–8
EX11	6	AP	Simple	4–6
EX12	6	AP	Simple	6–8
EX13	7	AP	Simple	4–6
EX14	7	AP	Moderate	8–10
EX15	6, 7	AP	Moderate	6–8
P1A	2, 4	AP	Simple	20–30
P2A	3, 4	AP	Moderate	30–40
P3A	5	AP	Moderate	30–40

ACCOUNTING FOR PARTNERSHIPS (Continued)

Number	SO	BT	Difficulty	Time (min.)
P4A	6	AP	Moderate	30–40
P5A	7	AP	Moderate	30–40
P1B	2, 4	AP	Simple	20–30
P2B	3, 4	AP	Moderate	30–40
P3B	5	AP	Moderate	30–40
P4B	6	AP	Moderate	30–40
P5B	7	AP	Moderate	30–40
BYP1	—	C	Simple	8–10
BYP2	1–3	C, E	Simple	15–20
BYP3	2, 5	S	Simple	10–15
BYP4	3	E	Simple	10–15
BYP5	1	S	Simple	15–20

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the characteristics of the partnership form of business organization.	Q12-1 Q12-2 Q12-3 Q12-4	Q12-24 DI12-1 E12-1				
2. Explain the accounting entries for the formation of a partnership.			Q12-5 E12-3 BE12-1 P12-1A BE12-2 P12-1B E12-2			
3. Identify the bases for dividing net income or net loss.	Q12-6 Q12-7 Q12-9		Q12-8 DI12-2 Q12-10 E12-4 BE12-3 E12-5 BE12-4 P12-2A BE12-5 P12-2B			
4. Describe the form and content of partnership financial statements.	Q12-11		E12-6 P12-2A E12-7 P12-1B P12-1A P12-2B			
5. Explain the effects of the entries to record the liquidation of a partnership.	Q12-12 Q12-13 Q12-14		Q12-15 E12-8 Q12-16 E12-9 BE12-6 E12-10 DI12-3 P12-3A DI12-4 P12-3B			
*6. Explain the effects of the entries when a new partner is admitted.	Q12-17 Q12-18		Q12-19 E12-12 Q12-20 E12-15 BE12-7 P12-4A BE12-8 P12-4B E12-11			
*7. Describe the effects of the entries when a partner withdraws from the firm.	Q12-22 Q12-23		Q12-21 E12-14 BE12-9 E12-15 BE12-10 P12-5A E12-13 P12-5B			
Broadening Your Perspective		Exploring the Web Decision Making Across the Organization			Communication All About You	Decision Making Across the Organization Ethics Case

ANSWERS TO QUESTIONS

1.
 - (a) Association of individuals. A partnership is a voluntary association of two or more individuals based on as simple an act as a handshake. Preferably, however, the agreement should be in writing. A partnership is both a legal entity and an accounting entity, but it is not a taxable entity.
 - (b) Limited life. A partnership does not have unlimited life. A partnership may be ended voluntarily or involuntarily. Thus, the life of a partnership is indefinite. Any change in the members of a partnership results in the dissolution of the partnership.
 - (c) Co-ownership of property. Partnership assets are co-owned by all the partners. If the partnership is terminated, the assets do not legally revert to the original contributor. Each partner has a claim on total assets equal to his or her capital balance. This claim does not attach to specific assets the individual partner contributed to the firm.
2.
 - (a) Mutual agency. This characteristic means that the act of any partner is binding on all other partners when engaging in partnership business. This is true even when the partners act beyond the scope of their authority, so long as the act appears to be appropriate for the partnership.
 - (b) Unlimited liability. Each partner is personally and individually liable for all partnership liabilities. Creditors' claims attach first to partnership assets and then to personal resources of any partner, irrespective of that partner's equity in the partnership.
3. The advantages of a partnership are: (1) combining skills and resources of two or more individuals, (2) ease of formation, (3) freedom from governmental regulations and restrictions, and (4) ease of decision making. Disadvantages are: (1) mutual agency, (2) limited life, and (3) unlimited liability.
4. A limited partnership is used when a general partner(s) wish to raise cash without involving outside investors in management of the business. Limited partners in this case have limited personal liability for business debts as long as they don't participate in management.
5. Sampson's capital account balance should be \$102,000, comprised of land \$65,000, and equipment \$57,000, less debt \$20,000.
6. When the partnership agreement does not specify the division of net income or net loss, net income and net loss should be divided equally.
7. Factors to be considered in determining how income and loss should be divided are: (1) a fixed ratio is easy to apply and it may be an equitable basis in some circumstances; (2) capital balance ratios when the funds invested in the partnership are considered the most critical factor; and (3) salary allowance and/or interest allowance coupled with a fixed ratio. This last approach gives specific recognition to differences that may exist among partners by providing salary allowances for time worked and interest allowances for capital invested.
8. The net income of \$36,000 should be divided equally—\$18,000 to M. Carson and \$18,000 to R. Leno.
9.
 - (a) Account debited: Income Summary; accounts credited: S. McMurray, Capital and F. Kohl, Capital.
 - (b) Account debited: S. McMurray, Drawing; account credited: Cash.

10.

Division of Net Income

	<u>T. Evans</u>	<u>R. Meloy</u>	<u>Total</u>
Salary Allowance	\$30,000	\$25,000	\$55,000
Deficiency: (\$10,000)			
(\$45,000 – \$55,000)			
T. Evans (60% X \$10,000)	(6,000)		(6,000)
R. Meloy (40% X \$10,000)		(4,000)	(4,000)
Total division	<u>\$24,000</u>	<u>\$21,000</u>	<u>\$45,000</u>

11. The financial statements of a partnership are similar to those of a proprietorship. The differences are due to the number of partners involved. The income statement for a partnership is identical to the income statement for a proprietorship except for the detailed information concerning the division of net income. The owners' equity statement is called the partners' capital statement. This statement shows the changes in each partner's capital account and in total partnership capital during the year. On the balance sheet each partner's capital balance is reported in the owners' equity section.
12. Liquidation of a partnership ends both the legal and economic life of the entity. Partnership dissolution occurs whenever a partner withdraws or a new partner is admitted. Dissolution does not necessarily mean that the business ends. If the continuing partners agree, operations can continue without interruption by forming a new partnership.
13. No, Bobby is not correct. All gains and losses on liquidation should be allocated to the partners on the basis of their income ratio. However, final cash distributions should be based on their capital balances.
14. Yes, Bill is correct. Capital balances are used because they represent the individual partner's equity in the partnership. The objective of the distribution is to eliminate the balance in each partner's capital account.
15. Total cash after paying liabilities..... \$109,000
 Total capital balances (\$34,000 + \$31,000 + \$28,000)..... 93,000
 Excess (gain on sale of noncash assets) \$ 16,000
- Allocated to Keegan (\$16,000 X 3/10) \$ 4,800
- Cash to Keegan (\$31,000 + \$4,800) \$ 35,800
16. Capital deficiency, M. Jeter..... \$ 8,000
- Loss allocated to: L. Pattison, capital (\$8,000 X 3/8) \$ 3,000
- Cash to L. Pattison (\$12,000 – \$3,000) \$ 9,000
- *17. This transaction represents the purchase of an existing partner's interest. It is a personal transaction that has no effect on partnership net assets.

Questions Chapter 12 (Continued)

***18.** Partnership net assets increase \$25,000. No, Steve Renn does not necessarily acquire a 1/6 income ratio. Unless stated otherwise, net income or net loss is divided evenly among all partners.

*19. Grant, Capital.....	66,000	
Kate Robidou, Capital		66,000

*20. Tracy Harper, Capital	39,000	
Kim Remington, Capital		39,000

***21.** Newlin's share of the bonus is \$3,000 computed as follows:

Partnership assets		\$85,000
Capital credit, Perry		<u>77,000</u>
Bonus to retiring partner		8,000
Allocated to:		
Garland: $\$8,000 \times 5/8 =$	\$5,000	
Newlin: $\$8,000 \times 3/8 =$	<u>3,000</u>	<u>8,000</u>
		<u>\$ 0</u>

***22.** Recording the revaluations violates the cost principle, which requires that assets be stated at original cost. It is also a departure from the going-concern assumption, which assumes the entity will continue indefinitely.

***23.** When a partner dies, it is usually necessary to determine the partner's equity at the date of death by: (1) determining the net income or loss for the year to date, (2) closing the books, and (3) preparing financial statements. The partnership agreement may also require an audit of the financial statements by independent auditors and a revaluation of assets by an appraisal firm.

24. A partnership is an association of two or more persons to carry on as co-owners of a business for profit. PepsiCo is a corporation since it has thousands of owners (called stockholders).

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 12-1

Cash	10,000	
Equipment.....	5,000	
Stanley Farrin, Capital.....		15,000

BRIEF EXERCISE 12-2

Accounts Receivable.....	\$16,000	
Less: Allowance for doubtful accounts	<u>2,500</u>	\$13,500
Equipment.....		11,000

Accumulated depreciation should not be shown because a new company cannot have any accumulated depreciation.

BRIEF EXERCISE 12-3

The division is: Held \$42,000 (\$70,000 X 60%) and Bond \$28,000 (\$70,000 X 40%).
The entry is:

Income Summary	70,000	
Held, Capital		42,000
Bond, Capital.....		28,000

BRIEF EXERCISE 12-4

Division of Net Income

	<u>Espino</u>	<u>Sears</u>	<u>Utech</u>	<u>Total</u>
Salary allowance.....	\$15,000	\$ 5,000	\$ 5,000	\$25,000
Remaining income, \$30,000: (\$55,000 – \$25,000)				
C (\$30,000 X 50%)	15,000			
S (\$30,000 X 30%)		9,000		
N (\$30,000 X 20%)			6,000	
Total remainder.....				<u>30,000</u>
Total division of net income	<u>\$30,000</u>	<u>\$14,000</u>	<u>\$11,000</u>	<u>\$55,000</u>

BRIEF EXERCISE 12-5

Division of Net Income

	<u>Joe</u>	<u>Sam</u>	<u>Total</u>
Salary allowance	\$15,000	\$10,000	\$25,000
Interest allowance.....	7,000	5,000	12,000
Remaining deficiency, (\$9,000): [((\$25,000 + \$12,000) – \$28,000)]			
Joe (\$9,000 X 50%)	(4,500)		
Sam (\$9,000 X 50%)		(4,500)	
Total remainder			(9,000)
Total division of net income.....	<u>\$17,500</u>	<u>\$10,500</u>	<u>\$28,000</u>

BRIEF EXERCISE 12-6

A, Capital.....	8,000	
L, Capital	7,000	
F, Capital	4,000	
Cash.....		19,000

*BRIEF EXERCISE 12-7

Cox, Capital.....	10,000	
Day, Capital		10,000

*BRIEF EXERCISE 12-8

Cash.....	52,000	
Menke, Capital (50% X \$11,900*)	5,950	
Hibbett, Capital (50% X \$11,900)	5,950	
Kosko, Capital (45% X \$142,000).....		63,900

*[((\$40,000 + \$50,000 + \$52,000) X 45%) – \$52,000 = \$11,900.

***BRIEF EXERCISE 12-9**

Denny, Capital.....	18,000	
Messer, Capital		9,000
Isch, Capital		9,000

***BRIEF EXERCISE 12-10**

Denny, Capital.....	18,000	
Messer, Capital (50% X \$6,000)	3,000	
Isch, Capital (50% X \$6,000)	3,000	
Cash		24,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES**DO IT! 12-1**

1. True.
2. False. If a partnership is dissolved, each partner has a claim on total assets equal to the balance in his or her capital account. The claim does not attach to any specific assets.
3. False. In a limited partnership, the general partners have unlimited liability.
4. True.
5. True.

DO IT! 12-2

The division of net income is as follows:

	<u>S. Wiborg</u>	<u>G. Murphy</u>	<u>Total</u>
Salary allowance.....	\$25,000	\$18,000	\$43,000
Remaining income (\$85,000 – \$43,000)			
S. Wiborg (40% X \$42,000).....	16,800		
G. Murphy (60% X \$42,000)		25,200	
Total remaining income			<u>42,000</u>
Total division of net income	<u>\$41,800</u>	<u>\$43,200</u>	<u>\$85,000</u>

DO IT! 12-2 (Continued)

Income Summary	85,000	
S. Wiborg, Capital		41,800
G. Murphy, Capital		43,200

DO IT! 12-3

Item	Cash	+	Noncash Assets	=	Liabilities	+	M. Jones Capital	+	J. Strummer, Capital	+	P. Simonon Capital
Balance before											
liquidation	15,000		90,000		40,000		20,000		32,000		13,000
Sale of noncash assets											
and allocation of gain	<u>125,000</u>		<u>(90,000)</u>				<u>13,125^a</u>		<u>8,750^b</u>		<u>13,125^a</u>
New balances	140,000		—0—		40,000		33,125		40,750		26,125
Pay liabilities	<u>(40,000)</u>				<u>(40,000)</u>						
New Balances	100,000		—0—		—0—		33,125		40,750		26,125
Cash distribution to											
partners	<u>(100,000)</u>						<u>(33,125)</u>		<u>(40,750)</u>		<u>(26,125)</u>
Final balances	<u>—0—</u>		<u>—0—</u>		<u>—0—</u>		<u>—0—</u>		<u>—0—</u>		<u>—0—</u>

^a35,000 X 3/8

^b35,000 X 2/8

DO IT! 12-4

Niles, Capital (\$21,000 X 3/7)	9,000	
Vandalia, Capital (\$21,000 X 4/7)	12,000	
Dowagiac, Capital		21,000
(To record write-off of capital deficiency)		
Niles, Capital (\$47,000 X \$9,000)	38,000	
Vandalia, Capital (\$40,000 – \$12,000)	28,000	
Cash		66,000
(To record distribution of cash of partners)		

SOLUTIONS TO EXERCISES

EXERCISE 12-1

1. False. A partnership is an association of *two* or more persons to carry on as co-owners of a business for profit.
2. False. Partnerships are fairly easy to form; they can be formed simply by a verbal agreement.
3. False. A partnership *is* an entity for financial reporting purposes.
4. False. The net income of a partnership is *not* taxed as a separate entity.
5. True.
6. True.
7. False. When a partnership is dissolved, the assets do *not* revert to the original contributor.
8. True.
9. False. Mutual agency is a *disadvantage* of the partnership form of business.

EXERCISE 12-2

(a)	Cash	50,000	
	Meissner, Capital		50,000
	Land.....	15,000	
	Building.....	80,000	
	Cohen, Capital		95,000
	Cash	9,000	
	Accounts Receivable.....	32,000	
	Equipment	19,000	
	Allowance for Doubtful Accounts		3,000
	Hughes, Capital		57,000
(b)	\$50,000 + \$95,000 + \$57,000 = <u>\$202,000</u>		

EXERCISE 12-3

Jan. 1	Cash.....	12,000	
	Accounts Receivable	14,000	
	Equipment	13,500	
	Allowance for Doubtful Accounts		3,000
	Jack Herington, Capital.....		36,500

EXERCISE 12-4**(a) (1)****DIVISION OF NET INCOME**

	<u>F. Calvert</u>	<u>G. Powers</u>	<u>Total</u>
Salary allowance	\$20,000	\$12,000	\$32,000
Interest allowance			
F. Calvert (\$50,000 X 10%).....	5,000		
G. Powers (\$40,000 X 10%)		4,000	
Total interest			9,000
Total salaries and interest	25,000	16,000	41,000
Remaining income, \$9,000 (\$50,000 – \$41,000)			
F. Calvert (\$9,000 X 60%).....	5,400		
G. Powers (\$9,000 X 40%).....		3,600	
Total remainder			9,000
Total division of net income.....	<u>\$30,400</u>	<u>\$19,600</u>	<u>\$50,000</u>

(2)**DIVISION OF NET INCOME**

	<u>F. Calvert</u>	<u>G. Powers</u>	<u>Total</u>
Salary allowance	\$20,000	\$12,000	\$32,000
Interest allowance.....	5,000	4,000	9,000
Total salaries and interest	25,000	16,000	41,000
Remaining deficiency, (\$5,000) (\$41,000 – \$36,000)			
F. Calvert (\$5,000 X 60%).....	(3,000)		
G. Powers (\$5,000 X 40%).....		(2,000)	
Total remainder			(5,000)
Total division of net income.....	<u>\$22,000</u>	<u>\$14,000</u>	<u>\$36,000</u>

(b) (1)	Income Summary	50,000	
	F. Calvert, Capital		30,400
	G. Powers, Capital		19,600
(2)	Income Summary	36,000	
	F. Calvert, Capital		22,000
	G. Powers, Capital		14,000

EXERCISE 12-5

(a)	Income Summary	70,000	
	O. Guillen, Capital (\$70,000 X 45%).....		31,500
	K. Williams, Capital (\$70,000 X 55%).....		38,500
(b)	Income Summary	70,000	
	O. Guillen, Capital		
	[\$30,000 + (\$15,000 X 45%)]		36,750
	K. Williams, Capital		
	[\$25,000 + (\$15,000 X 55%)]		33,250
(c)	Income Summary	70,000	
	O. Guillen, Capital		36,000
	K. Williams, Capital		34,000
	Guillen: [\$40,000 + \$6,000 – (\$20,000 X 50%)]		
	Williams: [\$35,000 + \$9,000 – (\$20,000 X 50%)]		
(d)	Guillen: \$60,000 + \$36,000 – \$18,000 = <u>\$78,000</u>		
	Williams: \$90,000 + \$34,000 – \$24,000 = <u>\$100,000</u>		

EXERCISE 12-6

(a) **STARRITE CO.**
Partners' Capital Statement
For the Year Ended December 31, 2010

	<u>G. Stark</u>	<u>J. Nyland</u>	<u>Total</u>
Capital, January 1	\$20,000	\$18,000	\$38,000
Add: Net income	<u>15,000</u>	<u>15,000</u>	<u>30,000</u>
	35,000	33,000	68,000
Less: Drawings.....	<u>8,000</u>	<u>5,000</u>	<u>13,000</u>
Capital, December 31.....	<u>\$27,000</u>	<u>\$28,000</u>	<u>\$55,000</u>

EXERCISE 12-6 (Continued)**(b)**

STARRITE CO.
Partial Balance Sheet
December 31, 2010

Owners' equity		
G. Stark, Capital	\$27,000	
J. Nyland, Capital	<u>28,000</u>	
Total owners' equity		<u>\$55,000</u>

EXERCISE 12-7

THE STOOGES PARTNERSHIP
Balance Sheet
December 31, 2010

Assets		
Current Assets		
Cash	\$37,000	
Accounts Receivable	\$36,000	
Less: Allowance for Doubtful Accounts	<u>(4,000)</u>	32,000
Supplies	<u>3,000</u>	
Total current assets		\$ 72,000
Property, Plant and Equipment		
Land	\$18,000	
Building	75,000	
Equipment	<u>47,000</u>	
Total property, plant, and equipment		<u>140,000</u>
Total assets		<u>\$212,000</u>
Liabilities and Owners' Equity		
Long-term Liabilities		
Mortgage Payable		\$ 20,000
Owners' Equity		
Moe, Capital	\$55,000	
Larry, Capital	73,000	
Curly, Capital	<u>64,000</u>	
Total owners' equity		<u>192,000</u>
Total liabilities and owners' equity		<u>\$212,000</u>

EXERCISE 12-8

THE BEST COMPANY Schedule of Cash Payments

Item	Cash	+ Noncash Assets	= Liabilities	+ Rodriguez Capital	+ Escobedo Capital
Balances before liquidation	\$ 20,000	\$100,000	\$55,000	\$45,000	\$20,000
Sale of noncash assets and allocation of gain	110,000	(100,000)		6,000	4,000
New balances	130,000	0	55,000	51,000	24,000
Pay liabilities	(55,000)		(55,000)		
New balances	75,000	0	0	51,000	24,000
Cash distribution to partners	(75,000)			(51,000)	(24,000)
Final balances	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>

EXERCISE 12-9

(a) Cash	110,000	
Noncash Assets		100,000
Gain on Realization		10,000
(b) Gain on Realization	10,000	
Rodriguez, Capital (\$10,000 X 60%)		6,000
Escobedo, Capital (\$10,000 X 40%)		4,000
(c) Liabilities	55,000	
Cash		55,000
(d) Rodriguez, Capital	51,000	
Escobedo, Capital	24,000	
Cash		75,000

EXERCISE 12-10

(a) (1)	Cash.....	4,000	
	Farley, Capital.....		4,000
(2)	Newell, Capital.....	17,000	
	Jennings, Capital.....	15,000	
	Cash.....		32,000
(b) (1)	Newell, Capital (\$4,000 X 5/8)	2,500	
	Jennings, Capital (\$4,000 X 3/8)	1,500	
	Farley, Capital.....		4,000
(2)	Newell, Capital (\$17,000 – \$2,500).....	14,500	
	Jennings, Capital (\$15,000 – \$1,500)	13,500	
	Cash.....		28,000

***EXERCISE 12-11**

(a)	J. Lynn, Capital (\$30,000 X 50%)	15,000	
	D. Duran, Capital.....		15,000
(b)	M. Oller, Capital (\$26,000 X 50%)	13,000	
	D. Duran, Capital.....		13,000
(c)	F. Tate, Capital (\$18,000 X 33 1/3%)	6,000	
	D. Duran, Capital.....		6,000

***EXERCISE 12-12**

(a)	Cash.....	90,000	
	G. Olde, Capital (6/10 X \$12,000)		7,200
	R. Young, Capital (4/10 X \$12,000).....		4,800
	K. Twener, Capital		78,000

Total capital of existing partnership	\$170,000
Investment by new partner, Twener.....	<u>90,000</u>
Total capital of new partnership	<u>\$260,000</u>

Twener's capital credit	
(30% X \$260,000)	<u>\$ 78,000</u>

***EXERCISE 12-12 (Continued)**

Investment by new partner, Twener	\$ 90,000		
Twener's capital credit.....	<u>78,000</u>		
Bonus to old partners	<u>\$ 12,000</u>		
(b) Cash		50,000	
G. Olde, Capital (6/10 X \$16,000).....		9,600	
R. Young, Capital (4/10 X \$16,000)		6,400	
K. Twener, Capital.....			66,000
Total capital of existing partnership	\$170,000		
Investment by new partner, Twener	<u>50,000</u>		
Total capital of new partnership	<u>\$220,000</u>		
Twener's capital credit			
(30% X \$220,000)	<u>\$ 66,000</u>		
Investment by new partner, Twener	\$ 50,000		
Twener's capital credit.....	<u>66,000</u>		
Bonus to new partner.....	<u>\$ 16,000</u>		

***EXERCISE 12-13**

1.	S. Nguyen, Capital	32,000	
	B. Cates, Capital		16,000
	V. Elder, Capital		16,000
2.	S. Nguyen, Capital	32,000	
	V. Elder, Capital		32,000
3.	S. Nguyen, Capital	32,000	
	B. Cates, Capital		32,000

***EXERCISE 12-14**

1.	R. Fisk, Capital	60,000	
	H. Barrajas, Capital	5,000	
	T. Dingler, Capital.....	3,000	
	Cash.....		68,000

Capital balance of withdrawing partner	\$60,000
Payment to withdrawing partner	<u>68,000</u>
Bonus to retiring partner	<u>\$ 8,000</u>

Allocation of bonus		
Barrajas, Capital		
(\$8,000 X 5/8).....	\$5,000	
Dingler, Capital		
(\$8,000 X 3/8)	<u>3,000</u>	<u>\$ 8,000</u>

2.	R. Fisk, Capital	60,000	
	H. Barrajas, Capital		2,500
	T. Dingler, Capital.....		1,500
	Cash.....		56,000

Capital balance of withdrawing partner	\$60,000
Payment to withdrawing partner	<u>56,000</u>
Bonus to remaining partners	<u>\$ 4,000</u>

Allocation of bonus		
Barrajas, Capital		
(\$4,000 X 5/8)	\$2,500	
Dingler, Capital		
(\$4,000 X 3/8)	<u>1,500</u>	<u>\$ 4,000</u>

***EXERCISE 12-15**

(a) Cash	80,000	
Stewart, Capital (\$280,000^a X 25%).....		70,000
Carson, Capital (\$10,000 X 50%).....		5,000
Letterman, Capital (\$10,000 X 30%)		3,000
O'Brien, Capital (\$10,000 X 20%)		2,000

^a\$100,000 + \$60,000 + \$40,000 + \$80,000

(b) Carson, Capital	100,000	
Letterman, Capital (\$20,000 X 3/5).....	12,000	
O'Brien, Capital (\$20,000 X 2/5).....	8,000	
Cash		120,000

SOLUTIONS TO PROBLEMS

PROBLEM 12-1A

(a)	Jan. 1	Cash.....	14,000	
		Accounts Receivable	17,500	
		Merchandise Inventory	28,000	
		Equipment.....	23,000	
		Allowance for Doubtful		
		Accounts.....		4,500
		Notes Payable.....		18,000
		Accounts Payable		22,000
		Patrick, Capital		38,000
	1	Cash.....	12,000	
		Accounts Receivable	26,000	
		Merchandise Inventory	20,000	
		Equipment.....	16,000	
		Allowance for Doubtful		
		Accounts.....		4,000
		Notes Payable.....		15,000
		Accounts Payable		31,000
		Samuelson, Capital.....		24,000
(b)	Jan. 1	Cash.....	5,000	
		Patrick, Capital		5,000
	1	Cash.....	19,000	
		Samuelson, Capital.....		19,000

PROBLEM 12-1A (Continued)**(c)**

PASA COMPANY
Balance Sheet
January 1, 2010

Assets		
Current assets		
Cash		
(\$14,000 + \$12,000 + \$5,000 + \$19,000).....		\$ 50,000
Accounts receivable		
(\$17,500 + \$26,000).....	\$43,500	
Less: Allowance for doubtful accounts		
(\$4,500 + \$4,000)	<u>8,500</u>	35,000
Merchandise inventory		
(\$28,000 + \$20,000)		<u>48,000</u>
Total current assets		133,000
Property, plant, and equipment		
Equipment (\$23,000 + \$16,000).....		<u>39,000</u>
Total assets		<u>\$172,000</u>
Liabilities and Owners' Equity		
Current liabilities		
Notes payable (\$18,000 + \$15,000).....		\$ 33,000
Accounts payable (\$22,000 + \$31,000)		<u>53,000</u>
Total current liabilities		86,000
Owners' equity		
Patrick, Capital (\$38,000 + \$5,000)	\$43,000	
Samuelson, Capital (\$24,000 + \$19,000).....	<u>43,000</u>	
Total owners' equity		<u>86,000</u>
Total liabilities and owners' equity		<u>\$172,000</u>

PROBLEM 12-2A

(a) (1) Income Summary	30,000	
Reese Caplin, Capital (\$30,000 X 60%)		18,000
Phyllis Newell, Capital (\$30,000 X 30%)		9,000
Betty Uhrich, Capital (\$30,000 X 10%)		3,000
 (2) Income Summary	 37,000	
Reese Caplin, Capital (\$15,000 + \$4,000)		19,000
Phyllis Newell, Capital (\$10,000 + \$4,000)		14,000
Betty Uhrich, Capital (\$0 + \$4,000)		4,000
 Net income	 \$37,000	
Salary allowance		
Caplin	(15,000)	
Newell	(10,000)	
Remainder	<u>\$12,000</u>	
 To each partner		
(\$12,000 X 1/3)	<u>\$ 4,000</u>	
 (3) Income Summary	 19,000	
Reese Caplin, Capital		
(\$4,800 + \$12,000 – \$1,100)		15,700
Phyllis Newell, Capital (\$3,000 – \$1,100)		1,900
Betty Uhrich, Capital (\$2,500 – \$1,100)		1,400
 Net income	 \$19,000	
Interest allowance		
Caplin (\$48,000 X 10%)	(4,800)	
Newell (\$30,000 X 10%)	(3,000)	
Uhrich (\$25,000 X 10%)	<u>(2,500)</u>	
Balance	8,700	
Salary allowance		
Caplin	(12,000)	
Remainder	<u>\$ (3,300)</u>	
 To each partner		
(\$3,300 X 1/3)	<u>\$ (1,100)</u>	

PROBLEM 12-2A (Continued)**(b)****DIVISION OF NET INCOME**

	<u>Reese Caplin</u>	<u>Phyllis Newell</u>	<u>Betty Uhrich</u>	<u>Total</u>
Salary allowance.....	\$12,000			\$12,000
Interest allowance on capital				
Reese Caplin				
(\$48,000 X 10%).....	4,800			
Phyllis Newell				
(\$30,000 X 10%).....		\$3,000		
Betty Uhrich				
(\$25,000 X 10%).....			\$2,500	
Total interest.....				<u>10,300</u>
Total salaries and interest.....	<u>16,800</u>	<u>3,000</u>	<u>2,500</u>	<u>22,300</u>
Remaining deficiency, (\$3,300)				
Reese Caplin				
(\$3,300 X 1/3).....	(1,100)			
Phyllis Newell				
(\$3,300 X 1/3).....		(1,100)		
Betty Uhrich				
(\$3,300 X 1/3).....			(1,100)	
Total remainder.....				<u>(3,300)</u>
Total division of net income	<u>\$15,700</u>	<u>\$1,900</u>	<u>\$1,400</u>	<u>\$19,000</u>

(c)

CNU COMPANY
Partners' Capital Statement
For the Year Ended December 31, 2010

	<u>Reese Caplin</u>	<u>Phyllis Newell</u>	<u>Betty Uhrich</u>	<u>Total</u>
Capital, January 1.....	\$48,000	\$30,000	\$25,000	\$103,000
Add: Net income	<u>15,700</u>	<u>1,900</u>	<u>1,400</u>	<u>19,000</u>
	63,700	31,900	26,400	122,000
Less: Drawings	<u>23,000</u>	<u>14,000</u>	<u>10,000</u>	<u>47,000</u>
Capital, December 31	<u>\$40,700</u>	<u>\$17,900</u>	<u>\$16,400</u>	<u>\$ 75,000</u>

PROBLEM 12-3A

(a)		
(1)		
Cash.....	55,000	
Allowance for Doubtful Accounts	1,000	
Accumulated Depreciation.....	5,500	
Loss on Realization.....	19,000	
Accounts Receivable		25,000
Merchandise Inventory		34,500
Equipment		21,000
Noncash assets (net).....	\$74,000	
Sale proceeds	<u>55,000</u>	
Loss on sale of noncash		
assets.....	<u>\$19,000</u>	
(2)		
M. Mantle, Capital (\$19,000 X 5/10).....	9,500	
W. Mays, Capital (\$19,000 X 3/10).....	5,700	
D. Snider, Capital (\$19,000 X 2/10).....	3,800	
Loss on Realization		19,000
(3)		
Notes Payable.....	13,500	
Accounts Payable	27,000	
Wages Payable.....	4,000	
Cash.....		44,500
(4)		
Cash.....	800	
D. Snider, Capital (\$3,800 – \$3,000).....		800
(5)		
M. Mantle, Capital (\$33,000 – \$9,500).....	23,500	
W. Mays, Capital (\$21,000 – \$5,700).....	15,300	
Cash.....		38,800

PROBLEM 12-3A (Continued)

(b)

Cash			
Bal.	27,500	(3)	44,500
(1)	55,000	(5)	38,800
(4)	800		
Bal.	-0-		

M. Mantle, Capital			
(2)	9,500	Bal.	33,000
(5)	23,500		
		Bal.	-0-

W. Mays, Capital			
(2)	5,700	Bal.	21,000
(5)	15,300		
		Bal.	-0-

D. Snider, Capital			
(2)	3,800	Bal.	3,000
		(4)	800
		Bal.	-0-

(c)	(1)	M. Mantle, Capital (\$800 X 5/8).....	500	
		W. Mays, Capital (\$800 X 3/8).....	300	
		D. Snider, Capital		800
	(2)	M. Mantle, Capital (\$23,500 – \$500).....	23,000	
		W. Mays, Capital (\$15,300 – \$300).....	15,000	
		Cash (\$38,800 – \$800).....		38,000

***PROBLEM 12-4A**

(a) (1)	T. Gomez, Capital	9,000	
	D. Atchley, Capital.....		9,000
(2)	J. Kensington, Capital	18,000	
	D. Atchley, Capital.....		18,000
(3)	Cash.....	66,000	
	S. Seger, Capital (50% X \$9,000)		4,500
	J. Kensington, Capital (40% X \$9,000).....		3,600
	T. Gomez, Capital (10% X \$9,000)		900
	D. Atchley, Capital.....		57,000

Total capital of existing partnership	\$124,000
Investment by Atchley	<u>66,000</u>
Total capital of new partnership	<u>\$190,000</u>

Atchley's capital credit (\$190,000 X 30%)	<u>\$ 57,000</u>

Investment by new partner, Atchley	\$ 66,000
Atchley's capital credit	<u>57,000</u>
Bonus to old partners	<u>\$ 9,000</u>

(4)	Cash.....	46,000	
	S. Seger, Capital (\$5,000 X 50%)	2,500	
	J. Kensington, Capital (\$5,000 X 40%).....	2,000	
	T. Gomez, Capital (\$5,000 X 10%)	500	
	D. Atchley, Capital.....		51,000

Total capital of existing partnership	\$124,000
Investment by Atchley	<u>46,000</u>
Total capital of new partnership	<u>\$170,000</u>

***PROBLEM 12-4A (Continued)**

Atchley's capital credit (\$170,000 X 30%)	<u>\$51,000</u>

Investment by new partner	\$46,000
Atchley's capital credit.....	<u>51,000</u>
Bonus to new partner	<u>\$ 5,000</u>

(b) (1) Total capital after admission (\$32,000 ÷ 20%).....	\$160,000
Total capital before admission	<u>124,000</u>
Cash investment by Atchley	<u>\$ 36,000</u>

(2) Decrease in Kensington's equity (\$54,000 – \$32,000).....	<u>\$ 22,000</u>

Kensington's income ratio	40%
Bonus to new partner (\$22,000 ÷ 40%)	<u>\$ 55,000</u>

***PROBLEM 12-5A**

(a) (1)	K. Durham, Capital.....	26,000	
	J. Fagan, Capital		13,000
	P. Ames, Capital		13,000
(2)	K. Durham, Capital.....	26,000	
	P. Ames, Capital		26,000
(3)	K. Durham, Capital.....	26,000	
	J. Fagan, Capital (\$8,000 X 5/8)	5,000	
	P. Ames, Capital (\$8,000 X 3/8).....	3,000	
	Cash.....		34,000
	Durham's capital balance	\$26,000	
	Payment to Durham	<u>34,000</u>	
	Bonus to Durham.....	<u>\$ 8,000</u>	
(4)	K. Durham, Capital.....	26,000	
	J. Fagan, Capital (\$4,000 X 5/8).....		2,500
	P. Ames, Capital (\$4,000 X 3/8)		1,500
	Cash.....		22,000
	Durham's capital balance	\$26,000	
	Payment to Durham	<u>22,000</u>	
	Bonus to old partners	<u>\$ 4,000</u>	
(b) (1)	Ames's capital after withdrawal	\$42,400	
	Ames's capital before withdrawal.....	<u>40,000</u>	
	Bonus to Ames.....	2,400	
	Ames's income ratio with Fagan.....	<u>3/8</u>	
	Total bonus (\$2,400 ÷ 3/8)	<u>\$ 6,400</u>	
(2)	Durham's capital balance	\$26,000	
	Total bonus to other partners	<u>(6,400)</u>	
	Cash paid to Durham	<u>\$19,600</u>	

PROBLEM 12-1B

(a)	Jan. 1	Cash	10,000	
		Accounts Receivable	18,000	
		Merchandise Inventory	38,000	
		Equipment	40,000	
		Allowance for Doubtful		
		Accounts		2,500
		Notes Payable	20,000	
		Accounts Payable	30,000	
		John, Capital.....		53,500
	1	Cash	8,000	
		Accounts Receivable	30,000	
		Merchandise Inventory	25,000	
		Equipment	22,000	
		Allowance for Doubtful		
		Accounts		4,000
		Accounts Payable	40,000	
		Calvin, Capital		41,000
(b)	Jan. 1	Cash	3,500	
		John, Capital.....		3,500
	1	Cash	16,000	
		Calvin, Capital		16,000

PROBLEM 12-1B (Continued)

(c)

JOHN CALVIN COMPANY
Balance Sheet
January 1, 2010

Assets		
Current assets		
Cash		
(\$10,000 + \$8,000 + \$3,500 + \$16,000)		\$ 37,500
Accounts receivable		
(\$18,000 + \$30,000)	\$48,000	
Less: Allowance for doubtful accounts		
(\$2,500 + \$4,000)	<u>6,500</u>	41,500
Merchandise inventory		
(\$38,000 + \$25,000)		<u>63,000</u>
Total current assets		142,000
 Property, plant, and equipment		
Equipment (\$40,000 + \$22,000)		<u>62,000</u>
Total assets		<u>\$204,000</u>
 Liabilities and Owners' Equity		
Current liabilities		
Notes payable		\$ 20,000
Accounts payable (\$30,000 + \$40,000)		<u>70,000</u>
Total current liabilities		90,000
 Owners' equity		
John, Capital (\$53,500 + \$3,500)	\$57,000	
Calvin, Capital (\$41,000 + \$16,000)	<u>57,000</u>	
Total owners' equity		<u>114,000</u>
Total liabilities and owners' equity		<u>\$204,000</u>

PROBLEM 12-2B

(a) (1)	Income Summary.....	50,000	
	H. Krik, Capital (\$50,000 X 50%).....		25,000
	N. Andres, Capital (\$50,000 X 30%)		15,000
	S. Thabo, Capital (\$50,000 X 20%).....		10,000
(2)	Income Summary.....	40,000	
	H. Krik, Capital		
	(\$15,000 + \$5,000)		20,000
	N. Andres, Capital (\$10,000 + \$5,000)		15,000
	S. Thabo, Capital (\$0 + \$5,000).....		5,000
	Net income.....	\$40,000	
	Salary allowances		
	Krik	(15,000)	
	Andres.....	(10,000)	
	Remainder	<u>\$15,000</u>	
	To each partner		
	(\$15,000 X 1/3)	<u>\$ 5,000</u>	
(3)	Income Summary.....	37,000	
	H. Krik, Capital		
	(\$4,000 + \$20,000 + \$3,000)		27,000
	N. Andres, Capital (\$2,500 + \$3,000).....		5,500
	S. Thabo, Capital (\$1,500 + \$3,000).....		4,500
	Net income.....	\$ 37,000	
	Interest allowance		
	Krik		
	(\$40,000 X 10%).....	(4,000)	
	Andres (\$25,000 X 10%)	(2,500)	
	Thabo (\$15,000 X 10%).....	<u>(1,500)</u>	
	Balance	29,000	
	Salary allowance		
	Krik	<u>(20,000)</u>	
	Remainder	<u>\$ 9,000</u>	
	To each partner		
	(\$9,000 X 1/3)	<u>\$ 3,000</u>	

PROBLEM 12-2B (Continued)**(b) DIVISION OF NET INCOME**

	<u>H. Krik</u>	<u>N. Andres</u>	<u>S. Thabo</u>	<u>Total</u>
Salary allowance.....	\$20,000			\$20,000
Interest allowance on capital				
H. Krik				
(\$40,000 X 10%).....	4,000			
N. Andres				
(\$25,000 X 10%).....		\$2,500		
S. Thabo				
(\$15,000 X 10%).....			\$1,500	
Total interest.....				<u>8,000</u>
Total salaries and interest.....	<u>24,000</u>	<u>2,500</u>	<u>1,500</u>	<u>28,000</u>
Remaining income, \$2,700				
H. Krik				
(\$9,000 X 1/3).....	3,000			
N. Andres				
(\$9,000 X 1/3).....		3,000		
S. Thabo				
(\$9,000 X 1/3).....			3,000	
Total remainder.....				<u>9,000</u>
Total division of net income	<u>\$27,000</u>	<u>\$5,500</u>	<u>\$4,500</u>	<u>\$37,000</u>

(c) KAT COMPANY
Partners' Capital Statement
For the Year Ended December 31, 2010

	<u>H. Krik</u>	<u>N. Andres</u>	<u>S. Thabo</u>	<u>Total</u>
Capital, January 1.....	\$40,000	\$25,000	\$15,000	\$80,000
Add: Net income.....	<u>27,000</u>	<u>5,500</u>	<u>4,500</u>	<u>37,000</u>
	67,000	30,500	19,500	117,000
Less: Drawings	<u>15,000</u>	<u>10,000</u>	<u>5,000</u>	<u>30,000</u>
Capital, December 31.....	<u>\$52,000</u>	<u>\$20,500</u>	<u>\$14,500</u>	<u>\$87,000</u>

PROBLEM 12-3B

(a) APACHE COMPANY Schedule of Cash Payments

Item	Noncash										
	Cash	+	Assets	=	Liabilities	+	Scottie	+	Spock	+	Kirk
Balances before liquidation	\$30,000	+	\$70,000	=	\$52,500	+	\$28,000	+	\$13,650	+	\$5,850
Sale of noncash assets and allocation of loss..... (1) + (2)	57,000	+	(70,000)	=			(6,500)	+	(3,900)	+	(2,600)
New balances	87,000	+	0	=	52,500	+	21,500	+	9,750	+	3,250
Pay liabilities..... (3)	(52,500)			=	(52,500)						
New balances	34,500	+	0	=	0	+	21,500	+	9,750	+	3,250
Cash distribution to partners	34,500		0	=	0	+	(21,500)	+	(9,750)	+	(3,250)
Final balances	\$ 0		\$ 0	=	\$ 0		\$ 0		\$ 0		\$ 0

PROBLEM 12-3B (Continued)**(b)****(1)**

Apr. 30	Cash	57,000	
	Allowance for Doubtful Accounts	2,000	
	Accumulated Depreciation	8,000	
	Loss on Realization	13,000	
	Accounts Receivable		25,000
	Merchandise Inventory		35,000
	Equipment		20,000
	Noncash assets (net)	\$70,000	
	Sale proceeds	<u>57,000</u>	
	Loss on sale of noncash		
	assets	<u>\$13,000</u>	

(2)

30	Scottie, Capital (\$13,000 X 50%)	6,500	
	Spock, Capital (\$13,000 X 30%)	3,900	
	Kirk, Capital (\$13,000 X 20%)	2,600	
	Loss on Realization		13,000

(3)

30	Notes Payable	20,000	
	Accounts Payable	30,000	
	Wages Payable	2,500	
	Cash		52,500

(4)

30	Scottie, Capital (\$28,000 – \$6,500)	21,500	
	Spock, Capital (\$13,650 – \$3,900)	9,750	
	Kirk, Capital (\$5,850 – \$2,000)	3,250	
	Cash		34,500

PROBLEM 12-3B (Continued)**(c)**

Cash			
Bal.	30,000	4/30 (3)	52,500
30 (1)	57,000	30 (4)	34,500
Bal.	-0-		

Spock, Capital			
4/30 (2)	3,900	Bal.	13,650
30 (4)	9,750		
		Bal.	-0-

Scottie, Capital			
4/30 (2)	6,500	Bal.	28,000
30 (4)	21,500		
		Bal.	-0-

Kirk, Capital			
4/30 (2)	2,600	Bal.	5,850
30 (4)	3,250		
		Bal.	-0-

***PROBLEM 12-4B**

(a) (1)	Bea, Capital	7,500	
	Ellen, Capital		7,500
(2)	Andy, Capital	8,000	
	Ellen, Capital		8,000
(3)	Cash.....	29,000	
	Barney, Capital (\$7,000 X 5/10)	3,500	
	Andy, Capital (\$7,000 X 3/10).....	2,100	
	Bea, Capital (\$7,000 X 2/10).....	1,400	
	Ellen, Capital		36,000

Total capital of existing partnership	\$61,000
Investment by Ellen.....	<u>29,000</u>
Total capital of new partnership	<u>\$90,000</u>

Ellen capital credit (\$90,000 X 40%).....	<u>\$36,000</u>

Investment by new partner, Ellen	\$29,000
Ellen capital credit.....	<u>36,000</u>
Bonus to new partner.....	<u>\$ 7,000</u>

(4)	Cash.....	24,000	
	Barney, Capital (\$7,000 X 5/10)		3,500
	Andy, Capital (\$7,000 X 3/10).....		2,100
	Bea, Capital (\$7,000 X 2/10).....		1,400
	Ellen, Capital		17,000

Total capital of existing partnership	\$61,000
Investment by Ellen.....	<u>24,000</u>
Total capital of new partnership	<u>\$85,000</u>

***PROBLEM 12-4B (Continued)**

Ellen's capital credit (\$85,000 X 20%)	<u>\$17,000</u>

Investment by new partner, Ellen	\$24,000
Ellen's capital credit	<u>17,000</u>
Bonus to old partners	<u>\$ 7,000</u>

(b) Total capital after admission ($\$24,000 \div 24\%$)	\$100,000
Total capital before admission	<u>61,000</u>
(1) Cash investment by Ellen	<u>\$ 39,000</u>
Increase in Andy's equity ($\$24,000 - \$16,000$)	<u>\$ 8,000</u>
Andy's income ratio	3/10
(2) Total bonus to old partners ($\$8,000 \div 3/10$)	<u>\$ 26,667</u>

***PROBLEM 12-5B**

(a) (1)	B. Spade, Capital	25,000	
	A. Heart, Capital		12,500
	L. Club, Capital		12,500
(2)	B. Spade, Capital	25,000	
	L. Club, Capital		25,000
(3)	B. Spade, Capital	25,000	
	A. Heart, Capital (\$9,000 X 6/9).....	6,000	
	L. Club, Capital (\$9,000 X 3/9)	3,000	
	Cash		34,000
	Spade's capital balance.....	\$25,000	
	Payment to Spade	<u>34,000</u>	
	Bonus to Spade	<u>\$ 9,000</u>	
(4)	B. Spade, Capital	25,000	
	A. Heart, Capital (\$6,000 X 6/9).....		4,000
	L. Club, Capital (\$6,000 X 3/9)		2,000
	Cash		19,000
	Spade's capital balance.....	\$25,000	
	Payment to Spade	<u>19,000</u>	
	Bonus to remaining partners	<u>\$ 6,000</u>	
(b) (1)	Club capital after withdrawal.....	\$55,000	
	Club capital before withdrawal	<u>51,000</u>	
	Bonus to Club.....	<u>\$ 4,000</u>	
	Club income ratio with Heart.....		3/9
	Total bonus (\$4,000 ÷ 3/9)		<u>\$12,000</u>
(2)	Spade capital balance.....	\$25,000	
	Total bonus to remaining partners.....	<u>(12,000)</u>	
	Cash paid to Spade	<u>\$13,000</u>	

Students' answers will depend upon the firm selected and the timing of their exploration.

- (a) The major disadvantages of a partnership are mutual agency, limited life, and unlimited liability. Mutual agency means that each partner acts on behalf of the partnership when engaging in partnership business. The act of any partner is binding on all other partners, even when the partners act beyond the scope of their authority, so long as the act appears to be appropriate for the partnership. A partnership does not have unlimited life. A partnership may be ended voluntarily or involuntarily. For the partnership discussed here, limited life does not appear to be a major drawback. Unlimited liability means that each partner is personally and individually liable for all partnership liabilities. Creditors' claims attach first to partnership assets, then to the personal resources of any partner, irrespective of that partner's capital equity in the company. This is a major limitation of a partnership.
- (b) The written partnership agreement, often referred to as the articles of co-partnership, is needed. It should contain such basic information as the name and principal location of the firm, the purpose of the business, and date of inception. In addition, the following should be specified: (1) names and capital contributions of partners, (2) rights and duties of partners, (3) basis for sharing net income or net loss, (4) provision for withdrawals of assets, (5) procedures for submitting disputes to arbitration, (6) procedures for the withdrawal or addition of a partner, and (7) rights and duties of surviving partners in the event of a partner's death.
- (c) The best approach would be to give Richard an interest allowance for the additional investment. This approach would therefore permit each party to share equally in net income or net loss after the interest allowance.
- (d) The computer equipment should be depreciated on the books of the partnership, not on Richard's personal tax return. The computer is owned by the partnership, and only Richard's share of net income should be reported on his tax return. The computer would be reported at its fair market value when invested in the partnership, less the accumulated depreciation as of the end of the taxable year.

- (e) To facilitate the payment from partnership assets of the deceased partner's equity, some companies obtain life insurance policies on each partner with the partnership as the beneficiary. The proceeds from the insurance policy on the deceased partner are then used to settle the estate.**

To: Daniel Ortman
Sue Stafford

From: Your Accountant

Subject: Partnership Agreement for Pasta Shop

There are many important issues that should be included in your partnership agreement. Prior to our meeting next Tuesday, in my office, it would be helpful for you to consider the following matters.

1. **Facts about the business; i.e., name, location, purpose, and date of inception.**
2. **Facts about the partners; i.e., the name and address of each partner, the beginning capital contribution of each partner, and the rights and duties of partners with respect to: (a) making business decisions, (b) active participation in the partnership (full/part-time), and (c) allowances for vacations and sick leave.**
3. **Basis for sharing net income or net loss. The Uniform Partnership Act specifies that the basis will be equal unless another basis is stated in the partnership agreement. The basis may include provisions for partnership salaries and interest on capital balances with the remainder being divided on a proportionate basis.**
4. **Provision for withdrawals of assets. There are two kinds of withdrawals: one is called drawings; the other is called a withdrawal of capital. The former relates to providing each partner with cash for normal living expenses. You may provide for periodic drawings of a fixed amount such as \$1,000 a month, or an amount not to exceed a specified amount such as \$1,500 or \$2,000. Withdrawals of capital can affect the future of the partnership. Thus, you may want to provide for consultation with an attorney, a financial advisor, and/or a CPA and a formal approval procedure.**

- 5. Procedures for submitting disputes to arbitration. Inevitably, disagreements will occur between partners. The partnership contract should provide a framework for resolving them. You may want to include some or all of the outside parties mentioned above in an arbitration committee.**
- 6. Procedures for the withdrawal or addition of a partner. At this time, consideration of this issue may seem premature. However, it is still useful to have basic procedures in place. For withdrawals, consideration should be given to both voluntary and “forced” withdrawals and the basis of determining and paying the capital equity of the partner who is leaving the firm. For additions, you may wish to state whether each admission must have the unanimous approval of existing partners and the terms of admission.**
- 7. Rights and duties of surviving partners. The death of a partner is often a traumatic experience. Thus, it is advisable that the partnership agreement specify the responsibilities of the surviving partners, assuming the business is continued, or if the business is terminated. Also, procedures should be included for determining the deceased partner’s equity in the firm. The procedures might include an audit of the financial statements and a revaluation of assets by an independent appraisal firm.**

I look forward to a productive session with both of you next Tuesday.

- (a) The stakeholders in this situation are Elizabeth and Laurie.
- (b) The consequences of Elizabeth's actions are that they cause significant differences in the time worked between the partners and in the amount of drawings made by each partner. Sooner or later, Laurie is going to become annoyed with Elizabeth's actions and this could cause friction between the partners.

The differences here emphasize the importance of a written partnership agreement. Time to be worked by each partner and allowable drawings are two subjects that should be in the agreement.

Based on the information given, ethical considerations rest primarily on the issue of fairness. Elizabeth is not trying to hide anything from Laurie. However, her actions do not seem to be fair.

- (c) For the differences in time worked, two changes in the partnership agreement should be considered. First, Laurie could be given a higher salary allowance than Elizabeth. Second, because Laurie is contributing more to net income than Elizabeth, she could be given a higher percentage of net income after deducting salary allowances.

For the differences in drawings, the partnership agreement could be altered to allow for interest on average monthly "net" partners' capitals. Net partners' capitals would be the difference between the balances of the capital and drawing accounts at the end of each month. If this is not agreeable to Elizabeth, then the partnership agreement should be changed to limit the drawings of each partner to a fixed amount.

Given that the students may come up with variety of answers that are correct, there is no single correct solution to this problem. You may wish to have a show of hands on each question to see whether any consensus has developed on any of the questions.

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CHAPTER 13

Corporations: Organization and Capital Stock Transactions

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the major characteristics of a corporation.	1, 2, 3, 4	1	1	1, 2		
2. Differentiate between paid-in capital and retained earnings.	5, 6, 8, 9, 11, 14, 15	2	2	2	3A, 4A	3B, 4B
3. Record the issuance of common stock.	7, 10, 11, 12, 17	3, 4, 5	3	3, 4, 5, 6, 11, 13	1A, 3A, 4A, 6A	1B, 3B, 4B, 6B
4. Explain the accounting for treasury stock.	7, 13, 14, 15, 18	6	4	5, 7, 8, 11, 13	2A, 3A, 6A	2B, 3B, 6B
5. Differentiate preferred stock from common stock.	16	7	6	5, 9, 10, 11, 13	1A, 3A, 4A, 6A	1B, 3B, 4B, 6B
6. Prepare a stockholders' equity section.	18, 19	8		9, 12, 13, 14, 15	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B, 6B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Journalize stock transactions, post, and prepare paid-in capital section.	Simple	30–40
2A	Journalize and post treasury stock transactions, and prepare stockholders' equity section.	Moderate	30–40
3A	Journalize and post transactions, prepare stockholders' equity section.	Complex	40–50
4A	Journalize and post stock transactions, and prepare stockholders' equity section.	Moderate	30–40
5A	Prepare stockholders' equity section.	Simple	20–30
6A	Prepare entries for stock transactions and prepare stockholders' equity section.	Moderate	20–30
1B	Journalize stock transactions, post, and prepare paid-in capital section.	Simple	30–40
2B	Journalize and post treasury stock transactions, and prepare stockholders' equity section.	Moderate	30–40
3B	Journalize and post transactions, prepare stockholders' equity section.	Moderate	30–40
4B	Journalize and post stock transactions, and prepare stockholders' equity section.	Moderate	30–40
5B	Prepare stockholders' equity section.	Simple	20–30
6B	Prepare entries for stock transactions and prepare stockholders' equity section.	Moderate	20–30

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 13
CORPORATIONS: ORGANIZATION AND CAPITAL STOCK
TRANSACTIONS

Number	SO	BT	Difficulty	Time (min.)
BE1	1	K	Simple	4–6
BE2	2	AP	Simple	1–2
BE3	3	AP	Simple	2–3
BE4	3	AP	Simple	2–3
BE5	3	AP	Simple	2–4
BE6	4	AP	Simple	4–6
BE7	5	AP	Simple	2–3
BE8	6	AP	Simple	4–6
DI1	1	K	Simple	2–4
DI2	2	AP	Simple	4–6
DI3	3	AP	Simple	4–6
DI4	4	AP	Simple	4–6
DI5	6	AP	Simple	6–8
EX1	1	K	Simple	6–8
EX2	1, 2	K	Simple	6–8
EX3	3	AP	Simple	6–8
EX4	3	AP	Simple	8–10
EX5	3–5	AP	Simple	6–8
EX6	3	AP	Simple	4–6
EX7	4	AP	Simple	8–10
EX8	4	AP	Simple	8–10
EX9	5, 6	AP	Simple	8–10
EX10	5	AP	Simple	6–8
EX11	3–5	AN	Moderate	8–10
EX12	6	AP	Simple	8–10
EX13	3–6	C, AP	Simple	6–8
EX14	6	AP	Simple	8–10
EX15	6	C	Simple	4–6

CORPORATIONS: ORGANIZATION AND CAPITAL STOCK TRANSACTIONS (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	3, 5, 6	AP	Simple	30–40
P2A	4, 6	AP	Moderate	30–40
P3A	2–6	AP	Complex	40–50
P4A	2, 3, 5, 6	AP	Moderate	30–40
P5A	6	AP	Simple	20–30
P6A	3–6	AP	Moderate	20–30
P1B	3, 5, 6	AP	Simple	30–40
P2B	4, 6	AP	Moderate	30–40
P3B	2–6	AP	Moderate	30–40
P4B	2, 3, 5, 6	AP	Moderate	30–40
P5B	6	AP	Simple	20–30
P6B	3–6	AP	Moderate	20–30
BYP1	1	AP	Simple	10–15
BYP2	6	AP	Simple	10–15
BYP3	1	C	Simple	8–12
BYP4	1, 4, 5	C	Moderate	15–20
BYP5	1, 5	S	Simple	10–15
BYP6	—	E	Simple	10–15
BYP7	1	S	Simple	15–20

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the major characteristics of a corporation.	Q13-4 BE13-1 DI13-1 E13-1 E13-2	Q13-1 Q13-2 Q13-3				
2. Differentiate between paid-in capital and retained earnings.	Q13-5 E13-2	Q13-6 Q13-8 Q13-9	BE13-2 DI13-2 P13-3A P13-4A P13-3B P13-4B			
3. Record the issuance of common stock.		Q13-10 Q13-11 Q13-12 Q13-17 E13-13	Q13-7 E13-5 P13-4A BE13-3 E13-6 P13-6A BE13-4 E13-11 P13-1B BE13-5 E13-13 P13-3B DI13-3 P13-1A P13-4B E13-3 P13-3A P13-6B E13-4			
4. Explain the accounting for treasury stock.		Q13-13 Q13-14 Q13-15 Q13-18	Q13-7 E13-11 P13-2B BE13-6 E13-13 P13-3B DI13-4 P13-2A P13-6B E13-5 P13-3A E13-7 P13-6A E13-8			
5. Differentiate preferred stock from common stock.		Q13-16 E13-13	BE13-7 E13-13 P13-1B E13-5 P13-1A P13-3B E13-9 P13-3A P13-4B E13-10 P13-4A P13-6B E13-11 P13-6A			
6. Prepare a stockholders' equity section.	Q13-19	Q13-18 E13-13 E13-15	BE13-8 P13-2A P13-2B DI13-5 P13-3A P13-3B E13-9 P13-4A P13-4B E13-12 P13-5A P13-5B E13-13 P13-6A P13-6B E13-14 P13-1B P13-1A			
Broadening Your Perspective		Decision Making Across the Organization Exploring the Web	Financial Reporting Comparative Analysis		Communication All About You	Ethics Case

ANSWERS TO QUESTIONS

1.
 - (a) Separate legal existence. A corporation is separate and distinct from its owners and it acts in its own name rather than in the name of its stockholders. In contrast to a partnership, the acts of the owners (stockholders) do not bind the corporation unless the owners are agents of the corporation.
 - (b) Limited liability of stockholders. Because of its separate legal existence, creditors of a corporation ordinarily have recourse only to corporate assets to satisfy their claims. Thus, the liability of stockholders is normally limited to their investment in the corporation.
 - (c) Transferable ownership rights. Ownership of a corporation is shown in shares of capital stock. The shares are transferable units. Stockholders may dispose of part or all of their interest by simply selling their stock. The transfer of ownership to another party is entirely at the discretion of the stockholder.
2.
 - (a) Corporation management is an advantage to a corporation because it can hire professional managers to run the company. Corporation management is a disadvantage to a corporation because it prevents owners from having an active role in directly managing the company.
 - (b) Two other disadvantages of a corporation are government regulations and additional taxes. A corporation is subject to numerous state and federal regulations. For example, state laws prescribe the requirements for issuing stock, and federal securities laws govern the sale of stock to the general public. Corporations must pay both federal and state income taxes. These taxes are substantial. In addition, stockholders must pay income taxes on cash dividends received.
3.
 - (a)
 - (1) A charter is a document that creates a corporation. A charter is also referred to as the articles of incorporation.
 - (2) The by-laws are the internal rules and procedures for conducting the affairs of a corporation. They also indicate the powers of the stockholders, directors, and officers of the corporation.
 - (3) Organization costs are costs incurred in the formation of a corporation. Organization costs are expensed as incurred.
 - (b) Incorrect. A corporation must be incorporated in only one state. It is to the company's advantage to incorporate in a state whose laws are favorable to the corporate form of business organization. A corporation may incorporate in a state in which it does not have a headquarters office or major operating facilities.
4. In the absence of restrictive provisions, the basic ownership rights of common stockholders are the rights to:
 - (a) vote in the election of board of directors and in corporate actions that require stockholders' approval.
 - (b) share in corporate earnings through the receipt of dividends.
 - (c) keep the same percentage ownership when new shares of common stock are issued (the preemptive right).
 - (d) share in assets upon liquidation.
5.
 - (a) The two principal components of stockholders' equity for a corporation are paid-in capital (the investment of cash and other assets in the corporation by stockholders in exchange for capital stock) and retained earnings. The principal source of retained earnings is net income.
 - (b) Paid-in capital is the term used to describe the total amount paid-in on capital stock. Paid-in capital may result through the sale of common stock, preferred stock, or treasury stock.

6. Each of the three basic financial statements for a corporation differs from those for a proprietorship. The income statement for a corporation will have income tax expense. For a corporation, a retained earnings statement is prepared to show the changes in retained earnings during the period. In the balance sheet, the owner's equity section is called the stockholders' equity section.
7. The maximum number of shares that a corporation is legally allowed to issue is the number authorized. Hawes Corporation is authorized to sell 100,000 shares. Of these shares, 70,000 shares have been issued. Outstanding shares are those issued shares which have not been reacquired by the corporation; in other words, issued shares less treasury shares. Hawes has 63,000 shares outstanding (70,000 issued less 7,000 treasury).
8. The par value of common stock has no effect on its market value. Par value is a legal amount per share which usually indicates the minimum amount at which a share of stock can be issued. The market value of stock depends on a number of factors, including the company's anticipated future earnings, its expected dividend rate per share, its current financial position, the current state of the economy, and the current state of the securities markets. Therefore, either investment mentioned in the question could be the better investment, based on the above factors and future potential. The relative par values should have no effect on the investment decision.
9. Among the factors which influence the market value of stock are the company's anticipated future earnings, its expected dividend rate per share, its current financial position, the current state of the economy, and the current state of the securities markets.
10. The issuance of stock does not have any effect on the issuer's net income. If stock is issued at a price above par, the excess is credited to a stockholders' equity account, Paid-in Capital in Excess of Par. This excess is part of the company's paid-in capital.
11. The sale of common stock below par value is not permitted in most states.
12. When stock is issued for services or noncash assets, the cost should be measured at either the fair market value of the consideration given up (in this case, the stock) or the fair market value of the consideration received (in this case, the land), whichever is more clearly evident. In this case, the fair market value of the stock is more objectively determinable than that of the land, since the stock is actively traded in the securities market. The appraised value of the land is merely an estimate of the land's value, while the market price of the stock is the amount the stock was actually worth on the date of exchange. Therefore, the land should be recorded at \$95,000, the common stock at \$20,000, and the excess (\$75,000) as paid-in capital in excess of par value.
13. A corporation may acquire treasury stock: (1) to reissue the shares to officers and employees under bonus and stock compensation plans, (2) to increase trading of the company's stock in the securities market in the hope of enhancing its market value, (3) to have additional shares available for use in the acquisition of other companies, (4) to reduce the number of shares outstanding and, thereby, increase earnings per share, and (5) to rid the company of disgruntled investors.
14. When treasury stock is purchased, treasury stock is debited and cash is credited at cost (\$12,000 in this example). Treasury stock is a contra stockholders' equity account and cash is an asset. Thus, this transaction: (a) has no effect on net income, (b) decreases total assets, (c) has no effect on total paid-in capital, and (d) decreases total stockholders' equity.

- 15.** When treasury stock is resold at a price above original cost, Cash is debited for the amount of the proceeds (\$18,000), Treasury Stock is credited at cost (\$12,000), and the excess (\$6,000) is credited to Paid-in Capital from Treasury Stock. Cash is an asset, and the other two accounts are part of stockholders' equity. Therefore, this transaction: (a) has no effect on net income, (b) increases total assets, (c) increases total paid-in capital, and (d) increases total stockholders' equity.
- 16.** (a) Common stock and preferred stock both represent ownership of the corporation. Common stock signifies the basic residual ownership; preferred stock is ownership with certain privileges or preferences. Preferred stockholders typically have a preference as to dividends and as to assets in the event of liquidation. However, preferred stockholders generally do not have voting rights.
 (b) Some preferred stocks possess the additional feature of being cumulative. Most preferred stock is cumulative—preferred stockholders must be paid both current-year dividends and unpaid prior year dividends before common stockholders receive any dividends.
 (c) Dividends in arrears are disclosed in the notes to the financial statements.
- 17.** Par value is a legal amount per share, often set at an arbitrarily selected amount, which usually indicates the minimum amount at which a share of stock can be issued. Market value is generally unrelated to par value. A stock's market value will reflect many factors, including the company's anticipated future earnings, its expected dividend rate per share, its current financial position, the current state of the economy, and the current state of the securities markets.
- 18.** The answers are summarized in the table below:

Account	Classification
(a) Common Stock	Paid-in capital—capital stock
(b) Paid-in Capital in Excess of Par Value	Paid-in capital—additional paid-in capital
(c) Retained Earnings	Retained earnings
(d) Treasury Stock	Deducted from total paid-in capital and retained earnings
(e) Paid-in Capital from Treasury Stock	Paid-in capital—additional paid-in capital
(f) Paid-in Capital in Excess of Stated Value	Paid-in capital—additional paid-in capital
(g) Preferred Stock	Paid-in capital—capital stock

- 19.** PepsiCo had 177 million shares of treasury stock at December 29, 2007 and 144 million shares at December 30, 2006.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 13-1

The advantages and disadvantages of a corporation are as follows:

<u>Advantages</u>	<u>Disadvantages</u>
Separate legal existence	Corporation management—
Limited liability of stockholders	separation of ownership
Transferable ownership rights	and management
Ability to acquire capital	Government regulations
Continuous life	Additional taxes
Corporation management— professional managers	

BRIEF EXERCISE 13-2

Dec. 31	Income Summary.....	450,000	
	Retained Earnings.....		450,000

BRIEF EXERCISE 13-3

May 10	Cash (2,000 X \$18).....	36,000	
	Common Stock (2,000 X \$10).....		20,000
	Paid-in Capital in Excess of Par		
	Value (2,000 X \$8).....		16,000

BRIEF EXERCISE 13-4

June 1	Cash (3,000 X \$6).....	18,000	
	Common Stock (3,000 X \$1).....		3,000
	Paid-in Capital in Excess of Stated		
	Value (3,000 X \$5).....		15,000

BRIEF EXERCISE 13-5

Land (5,000 X \$15).....	75,000	
Common Stock (5,000 X \$10)		50,000
Paid-in Capital in Excess of Par Value (5,000 X \$5)		25,000

BRIEF EXERCISE 13-6

July 1	Treasury Stock (500 X \$8)	4,000	
	Cash		4,000
Sept. 1	Cash (300 X \$11)	3,300	
	Treasury Stock (300 X \$8)		2,400
	Paid-in Capital from Treasury Stock (300 X \$3)		900

BRIEF EXERCISE 13-7

Cash (5,000 X \$130)	650,000	
Preferred Stock (5,000 X \$100)		500,000
Paid-in Capital in Excess of Par Value— Preferred Stock (5,000 X \$30)		150,000

BRIEF EXERCISE 13-8

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, \$10 par value, 5,000 shares issued and 4,500 shares outstanding	\$ 50,000
Additional paid-in capital	
In excess of par value—common stock.....	<u>20,000</u>
Total paid-in capital	70,000
Retained earnings	<u>45,000</u>
Total paid-in capital and retained earnings	115,000
Less: Treasury stock—common (500 shares).....	<u>(11,000)</u>
Total stockholders' equity	<u>\$104,000</u>

DO IT! 13-1

1. True.
2. True.
3. False. Additional government regulation is a disadvantage of the corporate form of business.
4. True.
5. False. No-par value stock is quite common today.

DO IT! 13-2

(a)	Income Summary	216,000	
	Retained Earnings		216,000
	(To close Income Summary and transfer net income to retained earnings)		
(b)	Stockholder's equity		
	Paid-in capital		
	Common Stock	\$1,000,000	
	Retained earnings	<u>216,000</u>	
	Total stockholder's equity		<u>\$1,216,000</u>

DO IT! 13-3

Apr. 1	Cash	780,000	
	Common Stock		300,000
	Paid-in Capital in Excess of Par Value		480,000
	(To record issuance of 60,000 shares at \$13 per share)		
Apr. 9	Organization Expense	27,500	
	Common Stock		10,000
	Paid-in Capital in Excess of Par Value		17,500
	(To record issuance of 2,000 shares for attorney's fees)		

DO IT! 13-4

Aug. 1	Treasury Stock	120,000	
	Cash		120,000
	(To record the purchase of 2,000 shares at \$60 per share)		
Dec. 1	Cash	86,400	
	Treasury Stock		72,000
	Paid-in Capital from Treasury Stock		14,400
	(To record the sale of 1,200 shares at \$72 per share)		

DO IT! 13-5

CONNOLLY CORPORATION
Balance Sheet (partial)

Stockholders' equity			
Paid-in capital			
Capital stock			
7% preferred stock, \$100 par value,			
10,000 shares authorized, 2,000			
shares issued and outstanding			
			\$ 200,000
Common stock, \$5 par value, 500,000			
shares authorized, 100,000 shares			
issued, and 93,000 shares outstanding			
			<u>500,000</u>
Total capital stock			<u>700,000</u>
Additional paid-in capital			
In excess of par value—preferred stock			
			\$ 23,000
In excess of par value—common stock.....			
			240,000
From treasury stock.....			
			<u>47,000</u>
Total additional paid-in capital			<u>310,000</u>
Total paid-in capital.....			<u>1,010,000</u>
Retained earnings			<u>372,000</u>
Total paid-in-capital and			
retained earnings.....			1,382,000
Less: Treasury stock—common			
(7,000 shares) (at cost)			
			<u>(46,000)</u>
Total stockholders' equity			<u>\$1,336,000</u>

SOLUTIONS TO EXERCISES

EXERCISE 13-1

1. True.
2. True.
3. False. Most of the largest U.S. corporations are *publicly* held corporations.
4. True.
5. False. The net income of a corporation *is* taxed as a separate entity.
6. False. Creditors have *no* legal claim on the personal assets of the owners of a corporation if the corporation does not pay its debts.
7. False. The transfer of stock from one owner to another *does not require* the approval of either the corporation or other stockholders; *it is entirely at the discretion of the stockholder*.
8. False. The board of directors of a corporation *manages* the corporation *for the stockholders, who legally own the corporation*.
9. True.
10. False. Corporations are subject to *more* state and federal regulations than partnerships or proprietorships.

EXERCISE 13-2

1. True.
2. False. *Corporation management (separation of ownership and management)*, government regulations, and additional taxes are the major disadvantages of a corporation.
3. False. When a corporation is formed, organization costs are expensed as incurred.
4. True.
5. False. The number of issued shares is always *less* than or equal to the number of authorized shares.
6. False. *No* journal entry is required for the authorization of capital stock.
7. False. Publicly held corporations usually issue stock *indirectly through an investment banking firm*.

EXERCISE 13-2 (Continued)

8. True.
9. False. The market value of common stock *has no relationship with the* par value.
10. False. *Paid-in capital* is the total amount of cash and other assets paid in to the corporation by stockholders in exchange for capital stock.

EXERCISE 13-3

(a)	Jan. 10	Cash (70,000 X \$5).....	350,000	
		Common Stock.....		350,000
	July 1	Cash (40,000 X \$7).....	280,000	
		Common Stock (40,000 X \$5)		200,000
		Paid-in Capital in Excess of		
		Par Value (40,000 X \$2)		80,000
(b)	Jan. 10	Cash (70,000 X \$5).....	350,000	
		Common Stock (70,000 X \$1)		70,000
		Paid-in Capital in Excess of		
		Stated Value (70,000 X \$4)		280,000
	July 1	Cash (40,000 X \$7).....	280,000	
		Common Stock (40,000 X \$1)		40,000
		Paid-in Capital in Excess of		
		Stated Value (40,000 X \$6)		240,000

EXERCISE 13-4

(a)	Cash.....	52,000	
	Common Stock (1,000 X \$5)		5,000
	Paid-in Capital in Excess of Par Value.....		47,000
(b)	Cash.....	52,000	
	Common Stock (1,000 X \$5)		5,000
	Paid-in Capital in Excess of Stated Value.....		47,000

EXERCISE 13-4 (Continued)

(c)	Cash.....	52,000	
	Common Stock		52,000
(d)	Organization Expense	52,000	
	Common Stock (1,000 X \$5)		5,000
	Paid-in Capital in Excess of Par Value		47,000
(e)	Land	52,000	
	Common Stock (1,000 X \$5)		5,000
	Paid-in Capital in Excess of Par Value		47,000

EXERCISE 13-5

Mar. 2	Organization Expense	30,000	
	Common Stock (5,000 X \$5)		25,000
	Paid-in Capital in Excess of Par		
	Value—Common Stock.....		5,000
June 12	Cash	375,000	
	Common Stock (60,000 X \$5)		300,000
	Paid-in Capital in Excess of Par		
	Value—Common Stock.....		75,000
July 11	Cash (1,000 X \$110).....	110,000	
	Preferred Stock (1,000 X \$100)		100,000
	Paid-in Capital in Excess of Par		
	Value—Preferred Stock (1,000 X \$10)		10,000
Nov. 28	Treasury Stock.....	80,000	
	Cash		80,000

EXERCISE 13-6

(1)	Land.....	115,000	
	Common Stock (5,000 X \$20)		100,000
	Paid-in Capital in Excess of Par Value.....		15,000
(2)	Land (20,000 X \$12)	240,000	
	Common Stock (20,000 X \$10)		200,000
	Paid-in Capital in Excess of Par Value (20,000 X \$2)		40,000

EXERCISE 13-7

(a)	Mar. 1	Treasury Stock (50,000 X \$15).....	750,000	
		Cash		750,000
	July 1	Cash (10,000 X \$17).....	170,000	
		Treasury Stock (10,000 X \$15)		150,000
		Paid-in Capital from Treasury Stock (10,000 X \$2)		20,000
	Sept. 1	Cash (8,000 X \$14)	112,000	
		Paid-in Capital from Treasury Stock (8,000 X \$1).....	8,000	
		Treasury Stock (8,000 X \$15)		120,000
(b)	Sept. 1	Cash (8,000 X \$12)	96,000	
		Paid-in Capital from Treasury Stock.....	20,000	
		Retained Earnings	4,000	
		Treasury Stock (8,000 X \$15)		120,000

EXERCISE 13-8

Treasury Stock	250,000	
Cash		250,000
Cash (2,000 X \$54)	108,000	
Treasury Stock (2,000 X \$50)		100,000
Paid-in Capital from Treasury Stock		8,000
Cash (2,000 X \$49)	98,000	
Paid-in Capital from Treasury Stock	2,000	
Treasury Stock (2,000 X \$50)		100,000
Cash (1,000 X \$40)	40,000	
Paid-in Capital from Treasury Stock		
(\$8,000 – \$2,000)	6,000	
Retained Earnings	4,000	
Treasury Stock (1,000 X \$50)		50,000

EXERCISE 13-9

(a) Feb. 1	Cash (20,000 X \$53)	1,060,000	
	Preferred Stock (20,000 X \$50)		1,000,000
	Paid-in Capital in Excess		
	of Par Value—Preferred		
	Stock (20,000 X \$3)		60,000
July 1	Cash (12,000 X \$57)	684,000	
	Preferred Stock		
	(12,000 X \$50)		600,000
	Paid-in Capital in Excess		
	of Par Value—Preferred		
	Stock (12,000 X \$7)		84,000

EXERCISE 13-9 (Continued)**(b)****Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 1				1,000,000	1,000,000
July 1				600,000	1,600,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Feb. 1				60,000	60,000
July 1				84,000	144,000

(c) Preferred stock—listed first in paid-in capital under capital stock.

Paid-in Capital in Excess of Par Value—Preferred Stock—listed first under additional paid-in capital.

EXERCISE 13-10

(a)	Cash	2,100,000	
	 Preferred Stock (100,000 X \$20)		2,000,000
	 Paid-in Capital in Excess of Par Value		100,000
(b)	Total Dividend		\$ 500,000
	Less: Preferred Stock Dividend		
	 (\$2,000,000 X 8%)		(160,000)
	Common Stock Dividends		<u>\$ 340,000</u>
(c)	Total Dividend		\$ 500,000
	Less: Preferred Stock Dividend		
	 [((\$2,000,000 X 8%) X 3)]		(480,000)
	Common Stock Dividends		<u>\$ 20,000</u>

EXERCISE 13-11

May 2	Cash (10,000 X \$13).....	130,000	
	Common Stock (10,000 X \$10).....		100,000
	Paid-in Capital in Excess of Par		
	Value—Common Stock		
	(10,000 X \$3).....		30,000
10	Cash (10,000 X \$60).....	600,000	
	Preferred Stock (10,000 X \$50).....		500,000
	Paid-in Capital in Excess of Par		
	Value—Preferred Stock		
	(10,000 X \$10).....		100,000
15	Treasury Stock	15,000	
	Cash		15,000
31	Cash (500 X \$16)	8,000	
	Treasury Stock (500 X \$15).....		7,500
	Paid-in Capital from Treasury		
	Stock (500 X \$1)		500

FREEZE CORPORATION
Partial Balance Sheet
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
8% Preferred stock, \$100 par value, noncumulative, 5,000 shares issued	\$ 500,000
Common stock, no par, \$5 stated value, 340,000 shares issued, and 330,000 shares outstanding	<u>1,700,000</u>
Total capital stock.....	<u>2,200,000</u>
Additional paid-in capital	
In excess of par value—preferred stock	\$280,000
In excess of stated value—common stock.....	<u>900,000</u>
Total additional paid-in capital	<u>1,180,000</u>
Total paid-in capital	<u>3,380,000</u>
Retained earnings	<u>1,134,000</u>
Total paid-in capital and retained earnings.....	4,514,000
Less: Treasury stock (10,000 common shares).....	<u>(120,000)</u>
Total stockholders' equity	<u><u>\$4,394,000</u></u>

MEMO

To: President _____

From: Your name, Chief Accountant

Re: Questions about Stockholders' Equity Section

Your memorandum about the stockholders' equity section was received this morning. I hope the following will answer your questions.

- (a) Common stock outstanding is 590,000 shares. (Issued shares 600,000 less treasury shares 10,000.)**
- (b) The stated value of the common stock is \$2 per share. (Common stock issued $\$1,200,000 \div 600,000$ shares.)**
- (c) The par value of the preferred stock is \$50 per share. (Preferred stock $\$300,000 \div 6,000$ shares.)**
- (d) The dividend rate is 10%, or $(\$30,000 \div \$300,000)$.**
- (e) The Retained Earnings balance is still \$1,858,000. Cumulative dividends in arrears are only disclosed in the notes to the financial statements.**

If I can be of further help, please contact me.

ALUMINUM COMPANY OF AMERICA

Stockholders' equity (in millions of dollars)

Paid-in capital

Capital stock

Preferred stock, \$100 par value, \$3.75
dividend, cumulative, 557,740 shares
authorized, 557,649 shares issued and
546,024 shares outstanding \$ 55

Common stock, \$1 par value,
1,800,000,000 shares authorized,
924,600,000 issued and 844,800,000
shares outstanding 925

Total capital stock 980

Additional paid-in capital 6,101

Total paid-in capital 7,081

Retained earnings 7,428

Total paid-in capital and retained
earnings 14,509

Less: Treasury stock (2,828)

Total stockholders' equity \$11,681

EXERCISE 13-15

<u>Account</u>	<u>Paid-in Capital</u>		<u>Retained Earnings</u>	<u>Other</u>
	<u>Capital Stock</u>	<u>Additional</u>		
Common Stock.....	X			
Preferred Stock	X			
Treasury Stock—Common				X
Paid-in Capital in Excess of Par Value—Preferred Stock.....		X		
Paid-in Capital in Excess of Stated Value—Common Stock.....		X		
Paid-in Capital from Treasury Stock		X		
Retained Earnings.....			X	

SOLUTIONS TO PROBLEMS

PROBLEM 13-1A

(a)	Jan. 10	Cash (80,000 X \$4).....	320,000	
		Common Stock (80,000 X \$2)		160,000
		Paid-in Capital in Excess of Stated Value—Common		
		Stock (80,000 X \$2).....		160,000
Mar. 1		Cash (5,000 X \$105)	525,000	
		Preferred Stock (5,000 X \$100).....		500,000
		Paid-in Capital in Excess of Par Value—Preferred Stock		
		(5,000 X \$5).....		25,000
Apr. 1		Land	85,000	
		Common Stock (24,000 X \$2)		48,000
		Paid-in Capital in Excess of Stated Value—Common		
		Stock (\$85,000 – \$48,000).....		37,000
May 1		Cash (80,000 X \$4.50).....	360,000	
		Common Stock (80,000 X \$2)		160,000
		Paid-in Capital in Excess of Stated Value—Common		
		Stock (80,000 X \$2.50)		200,000
Aug. 1		Organization Expense	30,000	
		Common Stock (10,000 X \$2)		20,000
		Paid-in Capital in Excess of Stated Value—Common		
		Stock (\$30,000 – \$20,000).....		10,000
Sept. 1		Cash (10,000 X \$5).....	50,000	
		Common Stock (10,000 X \$2)		20,000
		Paid-in Capital in Excess of Stated Value—Common		
		Stock (10,000 X \$3).....		30,000

PROBLEM 13-1A (Continued)

Nov. 1	Cash (1,000 X \$109)	109,000	
	Preferred Stock (1,000 X \$100)		100,000
	Paid-in Capital in Excess of Par Value—Preferred Stock (1,000 X \$9)		9,000

(b)**Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J5		500,000	500,000
Nov. 1		J5		100,000	600,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 10		J5		160,000	160,000
Apr. 1		J5		48,000	208,000
May 1		J5		160,000	368,000
Aug. 1		J5		20,000	388,000
Sept. 1		J5		20,000	408,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J5		25,000	25,000
Nov. 1		J5		9,000	34,000

Paid-in Capital in Excess of Stated Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 10		J5		160,000	160,000
Apr. 1		J5		37,000	197,000
May 1		J5		200,000	397,000
Aug. 1		J5		10,000	407,000
Sept. 1		J5		30,000	437,000

PROBLEM 13-1A (Continued)**(c) FRANCO CORPORATION****Paid-in capital****Capital stock**

8% Preferred stock, \$100 par
value, 10,000 shares
authorized, 6,000 shares
issued and outstanding **\$ 600,000**

Common stock, no par, \$2
stated value, 500,000 shares
authorized, 204,000 shares
issued and outstanding **408,000**

Total capital stock **1,008,000**

Additional paid-in capital

In excess of par value—
preferred stock **\$ 34,000**

In excess of stated value—
common stock **437,000**

Total additional paid-in
capital **471,000**

Total paid-in capital **\$1,479,000**

PROBLEM 13-2A

(a)	Mar. 1	Treasury Stock (5,000 X \$9).....	45,000	
		Cash		45,000
	June 1	Cash (1,000 X \$12).....	12,000	
		Treasury Stock (1,000 X \$9).....		9,000
		Paid-in Capital from Treasury		
		Stock (1,000 X \$3).....		3,000
	Sept. 1	Cash (2,000 X \$10).....	20,000	
		Treasury Stock (2,000 X \$9).....		18,000
		Paid-in Capital from Treasury		
		Stock (2,000 X \$1).....		2,000
	Dec. 1	Cash (1,000 X \$6)	6,000	
		Paid-in Capital from Treasury Stock		
		(1,000 X \$3)	3,000	
		Treasury Stock (1,000 X \$9).....		9,000
	31	Income Summary	30,000	
		Retained Earnings		30,000

(b)

Paid-in Capital from Treasury Stock

Date	Explanation	Ref.	Debit	Credit	Balance
June 1		J10		3,000	3,000
Sept. 1		J10		2,000	5,000
Dec. 1		J10	3,000		2,000

Treasury Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J10	45,000		45,000
June 1		J10		9,000	36,000
Sept. 1		J10		18,000	18,000
Dec. 1		J10		9,000	9,000

PROBLEM 13-2A (Continued)**Retained Earnings**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			100,000
Dec. 31		J10		30,000	130,000

(c) JACOBSEN CORPORATION**Stockholders' equity****Paid-in capital****Capital stock**

 Common stock, \$5 par,
 100,000 shares issued and
 99,000 outstanding **\$500,000**

Additional paid-in capital

 In excess of par value **\$200,000**

 From treasury stock **2,000**

 Total additional paid-in
 capital **202,000**

 Total paid-in capital **702,000**

Retained earnings 130,000

 Total paid-in capital and
 retained earnings **832,000**

**Less: Treasury stock (1,000 common
 shares, at cost) (9,000)**

 Total stockholders'
 equity **\$823,000**

PROBLEM 13-3A

(a)	Feb. 1	Cash	120,000	
		Common Stock (25,000 X \$1)		25,000
		Paid-in Capital in Excess of Stated Value—Common Stock (\$120,000 – \$25,000)		95,000
	Apr. 14	Cash	33,000	
		Paid-in Capital from Treasury Stock—Common (\$33,000 – \$30,000)		3,000
		Treasury Stock—Common (6,000 X \$5)		30,000
	Sept. 3	Patent	35,000	
		Common Stock (5,000 X \$1)		5,000
		Paid-in Capital in Excess of Stated Value—Common Stock (\$35,000 – \$5,000)		30,000
	Nov. 10	Treasury Stock—Common	6,000	
		Cash		6,000
	Dec. 31	Income Summary	452,000	
		Retained Earnings		452,000

(b)

Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			400,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,000,000
Feb. 1		J5		25,000	1,025,000
Sept. 3		J5		5,000	1,030,000

PROBLEM 13-3A (Continued)**Paid-in Capital in Excess of Par Value—Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			100,000

Paid-in Capital in Excess of Stated Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,450,000
Feb. 1		J5		95,000	1,545,000
Sept. 3		J5		30,000	1,575,000

Paid-in Capital from Common Treasury Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 14		J5		3,000	3,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,816,000
Dec. 31		J5		452,000	2,268,000

Treasury Stock—Common

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			50,000
Apr. 14		J5		30,000	20,000
Nov. 10		J5	6,000		26,000

PROBLEM 13-3A (Continued)**(c)****NEER CORPORATION****Stockholders' equity****Paid-in capital****Capital stock**

8% Preferred stock, \$50 par value, cumulative, 10,000 shares authorized, 8,000 shares issued and outstanding.....	\$ 400,000

Common stock, no par, \$1 stated value, 2,000,000 shares authorized, 1,030,000 shares issued and 1,025,000 shares outstanding.....	<u>1,030,000</u>

Total capital stock	<u>1,430,000</u>

Additional paid-in capital

In excess of par value— preferred stock.....	\$ 100,000

In excess of stated value— common stock	1,575,000

From common treasury stock.....	<u>3,000</u>

Total additional paid-in capital.....	<u>1,678,000</u>

Total paid-in capital	<u>3,108,000</u>

Retained earnings (see Note X)	<u>2,268,000</u>

Total paid-in capital and retained earnings	5,376,000

Less: Treasury stock (5,000 common shares)	<u>(26,000)</u>

Total stockholders' equity	<u>\$5,350,000</u>

Note X: Dividends on preferred stock totaling \$32,000 [8,000 X (8% X \$50)] are in arrears.

PROBLEM 13-4A

(a)	Feb. 1	Land.....	125,000	
		Preferred Stock (2,000 X \$50).....		100,000
		Paid-in Capital in Excess of Par Value—Preferred Stock		
		(\$125,000 – \$100,000)		25,000
	Mar. 1	Cash (1,000 X \$65)	65,000	
		Preferred Stock (1,000 X \$50).....		50,000
		Paid-in Capital in Excess of Par Value—Preferred Stock		
		(1,000 X \$15)		15,000
	July 1	Cash (16,000 X \$7)	112,000	
		Common Stock (16,000 X \$3)		48,000
		Paid-in Capital in Excess of Par Value—Common Stock		
		(\$16,000 X \$4).....		64,000
	Sept. 1	Patent (400 X \$70)	28,000	
		Preferred Stock (400 X \$50).....		20,000
		Paid-in Capital in Excess of Par Value—Preferred Stock		
		(400 X \$20)		8,000
	Dec. 1	Cash (8,000 X \$7.50).....	60,000	
		Common Stock (8,000 X \$3)		24,000
		Paid-in Capital in Excess of Par Value—Common Stock		
		(\$8,000 X \$4.50)		36,000
	Dec. 31	Income Summary	260,000	
		Retained Earnings		260,000

PROBLEM 13-4A (Continued)**(b)****Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			500,000
Feb. 1		J2		100,000	600,000
Mar. 1		J2		50,000	650,000
Sept. 1		J2		20,000	670,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			210,000
July 1		J2		48,000	258,000
Dec. 1		J2		24,000	282,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			75,000
Feb. 1		J2		25,000	100,000
Mar. 1		J2		15,000	115,000
Sept. 1		J2		8,000	123,000

Paid-in Capital in Excess of Par Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			700,000
July 1		J2		64,000	764,000
Dec. 1		J2		36,000	800,000

PROBLEM 13-4A (Continued)**Retained Earnings**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			300,000
Dec. 31		J2		260,000	560,000

(c) VARGAS CORPORATION**Stockholders' equity****Paid-in capital****Capital stock**

10% Preferred stock,
\$50 par value,
20,000 shares authorized,
13,400 shares issued
and outstanding **\$ 670,000**

Common stock, \$3 par value,
125,000 shares authorized,
94,000 shares issued
and outstanding **282,000**

Total capital stock **952,000**

Additional paid-in capital

In excess of par value—
preferred **\$123,000**

In excess of par value—
common **800,000**

Total additional paid-in
capital **923,000**

Total paid-in capital **1,875,000**

Retained earnings **560,000**

Total stockholders'
equity **\$2,435,000**

TYNER CORPORATION

Stockholders' equity

Paid-in capital

Capital stock

8% Preferred stock,

\$50 par noncumulative,

16,000 shares issued

and outstanding

\$ 800,000

Common stock, no par, \$5

stated value, 400,000

shares issued and 390,000

outstanding

2,000,000

Total capital stock

2,800,000

Additional paid-in capital

In excess of par value—

preferred stock.....

\$ 679,000

In excess of stated value—

common stock

1,600,000

From treasury stock

10,000

Total additional paid-in

capital.....

2,289,000

Total paid-in capital

5,089,000

Retained earnings

1,748,000

Total paid-in capital and

retained earnings

6,837,000

Less: Treasury stock (10,000

shares)

(130,000)

Total stockholders'

equity

\$6,707,000

PROBLEM 13-6A

(a) (1)	Land.....	140,000	
	 Preferred Stock (1,200 X \$100).....		120,000
	 Paid-in Capital in Excess of Par		
	 Value—Preferred Stock		20,000
(2)	Cash (400,000 X \$7.00)	2,800,000	
	 Common Stock (400,000 X \$2.50)		1,000,000
	 Paid-in Capital in Excess of Stated		
	 Value—Common Stock.....		1,800,000
(3)	Treasury Stock—Common		
	 (1,500 X \$13)	19,500	
	 Cash.....		19,500
(4)	Cash (500 X \$14).....	7,000	
	 Treasury Stock—Common		
	 (500 X \$13).....		6,500
	 Paid-in Capital from Treasury		
	 Stock		500

PROBLEM 13-6A (Continued)**(b)****PALMARO CORPORATION****Stockholders' equity****Paid-in capital****Capital stock**

**10% Preferred stock, \$100
par value, noncumulative,
20,000 shares authorized,
1,200 shares issued and
outstanding**

\$ 120,000

**Common stock, no par, \$2.50
stated value, 1,000,000
shares authorized, 400,000
shares issued, and 399,000
outstanding**

1,000,000**Total capital stock****1,120,000****Additional paid-in capital**

**In excess of par value—
preferred stock**

\$ 20,000

**In excess of stated value—
common stock**

1,800,000

**From treasury stock—
common**

500

**Total additional paid-in
capital**

1,820,500**Total paid-in capital****2,940,500****Retained earnings****82,000**

**Total paid-in capital and
retained earnings**

3,022,500

**Less: Treasury stock (1,000 common
shares)**

(13,000)

**Total stockholders'
equity**

\$3,009,500

PROBLEM 13-1B

(a)	Jan. 10	Cash (100,000 X \$3)	300,000	
		Common Stock (100,000 X \$2)		200,000
		Paid-in Capital in Excess of Stated Value—Common Stock (100,000 X \$1).....		100,000
	Mar. 1	Cash (10,000 X \$55)	550,000	
		Preferred Stock (10,000 X \$40).....		400,000
		Paid-in Capital in Excess of Par Value—Preferred Stock (10,000 X \$15)		150,000
	Apr. 1	Land	75,000	
		Common Stock (25,000 X \$2)		50,000
		Paid-in Capital in Excess of Stated Value—Common Stock (\$75,000 – \$50,000).....		25,000
	May 1	Cash (75,000 X \$4).....	300,000	
		Common Stock (75,000 X \$2)		150,000
		Paid-in Capital in Excess of Stated Value—Common Stock (75,000 X \$2).....		150,000
	Aug. 1	Organization Expense	50,000	
		Common Stock (10,000 X \$2)		20,000
		Paid-in Capital in Excess of Stated Value—Common Stock (\$50,000 – \$20,000).....		30,000
	Sept. 1	Cash (5,000 X \$6).....	30,000	
		Common Stock (5,000 X \$2).....		10,000
		Paid-in Capital in Excess of Stated Value—Common Stock (5,000 X \$4)		20,000

PROBLEM 13-1B (Continued)

Nov. 1	Cash (2,000 X \$60)	120,000	
	Preferred Stock (2,000 X \$40).....		80,000
	Paid-in Capital in Excess of Par Value—Preferred Stock (2,000 X \$20)		40,000

(b)**Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1		400,000	400,000
Nov. 1		J1		80,000	480,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 10		J1		200,000	200,000
Apr. 1		J1		50,000	250,000
May 1		J1		150,000	400,000
Aug. 1		J1		20,000	420,000
Sept. 1		J1		10,000	430,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J1		150,000	150,000
Nov. 1		J1		40,000	190,000

Paid-in Capital in Excess of Stated Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 10		J1		100,000	100,000
Apr. 1		J1		25,000	125,000
May 1		J1		150,000	275,000
Aug. 1		J1		30,000	305,000
Sept. 1		J1		20,000	325,000

PROBLEM 13-1B (Continued)**(c) DONELSON CORPORATION****Paid-in capital****Capital stock**

6% Preferred stock,
\$40 par value,
20,000 shares authorized,
12,000 shares issued
and outstanding..... **\$ 480,000**

Common stock, no par,
\$2 stated value,
500,000 shares authorized,
215,000 shares issued
and outstanding **430,000**

Total capital stock..... **910,000**

Additional paid-in capital

In excess of par value—
preferred stock **\$190,000**

In excess of stated value—
common stock **325,000**

Total additional paid-in
capital **515,000**

Total paid-in capital **\$1,425,000**

PROBLEM 13-2B

(a)	Mar. 1	Treasury Stock (5,000 X \$7).....	35,000	
		Cash		35,000
	June 1	Cash (1,000 X \$10).....	10,000	
		Treasury Stock (1,000 X \$7).....		7,000
		Paid-in Capital from Treasury		
		Stock (1,000 X \$3).....		3,000
	Sept. 1	Cash (2,000 X \$9)	18,000	
		Treasury Stock (2,000 X \$7).....		14,000
		Paid-in Capital from Treasury		
		Stock (2,000 X \$2).....		4,000
	Dec. 1	Cash (1,000 X \$5)	5,000	
		Paid-in Capital from Treasury Stock		
		(1,000 X \$2)	2,000	
		Treasury Stock (1,000 X \$7).....		7,000
	31	Income Summary	80,000	
		Retained Earnings		80,000

(b)

Paid-in Capital from Treasury Stock

Date	Explanation	Ref.	Debit	Credit	Balance
June 1		J12		3,000	3,000
Sept. 1		J12		4,000	7,000
Dec. 1		J12	2,000		5,000

Treasury Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Mar. 1		J12	35,000		35,000
June 1		J12		7,000	28,000
Sept. 1		J12		14,000	14,000
Dec. 1		J12		7,000	7,000

PROBLEM 13-2B (Continued)

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			100,000
Dec. 31		J12		80,000	180,000

(c) GENTRY CORPORATION

Stockholders' equity		
Paid-in capital		
Capital stock		
Common stock, \$1 par,		
400,000 shares issued and		
399,000 outstanding.....		\$ 400,000
Additional paid-in capital		
In excess of par value	\$500,000	
From treasury stock	<u>5,000</u>	
Total additional paid-in		
capital		<u>505,000</u>
Total paid-in capital		905,000
Retained earnings		<u>180,000</u>
Total paid-in capital and		
retained earnings		1,085,000
Less: Treasury stock (1,000 shares		
at cost).....		<u>(7,000)</u>
Total stockholders'		
equity		<u>\$1,078,000</u>

PROBLEM 13-3B

(a)	Feb. 1	Cash.....	25,500	
		Common Stock (3,000 X \$5).....		15,000
		Paid-in Capital in Excess of Stated Value—Common Stock		10,500
	Mar. 20	Treasury Stock—Common	12,000	
		(1,500 X \$8) Cash		12,000
	June 14	Cash.....	36,000	
		Paid-in Capital from Treasury Stock—Common		4,000
		Treasury Stock—Common (4,000 X \$8).....		32,000
	Sept. 3	Patent	19,000	
		Common Stock (2,000 X \$5).....		10,000
		Paid-in Capital in Excess of Stated Value—Common Stock		9,000
	Dec. 31	Income Summary	350,000	
		Retained Earnings.....		350,000

(b)

Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			300,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			1,000,000
Feb. 1		J1		15,000	1,015,000
Sept. 3		J1		10,000	1,025,000

PROBLEM 13-3B (Continued)**Paid-in Capital in Excess of Par Value—Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			20,000

Paid-in Capital in Excess of Stated Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			425,000
Feb. 1		J1		10,500	435,500
Sept. 3		J1		9,000	444,500

Paid-in Capital from Treasury Stock—Common

Date	Explanation	Ref.	Debit	Credit	Balance
June 14		J1		4,000	4,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			488,000
Dec. 31		J1		350,000	838,000

Treasury Stock—Common

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			40,000
Mar. 20		J1	12,000		52,000
June 14		J1		32,000	20,000

PROBLEM 13-3B (Continued)**(c)****MILES CORPORATION****Stockholders' equity****Paid-in capital****Capital stock****10% Preferred stock, \$100****par value, noncumulative,****5,000 shares authorized,****3,000 shares issued and****outstanding.....****\$ 300,000****Common stock, no par,****\$5 stated value,****300,000 shares authorized,****205,000 shares issued****and 202,500 shares****outstanding.....****1,025,000****Total capital stock.....****1,325,000****Additional paid-in capital****In excess of par value—****preferred stock.....****\$ 20,000****In excess of stated value—****common stock****444,500****From treasury****stock—common****4,000****Total additional paid-in****capital.....****468,500****Total paid-in capital****1,793,500****Retained earnings****838,000****Total paid-in capital and****retained earnings****2,631,500****Less: Treasury stock (2,500 common****shares)****(20,000)****Total stockholders'****equity****\$2,611,500**

PROBLEM 13-4B

(a)	Feb. 1	Land.....	65,000	
		Preferred Stock (1,000 X \$40).....		40,000
		Paid-in Capital in Excess of Par Value—Preferred Stock (\$65,000 – \$40,000).....		25,000
Mar. 1		Cash (2,000 X \$60)	120,000	
		Preferred Stock (2,000 X \$40).....		80,000
		Paid-in Capital in Excess of Par Value—Preferred Stock (2,000 X \$20)		40,000
July 1		Cash (20,000 X \$5.80)	116,000	
		Common Stock (20,000 X \$5)		100,000
		Paid-in Capital in Excess of Par Value—Common Stock (\$20,000 X \$0.80).....		16,000
Sept. 1		Patent (800 X \$65)	52,000	
		Preferred Stock (800 X \$40).....		32,000
		Paid-in Capital in Excess of Par Value—Preferred Stock (800 X \$25)		20,000
Dec. 1		Cash (10,000 X \$6)	60,000	
		Common Stock (10,000 X \$5)		50,000
		Paid-in Capital in Excess of Par Value—Common Stock (\$10,000 X \$1).....		10,000
Dec. 31		Income Summary	210,000	
		Retained Earnings		210,000

PROBLEM 13-4B (Continued)**(b)****Preferred Stock**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			200,000
Feb. 1		J2		40,000	240,000
Mar. 1		J2		80,000	320,000
Sept. 1		J2		32,000	352,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			350,000
July 1		J2		100,000	450,000
Dec. 1		J2		50,000	500,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			60,000
Feb. 1		J2		25,000	85,000
Mar. 1		J2		40,000	125,000
Sept. 1		J2		20,000	145,000

Paid-in Capital in Excess of Par Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			700,000
July 1		J2		16,000	716,000
Dec. 1		J2		10,000	726,000

PROBLEM 13-4B (Continued)**Retained Earnings**

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			300,000
Dec. 31		J2		210,000	510,000

(c) MOLINA CORPORATION**Stockholders' equity****Paid-in capital****Capital stock**

10%, Preferred stock,
\$40 par value,
10,000 shares authorized,
8,800 shares issued
and outstanding **\$ 352,000**

Common stock, \$5 par value,
200,000 shares authorized,
100,000 shares issued
and outstanding **500,000**

Total capital stock **852,000**

Additional paid-in capital

In excess of par value—
preferred **\$145,000**

In excess of par value—
common **726,000**

Total additional paid-in
capital **871,000**

Total paid-in capital **1,723,000**

Retained earnings **510,000**

Total stockholders'
equity **\$2,233,000**

JENKINS CORPORATION

Stockholders' equity

Paid-in capital

Capital stock

8% Preferred stock, \$100
par value, noncumulative,
3,000 shares issued
and outstanding

\$ 300,000

Common stock, no par, \$10
stated value, 120,000
shares issued, and 112,000
outstanding

1,200,000

Total capital stock

1,500,000

Additional paid-in capital

In excess of par value—
preferred stock..... **\$288,400**

In excess of stated value—
common stock **690,000**

From treasury stock **6,000**

Total additional paid-in
capital.....

984,400

Total paid-in capital

2,484,400

Retained earnings

826,000

Total paid-in capital and
retained earnings

3,310,400

Less: Treasury stock (8,000 common
shares)

(88,000)

Total stockholders'
equity

\$3,222,400

PROBLEM 13-6B

(a) (1)	Land.....	296,000	
	Preferred Stock (2,400 X \$100).....		240,000
	Paid-in Capital in Excess of Par		
	Value—Preferred Stock		56,000
(2)	Cash (400,000 X \$16).....	6,400,000	
	Common Stock (400,000 X \$5)		2,000,000
	Paid-in Capital in Excess of Stated		
	Value—Common Stock.....		4,400,000
(3)	Treasury Stock—Common		
	(1,500 X \$22)	33,000	
	Cash.....		33,000
(4)	Cash (500 X \$28).....	14,000	
	Treasury Stock—Common		
	(500 X \$22).....		11,000
	Paid-in Capital from Treasury		
	Stock		3,000

PROBLEM 13-6B (Continued)**(b)****STEVEN CORPORATION****Stockholders' equity****Paid-in capital****Capital stock**

8% Preferred stock, \$100
par value, noncumulative,
40,000 shares authorized,
2,400 shares issued and
outstanding **\$ 240,000**

Common stock, no par, \$5
stated value, 2,000,000
shares authorized, 400,000
shares issued, and 399,000
outstanding **2,000,000**

Total capital stock **2,240,000**

Additional paid-in capital

In excess of par value—
preferred stock **\$ 56,000**

In excess of stated value—
common stock **4,400,000**

From treasury stock—
common **3,000**

Total additional paid-in
capital **4,459,000**

Total paid-in capital **6,699,000**

Retained earnings **560,000**

Total paid-in capital and
retained earnings **7,259,000**

Less: Treasury stock (1,000 common
shares) **(22,000)**

Total stockholders'
equity **\$7,237,000**

- (a) The common stock of PepsiCo has a par value of 1 2/3 cents per share.
- (b) There are 3.6 billion shares authorized of which 1.782 billion are issued. The percentage is 49.5% ($1.782 \div 3.6$).

- (c) The outstanding shares were:

	<u>2007</u>	<u>2006</u>
Shares issued.....	1,782,000,000	1,782,000,000
Less: Treasury shares.....	177,000,000	144,000,000
Shares outstanding	<u>1,605,000,000</u>	<u>1,638,000,000</u>

- (d) The high and low market price per share in the fourth quarter of fiscal 2007 was \$79.00 and \$68.02.

- (a) **Par value:**
Coca-Cola, \$0.25 per share.
PepsiCo, \$0.01 $\frac{2}{3}$ per share.
- (b) **Percentage of authorized shares issued:**
Coca-Cola, $3,519 \div 5,600 = 62.8\%$.
PepsiCo, $1,782 \div 3,600 = 49.5\%$.
- (c) **Treasury shares, year-end 2007:**
Coca-Cola, 1,201 million shares.
PepsiCo, 177 million shares.
- (d) **Common or capital stock shares outstanding, year-end 2007:**
Coca-Cola, $3,519 \text{ million} - 1,201 \text{ million} = 2,318 \text{ million}$.
PepsiCo, $1,782 \text{ million} - 177 \text{ million} = 1,605 \text{ million}$.

Answers will vary depending on company chosen by student.

- (a) The cumulative provision means that preferred stockholders must be paid both current-year dividends and unpaid prior-year dividends before common stockholders receive any dividends. When preferred stock is cumulative, preferred dividends not declared in a given period are called dividends in arrears.
- (b) The market price of a share of stock is caused by many factors. Among the factors to be considered are:
 - (1) the corporation's anticipated future earnings,
 - (2) its expected dividend rate per share,
 - (3) its current financial position,
 - (4) the current state of the economy, and
 - (5) the current state of the securities markets.

Par value is the amount assigned to each share of stock in the corporate charter. Par value may be any amount selected by the corporation. Generally, the amount of par value is quite low because states often levy a tax on the corporation based on par value.

Par value is not indicative of the worth or market value of the stock. The significance of par value is a legal matter. Par value represents the legal capital per share that must be retained in the business for the protection of corporate creditors.

- (c) A corporation may acquire treasury stock to:
 - (1) Reissue the shares to officers and employees under bonus or stock compensation plans.
 - (2) Increase trading of the company's stock in the securities market in hope of enhancing its market value.
 - (3) Have additional shares available for use in the acquisition of other companies.
 - (4) Reduce the number of shares outstanding and thereby increase earnings per share.
 - (5) To rid the company of disgruntled investors.

Treasury stock is not an asset. If treasury stock was reported as an asset, then unissued stock should also be shown as an asset, also an erroneous conclusion. Rather than being an asset, treasury stock reduces stockholder claims on corporate assets. This effect is correctly shown by reporting treasury stock as a deduction from total paid-in capital and retained earnings.

Dear Uncle Sid:

Thanks for your recent letter and for asking me to explain four terms.

Here are my explanations:

- (1) Authorized stock is the total amount of stock that a corporation is given permission to sell as indicated in its charter. If all authorized stock is sold, a corporation must obtain consent of the state to amend its charter before it can issue additional shares.
- (2) Issued stock is the amount of stock that has been sold either directly to investors or indirectly through an investment banking firm.
- (3) Outstanding stock is capital stock that has been issued and is being held by stockholders.
- (4) Preferred stock is capital stock that has contractual preferences over common stock in certain areas.

I really enjoy my accounting classes and especially like the accounting instructors. I hope your corporation does well, and I wish you continued success with your inventions.

Regards,

- (a) The stakeholders in this situation are:
- ▶ The director of Marco's R & D division.
 - ▶ The president of Marco.
 - ▶ The shareholders of Marco.
 - ▶ Those who live in the environment to be sprayed by the new (untested) chemical.
- (b) The president is risking the environment and everything and everybody in it that is exposed to this new chemical in order to enhance his company's sales and to preserve his job. Presidents and entrepreneurs frequently take risks in performing their leadership functions, but this action appears to be irresponsible and unethical.
- (c) A parent company may protect itself against loss and most reasonable business risks by establishing separate subsidiary corporations but whether it can insulate itself against this type of action is a matter of state corporate law and criminal law.

- (a) KPMG LLP was the CPA firm that audited PepsiCo's financial statements.
- (b) PepsiCo's basic earnings per share was \$3.48 and its diluted earnings per share was \$3.41.
- (c) Net revenues in 2007 were \$39,474 million.
- (d) PepsiCo held 177 million shares of treasury stock at the end of 2007.
- (e) Capital expenditures (spending) totaled \$2,430 million in 2007.
- (f) Buildings are depreciated over a 20–44 year useful life by PepsiCo.
- (g) Dividends paid in 2007 totaled \$2,204 million.

CHAPTER 14

Corporations: Dividends, Retained Earnings, and Income Reporting

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Prepare the entries for cash dividends and stock dividends.	1, 2, 3, 4, 5, 6, 7, 8, 18	1, 2, 3	1	1, 2, 3, 4, 5, 6, 7	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
2. Identify the items reported in a retained earnings statement.	9, 10, 11, 12, 13, 14	4, 5	1	6, 8, 9	2A, 3A, 4A	2B, 3B, 4B
3. Prepare and analyze a comprehensive stockholders' equity section.	14, 15	6, 7	2	5, 6, 10, 11, 13, 15, 16	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
4. Describe the form and content of corporation income statements.	15, 16	8	3, 5	12, 13, 14		
5. Compute earnings per share.	17	9, 10		12, 14, 15, 16, 17	3A	3B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare dividend entries and stockholders' equity section.	Simple	30–40
2A	Journalize and post transactions; prepare retained earnings statement and stockholders' equity section.	Moderate	30–40
3A	Prepare retained earnings statement and stockholders' equity section, and compute earnings per share.	Moderate	30–40
4A	Prepare the stockholders' equity section, reflecting dividends and stock split.	Moderate	20–30
5A	Prepare the stockholders' equity section, reflecting various events.	Moderate	20–30
1B	Prepare dividend entries and stockholders' equity section.	Simple	30–40
2B	Journalize and post transactions; prepare retained earnings statement and stockholders' equity section.	Moderate	30–40
3B	Prepare retained earnings statement and stockholders' equity section, and compute earnings per share.	Moderate	30–40
4B	Prepare the stockholders' equity section, reflecting dividends and stock split.	Moderate	20–30
5B	Prepare the stockholders' equity section, reflecting various events.	Moderate	20–30

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 14
CORPORATIONS: DIVIDENDS, RETAINED EARNINGS,
AND INCOME REPORTING

Number	SO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	2–4
BE2	1	AP	Simple	4–6
BE3	1	AP	Simple	6–8
BE4	2	AP	Simple	3–5
BE5	2	AP	Simple	4–6
BE6	3	AP	Simple	2–4
BE7	3	AP	Simple	2–4
BE8	4	AP	Simple	4–6
BE9	5	AP	Simple	2–4
BE10	5	AP	Simple	2–4
DI1	1	AP	Simple	6–8
DI2	1	AP	Simple	6–8
DI3	2	AP	Simple	4–6
DI4	3, 5	AP	Simple	6–8
EX1	1	AP	Simple	6–8
EX2	1	AP	Simple	6–8
EX3	1	AP	Simple	4–6
EX4	1	AP	Simple	6–8
EX5	1, 3	AP	Simple	6–8
EX6	1–3	AN	Simple	8–10
EX7	1	AN	Moderate	5–7
EX8	2	AP	Simple	4–6
EX9	2	AP	Simple	4–6
EX10	3	AP	Simple	6–8
EX11	3	AP	Simple	8–10
EX12	4, 5	AP	Simple	6–8
EX13	3, 4	AP	Simple	6–8
EX14	4, 5	AP	Simple	4–6

CORPORATIONS: DIVIDENDS, RETAINED EARNINGS, AND INCOME REPORTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	3, 5	AP	Simple	6–8
EX16	3, 5	AP	Simple	6–8
EX17	5	AP	Simple	4–6
P1A	1, 3	AP	Simple	30–40
P2A	1–3	AP	Moderate	30–40
P3A	1–3, 5	AP	Moderate	30–40
P4A	1–3	AP	Moderate	20–30
P5A	1, 3	AP	Moderate	20–30
P1B	1, 3	AP	Simple	30–40
P2B	1–3	AP	Moderate	30–40
P3B	1–3, 5	AP	Moderate	30–40
P4B	1–3	AP	Moderate	20–30
P5B	1, 3	AP	Moderate	20–30
BYP1	1	AP	Simple	4–6
BYP2	3, 5	AN	Simple	10–15
BYP3	—	AN	Simple	15–20
BYP4	1, 2	AP	Moderate	15–20
BYP5	1	AN	Simple	10–15
BYP6	1	E	Simple	10–15
BYP7	—	E	Moderate	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Prepare the entries for cash dividends and stock dividends.	Q14-1 Q14-2 Q14-3 Q14-5 Q14-6	Q14-7 Q14-8	Q14-4 BE14-1 BE14-2 BE14-3 DI14-1 DI14-2 E14-1	E14-2 P14-4A E14-3 P14-5A E14-4 P14-1B E14-5 P14-2B P14-1A P14-3B P14-2A P14-4B P14-3A P14-5B	Q14-18 E14-6 E14-7	
2. Identify the items reported in a retained earnings statement.	Q14-12	Q14-9 Q14-11 Q14-13	Q14-10 BE14-4 BE14-5 DI14-3	E14-8 P14-4A E14-9 P14-2B P14-2A P14-3B P14-3A P14-4B	E14-6	
3. Prepare and analyze a comprehensive stockholders' equity section.	Q14-14 Q14-15		BE14-6 BE14-7 DI14-4 E14-5 E14-10 E14-11 E14-13	E14-15 P14-1B E14-16 P14-2B P14-1A P14-3B P14-2A P14-4B P14-3A P14-5B P14-4A P14-5A	E14-6	
4. Describe the form and content of corporation income statements.	Q14-15 Q14-16		BE14-8 E14-12 E14-13	E14-14		
5. Compute earnings per share.	Q14-17		BE14-9 BE14-10 DI14-4 E14-12 E14-14	E14-15 E14-16 E14-17 P14-3A P14-3B		
Broadening Your Perspective			Financial Reporting Decision Making Across the Organization	Communication Comparative Analysis Exploring the Web		All About You Ethics Case

ANSWERS TO QUESTIONS

1. (a) A dividend is a distribution of cash or stock by a corporation to its stockholders on a pro rata (proportional) basis.
(b) Disagree. Dividends may take four forms: cash, property, scrip (promissory note to pay cash), or stock.
2. Sue DeVine is not correct. Adequate cash is only one of the conditions. In order for a cash dividend to occur, a corporation must also have retained earnings and the dividend must be declared by the board of directors.
3. (a) The three dates are:
Declaration date is the date when the board of directors formally declares the cash dividend and announces it to stockholders. The declaration commits the corporation to a binding legal obligation that cannot be rescinded.
Record date is the date that marks the time when ownership of the outstanding shares is determined from the stockholder records maintained by the corporation. The purpose of this date is to identify the persons or entities that will receive the dividend.
Payment date is the date on which the dividend checks are mailed to the stockholders.
(b) The accounting entries and their dates are:
Declaration date—Debit Retained Earnings and Credit Dividends Payable.
No entry is made on the record date.
Payment date—Debit Dividends Payable and Credit Cash.

4. The allocation of the cash dividend is as follows:

Total dividend.....		\$45,000
Allocated to preferred stock		
Dividends in arrears—one year	\$10,000	
Current year dividend	<u>10,000</u>	<u>20,000</u>
Remainder allocated to common stock.....		<u>\$25,000</u>

5. A cash dividend decreases assets, retained earnings, and total stockholders' equity. A stock dividend decreases retained earnings, increases paid-in capital, and has no effect on total assets and total stockholders' equity.
6. A corporation generally issues stock dividends for one of the following reasons:
 - (a) To satisfy stockholders' dividend expectations without spending cash.
 - (b) To increase the marketability of its stock by increasing the number of shares outstanding and thereby decreasing the market price per share. Decreasing the market price of the stock makes the shares easier to purchase for smaller investors.
 - (c) To emphasize that a portion of stockholders' equity that had been reported as retained earnings has been permanently reinvested in the business and therefore is unavailable for cash dividends.
7. In a stock split, the number of shares is increased in the same proportion that par value is decreased. Thus, in the Meenen Corporation the number of shares will increase to 60,000 = (30,000 X 2) and the par value will decrease to \$5 = (\$10 ÷ 2). The effect of a split on market value is generally inversely proportional to the size of the split. In this case, the market price would fall to approximately \$60 per share (\$120 ÷ 2).

8. The different effects of a stock split versus a stock dividend are:

<u>Item</u>	<u>Stock Split</u>	<u>Stock Dividend</u>
Total paid-in capital	No change	Increase
Total retained earnings	No change	Decrease
Total par value (common stock)	No change	Increase
Par value per share	Decrease	No Change

9. A prior period adjustment is a correction of an error in previously issued financial statements. The correction is reported in the current year's retained earnings statement as an adjustment of the beginning balance of retained earnings.
10. The understatement of depreciation in a prior year overstates the beginning retained earnings balance. The retained earnings statement presentation is:

Balance, January 1, as reported.....	\$210,000
Correction for understatement of prior year's depreciation	<u>(50,000)</u>
Balance, January 1, as adjusted.....	<u>\$160,000</u>

11. The purpose of a retained earnings restriction is to indicate that a portion of retained earnings is currently unavailable for dividends. Restrictions may result from the following causes: legal, contractual, or voluntary.
12. Retained earnings restrictions are generally disclosed in the notes to the financial statements.
13. The debits and credits to retained earnings are:

<u>Debits</u>	<u>Credits</u>
1. Net loss	1. Net income
2. Prior period adjustments for overstatement of net income	2. Prior period adjustments for understatement of net income
3. Cash and stock dividends	
4. Some disposals of treasury stock	

14. Juan is incorrect. Only the ending balance of retained earnings is reported in the stockholders' equity section.
15. Gene should be told that although many factors affect the market price of a stock at a given time, the reported net income is one of the most significant factors. When companies announce increases or decreases in net income, the market price of their stock usually increases or decreases immediately. Net income also provides an indication of the amount of dividends that a company can distribute. In addition, net income leads to a growth in retained earnings, which is often reflected in a stock's market price.

Questions Chapter 14 (Continued)

- 16.** The unique feature of a corporation income statement is a separate section that shows income taxes or income tax expense. The presentation is as follows:

Income before income taxes	\$500,000
Income tax expense	<u>150,000</u>
Net income	<u>\$350,000</u>

- 17.** Earnings per share means earnings per share of common stock. Preferred stock dividends are subtracted from net income in computing EPS in order to obtain income available to common stockholders.
- 18.** PepsiCo declared the following dividends per share amounts in 2003 to 2007: \$0.63, \$0.85, \$1.01, \$1.16, and \$1.425. PepsiCo's dividends per share is consistent with its net income trend during this 5 year period.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 14-1

Nov. 1	Retained Earnings (80,000 X \$1/share).....	80,000	
	Dividends Payable.....		80,000
Dec. 31	Dividends Payable.....	80,000	
	Cash		80,000

BRIEF EXERCISE 14-2

Dec. 1	Retained Earnings (5,000 X \$16).....	80,000	
	Common Stock Dividends Distributable (5,000 X \$10).....		50,000
	Paid-in Capital in Excess of Par Value (5,000 X \$6).....		30,000
31	Common Stock Dividends Distributable.....	50,000	
	Common Stock		50,000

BRIEF EXERCISE 14-3

	Before Dividend	After Dividend
(a) Stockholders' equity		
Paid-in capital		
Common stock, \$10 par	\$2,000,000	\$2,200,000
In excess of par value	—	80,000
Total paid-in capital	2,000,000	2,280,000
Retained earnings	500,000	220,000
Total stockholders' equity	<u>\$2,500,000</u>	<u>\$2,500,000</u>
(b) Outstanding shares	<u>200,000</u>	<u>220,000</u>
(c) Par value per share	<u>\$10.00</u>	<u>\$10.00</u>

BRIEF EXERCISE 14-4

KERNS INC.
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1	\$220,000
Add: Net income	<u>140,000</u>
	360,000
Less: Dividends	<u>85,000</u>
Balance, December 31	<u><u>\$275,000</u></u>

BRIEF EXERCISE 14-5

PERSINGER INC.
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported		\$800,000
Correction for overstatement of net income in prior period (depreciation expense error)		<u>(50,000)</u>
Balance, January 1, as adjusted		750,000
Add: Net income		<u>120,000</u>
		870,000
Less: Cash dividend	\$90,000	
Stock dividend	<u>8,000</u>	<u>98,000</u>
Balance, December 31		<u><u>\$772,000</u></u>

BRIEF EXERCISE 14-6

Return on stockholders' equity ratio:

$$\$452 \div \frac{\$2,619 + \$5,306}{2} = 11.4\%$$

BRIEF EXERCISE 14-7

$$\text{Return on common stockholders' equity} = \frac{\$152,000}{(\$700,000 + \$820,000) \div 2} = 20\%$$

BRIEF EXERCISE 14-8

DIXEN CORPORATION
Income Statement
For the Year Ended December 31, 2010

Sales	\$450,000
Cost of goods sold	<u>205,000</u>
Gross profit	245,000
Operating expenses	<u>75,000</u>
Income from operations	170,000
Other revenues and gains	<u>50,000</u>
Income before income taxes	220,000
Income tax expense (\$220,000 X 30%)	<u>66,000</u>
Net income	<u>\$154,000</u>

BRIEF EXERCISE 14-9

$$\text{Earnings per share} = \$1.90, \text{ or } (\$380,000 \div 200,000)$$

BRIEF EXERCISE 14-10

$$\text{Earnings per share} = \$1.80, \text{ or } [(\$380,000 - \$20,000) \div 200,000]$$

DO IT! 14-1

1. The company has not missed past dividends and the preferred stock is noncumulative; thus, the preferred stockholders are paid only this year's dividend. The dividend paid to preferred stockholders would be \$21,000 ($3,000 \times .07 \times \$100$). The dividend paid to common stockholders would be \$84,000 ($\$105,000 - \$21,000$).
2. The preferred stock is noncumulative; thus, past unpaid dividends do not have to be paid. The dividend paid to preferred stockholders would be \$21,000 ($3,000 \times .07 \times \$100$). The dividend paid to common stockholders would be \$84,000 ($\$105,000 - \$21,000$).
3. The preferred stock is cumulative; thus, dividends that have been missed in the past (dividends in arrears) must be paid. The dividend paid to preferred stockholders would be \$63,000 ($3 \times 3,000 \times .07 \times \$100$). The dividend paid to common stockholders would be \$42,000 ($\$105,000 - \$63,000$).

DO IT! 14-2

- (a) (1) The stock dividend amount is \$3,060,000 [$(400,000 \times 15\%) \times \$51$]. The new balance in retained earnings is \$8,940,000 ($\$12,000,000 - \$3,060,000$).
- (2) The retained earnings after the stock split would be the same as it was before the split: \$12,000,000.
- (b) (1) and (2) The effects on the equity accounts are as follows:

	<u>Original Balances</u>	<u>After Dividend</u>	<u>After Split</u>
Paid-in capital	\$ 2,400,000	\$ 5,460,000	\$ 2,400,000
Retained earnings	<u>12,000,000</u>	<u>8,940,000</u>	<u>12,000,000</u>
Total stockholders' equity	<u>\$14,400,000</u>	<u>\$14,400,000</u>	<u>\$14,400,000</u>
Shares outstanding	<u>400,000</u>	<u>460,000</u>	<u>800,000</u>

Total stockholders' equity remains the same under both options.

ALPHA CENTURI CORPORATION
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported	\$3,100,000
Correction for understatement of net income in prior period (depreciation error)	<u>110,000</u>
Balance, January 1, as adjusted	3,210,000
Add: Net income	<u>1,200,000</u>
	4,410,000
Less: Cash dividends	<u>150,000</u>
Balance, December 31	<u>\$4,260,000</u>

DO IT! 14-4

(a)	2009	2010
Return on common stockholders' equity	$\frac{(\$200,000 - \$30,000)}{(\$600,000 + \$750,000)/2} = 25.2\%$	$\frac{(\$210,000 - \$30,000)}{(\$750,000 + \$830,000)/2} = 22.8\%$
(b) Earnings per share	$\frac{(\$200,000 - \$30,000)}{10,000} = \$17$	$\frac{(\$210,000 - \$30,000)}{9,000} = \$20$

- (c) Between 2009 and 2010, return on common stockholders' equity decreased from 25% to 23%. Earnings per share, however, improved from \$17 to \$20. It is important to note that net income barely changed during this period. The increase in EPS was due to the purchase of treasury shares, which reduced the denominator of the ratio. As the company repurchases its own shares, it becomes more reliant on debt and thus increases its risk.

SOLUTIONS TO EXERCISES

EXERCISE 14-1

(a)	June 15	Retained Earnings (120,000 X \$1).....	120,000	
		Dividends Payable		120,000
	July 10	Dividends Payable	120,000	
		Cash.....		120,000
	Dec. 15	Retained Earnings (122,000 X \$1.20)	146,400	
		Dividends Payable		146,400

- (b) In the retained earnings statement, dividends of \$266,400 will be deducted. In the balance sheet, Dividends Payable of \$146,400 will be reported as a current liability.

EXERCISE 14-2

(a)	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total dividend	\$6,000	\$12,000	\$28,000
Allocation to preferred stock	<u>6,000</u>	<u>7,000</u>	<u>7,000</u>
Remainder to common stock	<u>\$ 0</u>	<u>\$ 5,000</u>	<u>\$21,000</u>

(b)	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total dividend	\$6,000	\$12,000	\$28,000
Allocation to preferred stock	<u>6,000</u>	<u>10,000¹</u>	<u>8,000</u>
Remainder to common stock	<u>\$ 0</u>	<u>\$ 2,000</u>	<u>\$20,000</u>

¹Dividends in arrears for Year 1, \$2,000 + current dividend for Year 2, \$8,000.

(c)	Dec. 31	Retained Earnings	28,000	
		Dividends Payable		28,000

EXERCISE 14-3

(a) Retained Earnings (21,000* X \$18)	378,000	
Common Stock Dividends Distributable		
(21,000 X \$10)		210,000
Paid-in Capital in Excess of Par Value		
(21,000 X \$8)		168,000

* $[(\$1,000,000 \div \$10) + 40,000] \times 15\%$.

(b) Retained Earnings (36,000* X \$20)	720,000	
Common Stock Dividends Distributable		
(36,000 X \$5)		180,000
Paid-in Capital in Excess of Par Value		
(36,000 X \$15)		540,000

* $[(\$1,000,000 \div 5) + 40,000] \times 15\%$.

EXERCISE 14-4

	Before Action	After Stock Dividend	After Stock Split
Stockholders' equity			
Paid-in capital			
Common stock	\$ 300,000	\$ 315,000	\$ 300,000
In excess of par value	<u>0</u>	<u>6,000</u>	<u>0</u>
Total paid-in capital	300,000	321,000	300,000
Retained earnings	<u>900,000</u>	<u>879,000</u>	<u>900,000</u>
Total stockholders' equity	<u>\$1,200,000</u>	<u>\$1,200,000</u>	<u>\$1,200,000</u>
Outstanding shares	<u>30,000</u>	<u>31,500</u>	<u>60,000</u>
Par value per share	<u>\$10.00</u>	<u>\$10.00</u>	<u>\$5.00</u>

EXERCISE 14-5

(a) (1) Par value before the stock dividend was \$5.

(2) Par value after the stock dividend is still \$5.

(b) Common stock

Balance before dividend	\$400,000
Dividend shares (8,000 X \$5)	<u>40,000</u>
New balance	<u>\$440,000</u>

Paid-in capital in excess of par value

Balance before dividend	\$ 25,000
Excess over par of shares issued (8,000 X \$10)	<u>80,000</u>
New balance	<u>\$105,000</u>

Retained earnings

Balance before dividend	\$155,000
Dividend (8,000 X \$15).....	<u>120,000</u>
New balance	<u>\$ 35,000</u>

EXERCISE 14-6

Item	Paid-in Capital		Retained Earnings
	Capital Stock	Additional	
1.	NE	NE	D
2.	I	NE	NE
3.	NE	NE	NE
4.	I	I	D
5.	NE	NE	D
6.	NE	NE	NE
7.	NE	NE	NE
8.	I	I	NE

EXERCISE 14-7

1.	Dec. 31	Retained Earnings	50,000	
		Interest Expense		50,000
2.	31	Retained Earnings	8,000	
		Dividends Payable	10,000	
		Common Stock Dividends		
		Distributable		10,000
		Paid-in Capital in Excess		
		of Par Value		8,000
3.	31	Common Stock	2,000,000	
		Retained Earnings		2,000,000

EXERCISE 14-8

FELTER CORPORATION
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported		\$550,000
Correction for overstatement of 2009 net		
income (depreciation error)		<u>(40,000)</u>
Balance, January 1, as adjusted		510,000
Add: Net income		<u>350,000</u>
		860,000
Less: Cash dividends	\$120,000	
Stock dividends	<u>60,000</u>	<u>180,000</u>
Balance, December 31		<u>\$680,000</u>

EXERCISE 14-9

SASHA COMPANY
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported.....		\$310,000
Correction for understatement of 2008 net income.....		<u>20,000</u>
Balance, January 1, as adjusted.....		330,000
Add: Net income.....		<u>285,000</u>
		615,000
Less: Cash dividends	\$100,000 ¹	
Stock dividends	<u>150,000²</u>	<u>250,000</u>
Balance, December 31		<u>\$365,000</u>

¹(200,000 X \$.50/sh)²(200,000 X .05 X \$15/sh)**EXERCISE 14-10**

KELLY GROUCUTT COMPANY
Balance Sheet (Partial)
December 31, 2010

Paid-in capital		
Capital stock		
Preferred stock.....	\$125,000	
Common stock	<u>400,000</u>	
Total capital stock.....		\$ 525,000
Additional paid-in capital		
In excess of par value—preferred stock.....	75,000	
In excess of par value—common stock.....	<u>100,000</u>	
Total additional paid-in capital		<u>175,000</u>
Total paid-in capital		700,000
Retained earnings		<u>334,000*</u>
Total paid-in capital and retained earnings		1,034,000
Less: Treasury stock—common		<u>40,000</u>
Total stockholder's equity		<u>\$ 994,000</u>

*\$250,000 + \$140,000 – \$56,000

ORTIZ INC.
Balance Sheet (Partial)
December 31, 200X

Stockholders' equity		
Paid-in capital		
Capital stock		
8% Preferred stock, \$5 par value, 40,000 shares authorized, 30,000 shares issued		\$ 150,000
Common stock, no par, \$1 stated value, 400,000 shares autho- rized, 300,000 shares issued and 290,000 outstanding	\$ 300,000	
Common stock dividends distributable	30,000	330,000
Total capital stock		480,000
Additional paid-in capital		
In excess of par value— preferred stock	344,000	
In excess of stated value— common stock	1,200,000	
Total additional paid-in capital		1,544,000
Total paid-in capital		2,024,000
Retained earnings (see Note R)		800,000
Total paid-in capital and retained earnings		2,824,000
Less: Treasury stock (10,000 common shares)		74,000
Total stockholders' equity		<u>\$2,750,000</u>

Note R: Retained earnings is restricted for plant expansion, \$100,000.

EXERCISE 14-12

(a) **PATEL CORPORATION**
Income Statement
For the Year Ended December 31, 2010

Sales	\$800,000
Cost of goods sold.....	<u>465,000</u>
Gross profit.....	335,000
Operating expenses.....	<u>110,000</u>
Income from operations	225,000
Other revenues and gains	92,000
Other expenses and losses.....	<u>32,000</u>
Income before income taxes.....	285,000
Income tax expense (\$285,000 X 20%)	<u>57,000</u>
Net income	<u>\$228,000</u>

(b) Earnings per share = \$3.96, or $[(\$228,000 - \$30,000) \div 50,000]$

EXERCISE 14-13

(a) **MIKE SINGLETARY CORPORATION**
Income Statement
For the Year Ended December 31, 2010

Net sales	\$ 600,000
Cost of goods sold.....	<u>360,000</u>
Gross profit.....	240,000
Operating expenses.....	<u>153,000</u>
Income from operations	87,000
Interest expense.....	<u>7,500</u>
Income before income taxes.....	79,500
Income tax expense (30% X \$79,500).....	<u>23,850</u>
Net income	<u>\$ 55,650</u>

(b)
$$\frac{\text{Net income} - \text{preferred dividends}}{\text{Average common stockholders' equity}} = \frac{\$55,650 - \$15,000}{\$200,000} = \underline{20.3\%}$$

EXERCISE 14-14

Net income: $\$2,000,000 - \$1,200,000 = \$800,000$;
 $\$800,000 - (30\% \times \$800,000) = \$560,000$

Preferred dividends: $(50,000 \times \$20) \times 8\% = \$80,000$

Average common shares outstanding: 200,000

Earnings per share:

$$\frac{\$560,000 - \$80,000}{200,000} = \underline{\underline{\$2.40}}$$

EXERCISE 14-15

	2010	2009
Earnings per share	$\frac{\$290,000 - \$20,000}{100,000} = \$2.70$	$\frac{\$200,000 - \$20,000}{80,000} = \$2.25$
Return on common stockholders' equity	$\frac{\$290,000 - \$20,000}{\$1,200,000} = 22.5\%$	$\frac{\$200,000 - \$20,000}{\$900,000} = 20.0\%$

EXERCISE 14-16

	2010	2009
Earnings per share	$\frac{\$290,000 - \$20,000}{150,000} = \$1.80$	$\frac{\$248,000 - \$20,000}{180,000} = \$1.27$
Return on common stockholders' equity	$\frac{\$290,000 - \$20,000}{\$1,800,000} = 15.0\%$	$\frac{\$248,000 - \$20,000}{\$1,900,000} = 12.0\%$

EXERCISE 14-17

$$(a) \quad \frac{\$241,000 - \$16,000}{100,000} = \$2.25$$

$$(b) \quad \frac{\$241,000 - \$16,000}{90,000^*} = \$2.50$$

$$*100,000 - 10,000 = 90,000.$$

SOLUTIONS TO PROBLEMS

PROBLEM 14-1A

(a)	Feb.	1	Retained Earnings (60,000 X \$1).....	60,000	
			Dividends Payable.....		60,000
	Mar.	1	Dividends Payable.....	60,000	
			Cash		60,000
	Apr.	1	Memo—two-for-one stock split increases number of shares to 120,000 = (60,000 X 2) and reduces par value to \$10 per share.		
	July	1	Retained Earnings (12,000 X \$13)	156,000	
			Common Stock Dividends Distributable (12,000 X \$10).....		120,000
			Paid-in Capital in Excess of Par Value (12,000 X \$3).....		36,000
		31	Common Stock Dividends Distributable	120,000	
			Common Stock.....		120,000
	Dec.	1	Retained Earnings (132,000 X \$.50).....	66,000	
			Dividends Payable.....		66,000
		31	Income Summary.....	350,000	
			Retained Earnings.....		350,000

(b)

Common Stock

Date		Explanation	Ref.	Debit	Credit	Balance
Jan.	1	Balance	✓			1,200,000
Apr.	1	2 for 1 split—new par \$10				
July	31				120,000	1,320,000

PROBLEM 14-1A (Continued)**Common Stock Dividends Distributable**

Date	Explanation	Ref.	Debit	Credit	Balance
July 1				120,000	120,000
31			120,000		0

Paid-in Capital in Excess of Par Value

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			200,000
July 1				36,000	236,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			600,000
Feb. 1	Cash dividend		60,000		540,000
July 1	Stock dividend		156,000		384,000
Dec. 1	Cash dividend		66,000		318,000
31	Net income			350,000	668,000

(c) **CAROLINAS CORPORATION**
Balance Sheet (Partial)
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, \$10 par value, 132,000	
shares issued and outstanding	\$1,320,000
Additional paid-in capital	
In excess of par value	236,000
Total paid-in capital	1,556,000
Retained earnings	668,000
Total stockholders' equity	<u>\$2,224,000</u>

PROBLEM 14-2A

(a)	July	1	Retained Earnings		
			[(\$800,000 ÷ \$5) X \$.50]	80,000	
			Dividends Payable—Common		
			Stock		80,000
	Aug.	1	Retained Earnings	25,000	
			Accumulated Depreciation		25,000
	Sept.	1	Dividends Payable—Common		
			Stock	80,000	
			Cash		80,000
	Dec.	1	Retained Earnings (16,000 X \$18)	288,000	
			Common Stock Dividends		
			Distributable (16,000 X \$5)		80,000
			Paid-in Capital in Excess of		
			Par Value—Common Stock		
			(16,000 X \$13)		208,000
		15	Retained Earnings (12,000 X \$3)	36,000	
			Dividends Payable—Preferred		
			Stock		36,000
		31	Income Summary	355,000	
			Retained Earnings		355,000

(b)

Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			600,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			800,000

PROBLEM 14-2A (Continued)**Common Stock Dividends Distributable**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 1				80,000	80,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			200,000

Paid-in Capital in Excess of Par Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			300,000
Dec. 1				208,000	508,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			800,000
July 1	Cash dividend— common		80,000		720,000
Aug. 1	Prior period adjustment— depreciation		25,000		695,000
Dec. 1	Stock dividend— common		288,000		407,000
Dec. 15	Cash dividend— preferred		36,000		371,000
Dec. 31	Net income			355,000	726,000

PROBLEM 14-2A (Continued)**(c)**

HASHMI COMPANY
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported		\$ 800,000
Correction of 2009 depreciation.....		<u>25,000</u>
Balance, January 1, as adjusted		775,000
Add: Net income		<u>355,000</u>
		1,130,000
Less: Cash dividends—preferred.....	\$ 36,000	
Stock dividends—common	288,000	
Cash dividends—common.....	<u>80,000</u>	<u>404,000</u>
Balance, December 31		<u>\$ 726,000</u>

(d)

HASHMI COMPANY
Balance Sheet (Partial)
December 31, 2010

Stockholders' equity		
Paid-in capital		
Capital stock		
6% Preferred stock, \$50 par value, 12,000 shares issued.....		\$ 600,000
Common stock, \$5 par value, 160,000 shares issued	\$800,000	
Common stock dividends distributable (16,000 shares).....	<u>80,000</u>	<u>880,000</u>
Total capital stock		1,480,000
Additional paid-in capital		
In excess of par value—preferred stock.....	200,000	
In excess of par value—common stock.....	<u>508,000</u>	
Total additional paid-in capital.....		<u>708,000</u>
Total paid-in capital.....		2,188,000
Retained earnings (see Note B)		<u>726,000</u>
Total stockholders' equity.....		<u>\$2,914,000</u>

Note B: Retained earnings is restricted for plant expansion, \$200,000.

PROBLEM 14-3A

(a)

Retained Earnings					
Sept. 1	Prior Per. Adj.	63,000	Jan. 1	Balance	1,170,000
Oct. 1	Cash Dividend	250,000	Dec. 31	Net Income	585,000
Dec. 31	Stock Dividend	400,000			
				Dec. 31	Balance
					1,042,000

(b)

DOLD CORPORATION
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported.....		\$1,170,000
Correction of overstatement of 2009 net income because of understatement of depreciation		<u>(63,000)</u>
Balance, January 1, as adjusted.....		1,107,000
Add: Net income.....		<u>585,000</u>
		1,692,000
Less: Cash dividends.....	\$250,000	
Stock dividends	<u>400,000</u>	<u>650,000</u>
Balance, December 31		<u>\$1,042,000</u>

(c)

DOLD CORPORATION
Partial Balance Sheet
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
6% Preferred stock,	
\$50 par value, cumulative,	
20,000 shares authorized,	
15,000 shares issued and	
outstanding.....	\$ 750,000

DOLD CORPORATION (Continued)

Common stock, \$10 par value, 500,000 shares authorized, 250,000 shares issued and outstanding	\$2,500,000	
Common stock dividends distributable	<u>250,000</u>	<u>2,750,000</u>
Total capital stock		<u>3,500,000</u>
Additional paid-in capital		
In excess of par value— preferred stock.....	250,000	
In excess of par value— common stock.....	<u>400,000</u>	
Total additional paid-in capital		<u>650,000</u>
Total paid-in capital.....		<u>4,150,000</u>
Retained earnings (see Note X).....		<u>1,042,000</u>
Total stockholders' equity.....		<u>\$5,192,000</u>

Note X: Retained earnings is restricted for plant expansion, \$200,000.

(d) Total cash dividend		\$250,000
Allocated to preferred stock		
Dividend in arrears—2009 (15,000 X \$3)	\$45,000	
2010 dividend	<u>45,000</u>	<u>90,000</u>
Remainder to common stock.....		<u>\$160,000</u>

(e)
$$\frac{\$585,000 - \$45,000}{240,000} = \$2.25$$

***15,000 X \$3 = \$45,000**

PROBLEM 14-4A

(a) **PATTINI CORPORATION**
Partial Balance Sheet
March 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
90,000 shares issued and outstanding.....	\$1,400,000
Retained earnings	410,000
Total stockholders' equity.....	<u>\$1,810,000</u>

(b) **PATTINI CORPORATION**
Partial Balance Sheet
June 30, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
360,000 shares issued and outstanding	\$1,400,000
Retained earnings	410,000
Total stockholders' equity.....	<u>\$1,810,000</u>

(c) **PATTINI CORPORATION**
Partial Balance Sheet
September 30, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
378,000 shares issued and outstanding	\$1,634,000*
Retained earnings	176,000**
Total stockholders' equity.....	<u>\$1,810,000</u>

***\$1,400,000 + [(360,000 X .05) X \$13] **\$410,000 – \$234,000**

PROBLEM 14-4A (Continued)

(d)

**PATTINI CORPORATION
Partial Balance Sheet
December 31, 2010**

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
378,000 shares issued and outstanding.....	
	\$1,634,000
Retained earnings	<u>337,000*</u>
Total stockholders' equity.....	<u>\$1,971,000</u>

***\$176,000 – (\$.50 X 378,000) + \$350,000**

PROBLEM 14-5A

Preliminary analysis (in thousands)—NOT REQUIRED

	Common Stock	Common Stock Dividends Distributable	Retained Earnings	Total
Balance, Jan. 1	\$1,500	\$200	\$600	\$2,300
1. Issued 50,000 shares for stock dividend	200	(200)		0
2. Issued 30,000 shares for cash	180			180
3. Corrected error in 2008 net income			70	70
4. Declared cash dividend			(80)	(80)
5. Net income for year			300	300
Balance, Dec. 31	<u>\$1,880</u>	<u>\$ 0</u>	<u>\$890</u>	<u>\$2,770</u>

YADIER INC.
Stockholders' Equity Section of Balance Sheet
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
580,000 shares issued and outstanding	\$1,880,000
Retained earnings	<u>890,000</u>
Total stockholders' equity	<u>\$2,770,000</u>

PROBLEM 14-1B

(a)	Jan. 15	Retained Earnings (200,000 X \$1)	200,000	
		Dividends Payable.....		200,000
	Feb. 15	Dividends Payable.....	200,000	
		Cash		200,000
	Apr. 15	Retained Earnings (20,000 X \$15)	300,000	
		Common Stock Dividends		
		Distributable (20,000 X \$5)		100,000
		Paid-in Capital in Excess of Par Value (20,000 X \$10)		200,000
	May 15	Common Stock Dividends		
		Distributable	100,000	
		Common Stock (20,000 X \$5).....		100,000
	July 1	Memo—two-for-one stock split increases the number of shares outstanding to 440,000, or (220,000 X 2) and reduces par value to \$2.50 per share.		
	Dec. 1	Retained Earnings (440,000 X \$.50).....	220,000	
		Dividends Payable.....		220,000
	31	Income Summary.....	250,000	
		Retained Earnings.....		250,000

(b)

Common Stock

Date		Explanation	Ref.	Debit	Credit	Balance
Jan. 1		Balance	✓			1,000,000
May 15					100,000	1,100,000
July 1		2 for 1 stock split— new par value = \$2.50				

PROBLEM 14-1B (Continued)**Common Stock Dividends Distributable**

Date	Explanation	Ref.	Debit	Credit	Balance
Apr. 15				100,000	100,000
May 15			100,000		0

Paid-in Capital in Excess of Par Value

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			200,000
Apr. 15				200,000	400,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			840,000
15	Cash dividends		200,000		640,000
Apr. 15	Stock dividends		300,000		340,000
Dec. 1	Cash dividends		220,000		120,000
31	Net income			250,000	370,000

(c) **WEISER CORPORATION**
Balance Sheet (Partial)
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, \$2.50 par value, 440,000	
shares issued and outstanding	\$1,100,000
Additional paid-in capital	
In excess of par value	<u>400,000</u>
Total paid-in capital.....	1,500,000
Retained earnings	<u>370,000</u>
Total stockholders' equity	<u>\$1,870,000</u>

PROBLEM 14-2B

(a)	July	1	Retained Earnings		
			[(\$900,000 ÷ \$10) X \$.50]	45,000	
			Dividends Payable—Common		
			Stock		45,000
	Aug.	1	Accumulated Depreciation	72,000	
			Retained Earnings		72,000
	Sept.	1	Dividends Payable—Common		
			Stock	45,000	
			Cash		45,000
	Dec.	1	Retained Earnings (9,000 X \$16).....	144,000	
			Common Stock Dividends		
			Distributable (9,000 X \$10)		90,000
			Paid-in Capital in Excess of		
			Par Value—Common Stock		
			(9,000 X \$6).....		54,000
		15	Retained Earnings (6,000 X \$7).....	42,000	
			Dividends Payable—Preferred		
			Stock		42,000
		31	Income Summary	350,000	
			Retained Earnings		350,000

(b)

Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			600,000

Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			900,000

PROBLEM 14-2B (Continued)**Common Stock Dividends Distributable**

Date	Explanation	Ref.	Debit	Credit	Balance
Dec. 1				90,000	90,000

Paid-in Capital in Excess of Par Value—Preferred Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			100,000

Paid-in Capital in Excess of Par Value—Common Stock

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			200,000
Dec. 1				54,000	254,000

Retained Earnings

Date	Explanation	Ref.	Debit	Credit	Balance
Jan. 1	Balance	✓			500,000
July 1	Cash dividends— common		45,000		455,000
Aug. 1	Prior period adjustment			72,000	527,000
Dec. 1	Stock dividends— common		144,000		383,000
15	Cash dividends— preferred		42,000		341,000
31	Net income			350,000	691,000

(c)

GIBSON, INC.
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as reported		\$500,000
Correction of 2009 depreciation.....		<u>72,000</u>
Balance, January 1, as adjusted		572,000
Add: Net income		<u>350,000</u>
		922,000
Less: Cash dividends—preferred.....	\$ 42,000	
Stock dividends—common	144,000	
Cash dividends—common.....	<u>45,000</u>	<u>231,000</u>
Balance, December 31		<u>\$691,000</u>

(d)

GIBSON, INC.
Balance Sheet (Partial)
December 31, 2010

Stockholders' equity		
Paid-in capital		
Capital stock		
7% Preferred stock, \$100 par value, 6,000 shares issued		\$ 600,000
Common stock, \$10 par value, 90,000 shares issued	\$900,000	
Common stock dividends distributable	<u>90,000</u>	<u>990,000</u>
Total capital stock		1,590,000
Additional paid-in capital		
In excess of par value—preferred stock.....	100,000	
In excess of par value—common stock.....	<u>254,000</u>	
Total additional paid-in capital.....		<u>354,000</u>
Total paid-in capital.....		1,944,000
Retained earnings.....		<u>691,000</u>
Total stockholders' equity.....		<u>\$2,635,000</u>

PROBLEM 14-3B

(a)

Retained Earnings				
Nov. 1	Cash Dividend	500,000	Jan. 1 Balance	2,450,000
Dec. 31	Stock Dividend	360,000	Dec. 31	970,000
			Dec. 31 Balance	2,560,000

(b)

YAKIMA CORPORATION
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1.....		\$2,450,000
Add: Net income.....		<u>970,000</u>
		3,420,000
Less: Cash dividends	\$500,000	
Stock dividends	<u>360,000</u>	<u>860,000</u>
Balance, December 31		<u>\$2,560,000</u>

(c)

YAKIMA CORPORATION
Partial Balance Sheet
December 31, 2010

Stockholders' equity		
Paid-in capital		
Capital stock		
6% Preferred stock, \$100		
par value, noncumulative,		
callable at \$125, 20,000		
shares authorized, 10,000		
shares issued and		
out-standing		\$1,000,000
Common stock, no par, \$5		
stated value, 600,000 shares		
authorized, 400,000 shares		
issued and outstanding	\$2,000,000	
Common stock dividends		
distributable.....	<u>200,000</u>	<u>2,200,000</u>
Total capital stock.....		<u>3,200,000</u>

YAKIMA CORPORATION (Continued)

Additional paid-in capital	
In excess of par value—	
preferred stock.....	\$ 200,000
In excess of stated value—	
common stock.....	<u>1,180,000</u>
Total additional paid-in	
capital.....	<u>1,380,000</u>
Total paid-in capital.....	<u>4,580,000</u>
Retained earnings (see Note A)	<u>2,560,000</u>
Total stockholders'	
equity.....	<u>\$7,140,000</u>

Note A: Retained earnings is restricted for plant expansion, \$100,000.

(d) Total dividend.....	\$500,000
Allocated to preferred stock—current year only	<u>60,000</u>
Remainder to common stock.....	<u>\$440,000</u>

(e) $\frac{\$970,000 - \$60,000}{325,000} = \$2.80$

***10,000 X \$6 = \$60,000**

PROBLEM 14-4B

(a)

CARNE CORPORATION
Partial Balance Sheet
March 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
100,000 shares issued and outstanding.....	\$2,800,000
Retained earnings	<u>900,000</u>
Total stockholders' equity	<u>\$3,700,000</u>

(b)

CARNE CORPORATION
Partial Balance Sheet
June 30, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
400,000 shares issued and outstanding	\$2,800,000
Retained earnings	<u>900,000</u>
Total stockholders' equity	<u>\$3,700,000</u>

(c)

CARNE CORPORATION
Partial Balance Sheet
September 30, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
420,000 shares issued and outstanding.....	\$3,060,000*
Retained earnings	<u>640,000**</u>
Total stockholders' equity	<u>\$3,700,000</u>

***\$2,800,000 + [(400,000 X .05) X \$13] **\$900,000 – \$260,000**

PROBLEM 14-4B (Continued)**(d)****CARNE CORPORATION
Partial Balance Sheet
December 31, 2010**

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
420,000 shares issued and outstanding.....	
	\$3,060,000
Retained earnings	<u>1,130,000*</u>
Total stockholders' equity	<u>\$4,190,000</u>

***\$640,000 – (\$.50 X 420,000) + \$700,000**

PROBLEM 14-5B

Preliminary analysis (in thousands)—NOT REQUIRED

	<u>Common Stock</u>	<u>Common Stock Dividends Distributable</u>	<u>Retained Earnings</u>	<u>Total</u>
Balance, Jan. 1	\$3,000	\$400	\$1,200	\$4,600
1. Issued 100,000 shares for stock dividend	400	(400)		0
2. Issued 60,000 shares for cash	300			300
3. Corrected error in 2008 net income			140	140
4. Declared cash dividend			(300)	(300)
5. Net income for year			600	600
Balance, Dec. 31	<u>\$3,700</u>	<u>\$ 0</u>	<u>\$1,640</u>	<u>\$5,340</u>

GARCIA INC.
Stockholders' Equity Section of Balance Sheet
December 31, 2010

Stockholders' equity	
Paid-in capital	
Capital stock	
Common stock, no-par value,	
1,160,000 shares issued and outstanding	\$3,700,000
Retained earnings	<u>1,640,000</u>
Total stockholders' equity	<u>\$5,340,000</u>

- (a) According to the Consolidated Statement of Common Shareholders' Equity, the company declared dividends on common stock of \$2,306 million during the year-ended December 29, 2007.
- (b) The company declared dividends on common stock of \$1,912 million during the year ended December 30, 2006.

(a)

	PepsiCo	Coca-Cola
Earnings per share	$\frac{\$5,658 - \$2}{1,625} = \$3.48$	$\frac{\$5,981 - \$0}{2,313} = \$2.59$
Return on common stockholders' equity	$\frac{\$5,658 - \$2}{(\$17,325 + \$15,447) \div 2} = 34.5\%$	$\frac{\$5,981 - \$0}{(\$21,744 + \$16,920) \div 2} = 30.9\%$

The return on common stockholders' equity can be used to compare the profitability of two companies. It shows how many dollars of net income were earned for each dollar invested by the owners. Since this ratio is expressed as a percent instead of a dollar amount like earnings per share, it can be used to compare PepsiCo and Coca-Cola. During 2007, PepsiCo was 12% more profitable than Coca-Cola based on their respective returns on common stockholders' equity. Earnings per share measures cannot be compared across companies because they may use vastly different numbers of shares to finance the company.

(b) PepsiCo paid cash dividends of \$2,204 million and Coca-Cola paid \$3,149 million of cash dividends in 2007.

Answers will vary depending on the company chosen by the student.

Journal entries—NOT REQUIRED

July	1	Retained Earnings (140,000 X \$0.50).....	70,000	
		Dividends Payable		70,000
Aug.	1	Accumulated Depreciation	72,000	
		Retained Earnings.....		72,000
Sept.	1	Dividends Payable	70,000	
		Cash		70,000
Dec.	1	Retained Earnings (14,000 X \$12).....	168,000	
		Common Stock Dividends Distributable.....		168,000
	15	Retained Earnings (4,000 X \$9)	36,000	
		Dividends Payable		36,000
	31	Income Summary	320,000	
		Retained Earnings.....		320,000

(a) **FERNANDEZ, INC.**
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1, as previously reported		\$500,000
Correction of 2009 depreciation		<u>72,000</u>
Balance, January 1, as corrected.....		572,000
Add: Net income		<u>320,000</u>
		892,000
Less: Cash dividends—preferred	\$ 36,000	
Stock dividends—common	168,000	
Cash dividends—common	<u>70,000</u>	<u>274,000</u>
Balance, December 31		<u>\$618,000</u>

BYP 14-4 (Continued)

- (b) Treating the overstatement of 2009 depreciation expense as an adjustment of 2010 income would be incorrect because it applies to the prior year's income statement and would distort depreciation expense for 2008.**
- (c) Companies issue stock dividends instead of cash dividends to satisfy stockholders' dividend expectations without spending cash and to increase the marketability of the corporation's stock.**

Dear Mom and Dad,

Thanks for calling me about your investments in Cormier Corporation and Fegan, Inc.

The effect to you as stockholders is the same for both a stock dividend and a stock split. In each case, the number of shares you own will increase. Following the stock dividend, you will own 110 shares of Cormier [$100 + (100 \times 10\%)$]. After the stock split, you will own 200 shares of Fegan (100×2).

The total value of your investments should remain approximately the same as before the stock dividend and stock split. The reason is that the market value per share will likely decrease in proportion to the additional shares that you will own. If there is a change in value, it is more likely to be higher than lower.

The effects of the stock dividend and stock split on the corporations are limited entirely to the stockholders' equity sections as follows:

<u>Stockholders' Equity Item</u>	<u>After Stock Dividend</u>	<u>After Stock Split</u>
Total capital stock	Increase	No change
Par value per share	No change	Decrease
Total paid-in capital	Increase	No change
Total retained earnings	Decrease	No change
Total stockholders' equity	No change	No change

I hope this answers your questions, Mom and Dad. If you have any additional questions, please give me a call.

Love,

P.S. Please send money.

- (a) The stakeholders in this situation are:
- ▶ Tom Henson, president of Garcia Corporation.
 - ▶ Andrea Lane, financial vice-president.
 - ▶ The stockholders of Garcia Corporation.
- (b) There is nothing unethical in issuing a stock dividend. But the president's order to write a press release convincing the stockholders that the stock dividend is just as good as a cash dividend is unethical. A stock dividend is not a cash dividend and does not necessarily place the stockholder in the same position. A stock dividend is a "paper" dividend—the issuance of a stock certificate, not a check (cash).
- (c) The stock dividend results in a decrease in retained earnings and an increase of the same amount in paid-in capital with no change in total stockholders' equity. There is no change in total assets and no change in total liabilities and stockholders' equity.

As a stockholder, preference for a cash dividend versus a stock dividend is dependent upon one's investment objective—income (cash flow) or growth (reinvestment).

CHAPTER 15

Long-Term Liabilities

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain why bonds are issued.	1, 2, 3, 4, 5	1	1	1, 2		
2. Prepare the entries for the issuance of bonds and interest expense.	6, 7, 8	2, 3, 4	2	3, 4, 5, 6, 7, 8	1A, 2A, 5A, 6A, 9A	1B, 2B, 5B, 6B, 9B
3. Describe the entries when bonds are redeemed or converted.	9, 10	5	3	5, 6, 8, 9, 18, 19	1A, 2A, 9A	1B, 2B, 9B
4. Describe the accounting for long-term notes payable.	11, 21	6	4	10, 11	3A	3B
5. Contrast the accounting for operating and capital leases.	12, 13, 14	7	5	12	4A	4B
6. Identify the methods for the presentation and analysis of long-term liabilities.	15	8		13, 14	1A, 2A, 7A, 8A	1B, 2B, 7B, 8B
*7. Compute the market price of a bond.	18	9		15		
*8. Apply the effective-interest method of amortizing bond discount and bond premium.	16, 17	10		16, 17	5A, 6A	5B, 6B
*9. Apply the straight-line method of amortizing bond discount and bond premium.	19, 20	11, 12		18, 19	7A, 8A, 9A	7B, 8B, 9B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare entries to record issuance of bonds, interest accrual, and bond redemption.	Moderate	20–30
2A	Prepare entries to record issuance of bonds, interest accrual, and bond redemption.	Moderate	15–20
3A	Prepare installment payments schedule and journal entries for a mortgage note payable.	Moderate	20–30
4A	Analyze three different lease situations and prepare journal entries.	Moderate	20–30
*5A	Prepare entries to record issuance of bonds, payment of interest, and amortization of bond premium using effective-interest method.	Moderate	30–40
*6A	Prepare entries to record issuance of bonds, payment of interest, and amortization of discount using effective-interest method. In addition, answer questions.	Moderate	30–40
*7A	Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for two years.	Simple	30–40
*8A	Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount.	Simple	30–40
*9A	Prepare entries to record interest payments, straight-line premium amortization, and redemption of bonds.	Moderate	30–40
1B	Prepare entries to record issuance of bonds, interest accrual, and bond redemption.	Moderate	20–30
2B	Prepare entries to record issuance of bonds, interest accrual, and bond redemption.	Moderate	15–20
3B	Prepare installment payments schedule and journal entries for a mortgage note payable.	Moderate	20–30
4B	Analyze three different lease situations and prepare journal entries.	Moderate	20–30
*5B	Prepare entries to record issuance of bonds, payment of interest, and amortization of bond discount using effective-interest method.	Moderate	30–40

ASSIGNMENT CHARACTERISTICS TABLE (Continued)

Problem Number	Description	Difficulty Level	Time Allotted (min.)
*6B	Prepare entries to record issuance of bonds, payment of interest, and amortization of premium using effective-interest method. In addition, answer questions.	Moderate	30–40
*7B	Prepare entries to record issuance of bonds, interest accrual, and straight-line amortization for two years.	Simple	30–40
*8B	Prepare entries to record issuance of bonds, interest, and straight-line amortization of bond premium and discount.	Simple	30–40
*9B	Prepare entries to record interest payments, straight-line discount amortization, and redemption of bonds.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 15
LONG-TERM LIABILITIES

Number	SO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	6–8
BE2	2	AP	Simple	4–6
BE3	2	AP	Simple	3–5
BE4	2	AP	Simple	4–6
BE5	3	AP	Simple	3–5
BE6	4	AP	Simple	6–8
BE7	5	AP	Simple	3–5
BE8	6	AP	Simple	3–5
BE9	7	AP	Simple	3–5
BE10	8	AP	Simple	4–6
BE11	9	AP	Simple	4–6
BE12	9	AP	Simple	4–6
DI1	1	C	Simple	2–3
DI2	2	AP	Simple	4–6
DI3	3	AP	Simple	3–5
DI4	4	AP	Simple	4–6
DI5	5	AP	Simple	4–6
EX1	1	C	Simple	4–6
EX2	1	AN	Simple	4–6
EX3	2	AP	Simple	4–6
EX4	2	AP	Simple	4–6
EX5	2, 3	AP	Simple	5–7
EX6	2, 3	AP	Moderate	8–10
EX7	2	AP	Simple	6–8
EX8	2, 3	AP	Simple	6–8
EX9	3	AP	Moderate	8–10
EX10	4	AP	Simple	6–8
EX11	4	AP	Simple	8–10
EX12	5	AP	Simple	4–6
EX13	6	AP	Simple	3–5
EX14	6	AN	Simple	4–6

LONG-TERM LIABILITIES (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	7	AP	Simple	4–6
EX16	8	AP	Moderate	8–10
EX17	8	AP	Moderate	8–10
EX18	3, 9	AP	Simple	6–8
EX19	3, 9	AP	Simple	6–8
P1A	2, 3, 6	AP	Moderate	20–30
P2A	2, 3, 6	AP	Moderate	15–20
P3A	4	AP	Moderate	20–30
P4A	5	AP	Moderate	20–30
P5A	2, 8	AP	Moderate	30–40
P6A	2, 8	AP	Moderate	30–40
P7A	6, 9	AP	Simple	30–40
P8A	6, 9	AP	Simple	30–40
P9A	2, 3, 9	AP	Moderate	30–40
P1B	2, 3, 6	AP	Moderate	20–30
P2B	2, 3, 6	AP	Moderate	15–20
P3B	4	AP	Moderate	20–30
P4B	5	AP	Moderate	20–30
P5B	2, 8	AP	Moderate	30–40
P6B	2, 8	AP	Moderate	30–40
P7B	6, 9	AP	Simple	30–40
P8B	6, 9	AP	Simple	30–40
P9B	2, 3, 9	AP	Moderate	30–40
BYP1	5, 6	AN	Simple	5–10
BYP2	6	AP	Simple	10–15
BYP3	1	C	Simple	10–15
BYP4	2, 3, 9	AN	Moderate	15–20
BYP5	1	C	Simple	10–15
BYP6	—	E	Simple	10–15
BYP7	—	E	Simple	5–10

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain why bonds are issued.	Q15-5	Q15-1 Q15-2 Q15-3	BE15-1	E15-2		
2. Prepare the entries for the issuance of bonds and interest expense.		Q15-6 Q15-8	Q15-7 BE15-2 BE15-3 BE15-4 DI15-2 E15-3 E15-4	E15-5 P15-6A E15-6 P15-9A E15-7 P15-1B E15-8 P15-2B P15-1A P15-5B P15-2A P15-6B P15-9B		
3. Describe the entries when bonds are redeemed or converted.		Q15-10	Q15-9 BE15-5 DI15-3 E15-5 E15-6	P15-9A P15-9B E15-18 E15-19 E15-8 E15-9		
4. Describe the accounting for long-term notes payable.		Q15-21	Q15-11 BE15-6 DI15-4	E15-10 P15-3B E15-11 P15-3A		
5. Contrast the accounting for operating and capital leases.		Q15-12 Q15-13	Q15-14 BE15-7 DI15-5	E15-12 P15-4A P15-4B		
6. Identify the methods for the presentation and analysis of long-term liabilities.	Q15-15		BE15-8 E15-13 E15-14 P15-1A	P15-2A P15-7A P15-8A P15-1B		
*7. Compute the market price of a bond.		Q15-18	BE15-9	E15-15		
*8. Apply the effective-interest method of amortizing bond discount and bond premium.		Q15-16 Q15-17	BE15-10 E15-16 E15-17	P15-5A P15-6A P15-5B		
*9. Apply the straight-line method of amortizing bond discount and bond premium.		Q15-19	Q15-20 BE15-11 BE15-12 E15-18	E15-19 P15-7B P15-7A P15-8A P15-9A		
Broadening Your Perspective		Communication Exploring the Web	Comp. Analysis	Financial Reporting Decision Making Across the Organization		All About You Ethics Case

ANSWERS TO QUESTIONS

1.
 - (a) Long-term liabilities are obligations that are expected to be paid after one year. Examples include bonds, long-term notes, and lease obligations.
 - (b) Bonds are a form of interest-bearing notes payable used by corporations, universities, and governmental agencies.
2.
 - (a) The major advantages are:
 - (1) Stockholder control is not affected—bondholders do not have voting rights, so current stockholders retain full control of the company.
 - (2) Tax savings result—bond interest is deductible for tax purposes; dividends on stock are not.
 - (3) Earnings per share may be higher—although bond interest expense will reduce net income, earnings per share on common stock will often be higher under bond financing because no additional shares of common stock are issued.
 - (b) The major disadvantages in using bonds are that interest must be paid on a periodic basis and the principal (face value) of the bonds must be paid at maturity.
3.
 - (a) Secured bonds have specific assets of the issuer pledged as collateral. In contrast, unsecured bonds are issued against the general credit of the borrower. These bonds are called debenture bonds.
 - (b) Term bonds mature at a single specified future date. In contrast, serial bonds mature in installments.
 - (c) Registered bonds are issued in the name of the owner. In contrast, bearer (coupon) bonds are not registered. Holders of bearer bonds must send in coupons to receive interest payments.
 - (d) Convertible bonds may be converted into common stock at the bondholders' option. Callable bonds are subject to retirement at a stated dollar amount prior to maturity at the option of the issuer.
4.
 - (a) Face value is the amount of principal due at the maturity date.
 - (b) The contractual interest rate is the rate used to determine the amount of cash interest the borrower pays and the investor receives. This rate is also called the stated interest rate because it is the rate stated on the bonds.
 - (c) A bond indenture is a legal document that sets forth the terms of the bond issue.
 - (d) A bond certificate is a legal document that indicates the name of the issuer, the face value of the bonds, the contractual interest rate and maturity date of the bonds.
5. The two major obligations incurred by a company when bonds are issued are the interest payments due on a periodic basis and the principal which must be paid at maturity.
6. Less than. Investors are required to pay more than the face value; therefore, the market interest rate is less than the contractual rate.
7. \$28,000. $\$800,000 \times 7\% \times 1/2 \text{ year} = \$28,000$.
8. \$860,000. The balance of the Bonds Payable account minus the balance of the Discount on Bonds Payable account (or plus the balance of the Premium on Bonds Payable account) equals the carrying value of the bonds.

Questions Chapter 15 (Continued)

9. Debits: Bonds Payable (for the face value) and Premium on Bonds Payable (for the unamortized balance).
Credits: Cash (for 97% of the face value) and Gain on Bond Redemption (for the difference between the cash paid and the bonds' carrying value).
10. A convertible bond permits bondholders to convert it into common stock at the option of the bondholders.
(a) For bondholders, the conversion option gives an opportunity to benefit if the market price of the common stock increases substantially.
(b) For the issuer, convertible bonds usually have a higher selling price and a lower rate of interest than comparable debt securities without the conversion option.
11. No, Tim is not right. Each payment by Tim consists of: (1) interest on the unpaid balance of the loan and (2) a reduction of loan principal. The interest decreases each period while the portion applied to the loan principal increases each period.
12. (a) A lease agreement is a contract in which the lessor gives the lessee the right to use an asset for a specified period in return for one or more periodic rental payments. The lessor is the owner of the property and the lessee is the renter or tenant.
(b) The two most common types of leases are operating leases and capital leases.
(c) In an operating lease, the property is rented by the lessee and the lessor retains all ownership risks and responsibilities. A capital lease transfers substantially all the benefits and risks of ownership from the lessor to the lessee, so that the lease is in effect a purchase of the property.
13. This lease would be reported as an operating lease. In an operating lease, each payment is debited to Rent Expense. Neither a leased asset nor a lease liability is capitalized.
14. In a capital lease agreement, the lessee records the present value of the lease payments as an asset and a liability. Therefore, Rondelli Company would debit Leased Asset-Equipment for \$186,300 and credit Lease Liability for the same amount.
15. The nature and the amount of each long-term liability should be presented in the balance sheet or in schedules in the accompanying notes to the statements. The notes should also indicate the interest rates, maturity dates, conversion privileges, and assets pledged as collateral.
- *16. Laura is probably indicating that since the borrower has the use of the bond proceeds over the term of the bonds, the borrowing rate in each period should be the same. The effective-interest method results in a varying amount of interest expense but a constant rate of interest on the balance outstanding. Accordingly, it results in a better matching of expenses with revenues than the straight-line method. When the difference between the straight-line method of amortization and the effective interest method is material, GAAP requires the use of the effective interest method.
- *17. Decrease. Under the effective-interest method the interest charge per period is determined by multiplying the carrying value of the bonds by the effective-interest rate. When bonds are issued at a premium, the carrying value decreases over the life of the bonds. As a result, the interest expense will also decrease over the life of the bonds because it is determined by multiplying the decreasing carrying value of the bonds at the beginning of the period by the effective-interest rate.

Questions Chapter 15 (Continued)

- *18.** No, Tina is not right. The market price of any bond is a function of three factors: (1) The dollar amounts to be received by the investor (interest and principal), (2) The length of time until the amounts are received (interest payment dates and maturity date), and (3) The market interest rate.
- *19.** The straight-line method results in the same amortized amount being assigned to Interest Expense each interest period. This amount is determined by dividing the total bond discount or premium by the number of interest periods the bonds will be outstanding.
- *20.** \$28,000. Interest expense is the interest to be paid in cash less the premium amortization for the year. Cash to be paid equals $8\% \times \$400,000$ or \$32,000. Total premium equals 5% of \$400,000 or \$20,000. Since this is to be amortized over 5 years (the life of the bonds) in equal amounts, the amortization amount is $\$20,000 \div 5 = \$4,000$. Thus, $\$32,000 - \$4,000$ or \$28,000 equals interest expense for 2010.
- 21.** PepsiCo redeemed (paid) \$579 million of long-term debt.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 15-1

	<u>Issue Stock</u>	<u>Issue Bond</u>
Income before interest and taxes	\$700,000	\$700,000
Interest (\$2,000,000 X 8%)	<u>0</u>	<u>160,000</u>
Income before income taxes	700,000	540,000
Income tax expense (30%)	<u>210,000</u>	<u>162,000</u>
Net income (a)	<u>\$490,000</u>	<u>\$378,000</u>
Outstanding shares (b)	700,000	500,000
Earnings per share (a) ÷ (b)	<u>\$0.70</u>	<u>\$0.76</u>

Net income is higher if stock is used. However, earnings per share is lower than earnings per share if bonds are used because of the additional shares of stock that are outstanding.

BRIEF EXERCISE 15-2

(a)	Jan. 1	Cash	3,000,000	
		Bonds Payable		
		(3,000 X \$1,000)		3,000,000
(b)	July 1	Bond Interest Expense.....	120,000	
		Cash		
		(\$3,000,000 X 8% X 1/2).....		120,000
(c)	Dec. 31	Bond Interest Expense.....	120,000	
		Bond Interest Payable		
		(\$3,000,000 X 8% X 1/2).....		120,000

BRIEF EXERCISE 15-3

(a)	Jan. 1	Cash (\$2,000,000 X .97).....	1,940,000	
		Discount on Bonds Payable	60,000	
		Bonds Payable.....		2,000,000

(b)	Jan. 1	Cash (\$2,000,000 X 1.04)	2,080,000	
		Bonds Payable.....		2,000,000
		Premium on Bonds Payable.....		80,000

BRIEF EXERCISE 15-4

1.	Jan. 1	Cash (1,000 X \$1,000)	1,000,000	
		Bonds Payable.....		1,000,000

2.	July 1	Cash (\$800,000 X 1.02).....	816,000	
		Bonds Payable.....		800,000
		Premium on Bonds Payable.....		16,000

3.	Sept. 1	Cash (\$200,000 X .98)	196,000	
		Discount on Bonds Payable	4,000	
		Bonds Payable.....		200,000

BRIEF EXERCISE 15-5

	Bonds Payable.....	1,000,000	
	Loss on Bond Redemption		
	(\$1,010,000 – \$940,000)	70,000	
	Discount on Bonds Payable.....		60,000
	Cash (\$1,000,000 X 101%)		1,010,000

BRIEF EXERCISE 15-6

Semiannual Interest Period	(A) Cash Payment	(B) Interest Expense (D) X 5%	(C) Reduction of Principal (A) – (B)	(D) Principal Balance (D) – (C)
Issue Date				\$600,000
1	\$48,145	\$30,000	\$18,145	581,855
Dec. 31	Cash		600,000	
	Mortgage Notes Payable			600,000
June 30	Interest Expense		30,000	
	Mortgage Notes Payable		18,145	
	Cash			48,145

BRIEF EXERCISE 15-7

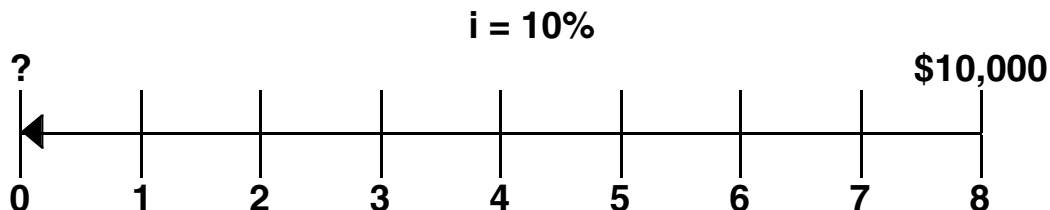
1.	Rent Expense	80,000	
	Cash		80,000
2.	Leased Asset—Building	700,000	
	Lease Liability		700,000

BRIEF EXERCISE 15-8**Long-term liabilities**

Bonds payable, due 2012	\$500,000	
Less: Discount on bonds payable	<u>45,000</u>	\$455,000
Notes payable, due 2015		80,000
Lease liability		<u>70,000</u>
Total long-term liabilities		<u>\$605,000</u>

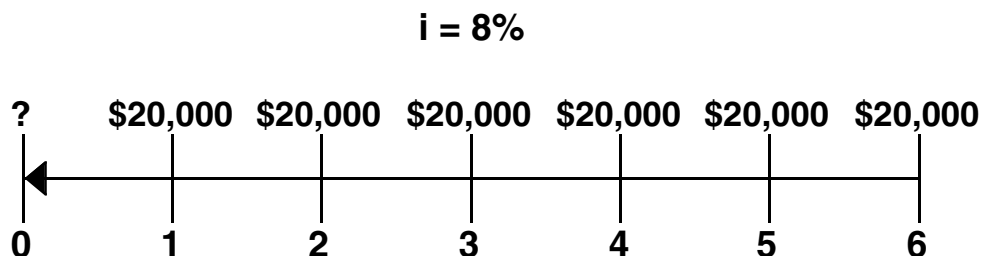
***BRIEF EXERCISE 15-9**

(b)



Discount rate from Table 15 A-1 is .46651 (8 periods at 10%). Present value of \$10,000 to be received in 8 periods discounted at 10% is therefore \$4,665.10 (\$10,000 X .46651).

(b)



Discount rate from Table 15 A-2 is 4.62288 (6 periods at 8%). Present value of 6 payments of \$20,000 each discounted at 8% is therefore \$92,457.60 (\$20,000 X 4.62288).

***BRIEF EXERCISE 15-10**

(a)	Interest Expense	46,884	
	Discount on Bonds Payable.....		1,884
	Cash		45,000

- (b) Interest expense is greater than interest paid because the bonds sold at a discount which must be amortized over the life of the bonds. The bonds sold at a discount because investors demanded a market interest rate higher than the contractual interest rate.
- (c) Interest expense increases each period because the bond carrying value increases each period. As the market interest rate is applied to this bond carrying amount, interest expense will increase.

*BRIEF EXERCISE 15-11

(a)	Jan. 1	Cash (.96 X \$5,000,000)	4,800,000	
		Discount on Bonds Payable	200,000	
		Bonds Payable		5,000,000
(b)	July 1	Bond Interest Expense	235,000	
		Discount on Bonds Payable		
		(\$200,000 ÷ 20)		10,000
		Cash		
		(\$5,000,000 X 9% X 1/2)		225,000

*BRIEF EXERCISE 15-12

(a)	Cash (1.02 X \$3,000,000)	3,060,000	
	Bonds Payable		3,000,000
	Premium on Bonds Payable		60,000
(b)	Bond Interest Expense	144,000	
	Premium on Bonds Payable		
	(\$60,000 ÷ 10)	6,000	
	Cash (\$3,000,000 X 10% X 1/2)		150,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 15-1

1. False. Mortgage bonds and sinking fund bonds are both examples of secured bonds.
2. False. Convertible bonds can be converted into common stock at the bondholder's option; callable bonds can be retired by the issuer at a set amount prior to maturity.
3. True.
4. True.
5. True.

DO IT! 15-2

(a) Cash	312,000	
Bonds Payable.....		300,000
Premium on Bonds Payable.....		12,000
(To record sale of bonds at a premium)		
 (b) Long-term liabilities		
Bonds payable		\$300,000
Plus: Premium on bonds payable		<u>12,000</u>
		<u>\$312,000</u>

DO IT! 15-3

Loss on Bond Redemption.....	6,000	
Bonds Payable.....	400,000	
Discount on Bonds Payable.....		10,000
Cash		396,000
(To record redemption of bonds at 99)		

DO IT! 15-4

Cash	350,000	
Mortgage Notes Payable		350,000
(To record mortgage loan)		
 Interest Expense	10,500*	
Mortgage Notes Payable	7,357	
Cash		17,857
(To record semiannual payment on mortgage)		

*Interest expense = \$350,000 X 6% X 6/12

DO IT! 15-5

(a)	Leased Asset—Equipment.....	192,000	
	Lease Liability		192,000
	(To record leased asset and lease liability)		

- (b) The debt to total assets ratio = $\$1,100,000 \div \$1,800,000 = 61\%$. This ratio means that 61% of the total assets were provided by creditors. The higher the percentage of debt to total assets, the greater the risk that the company may be unable to meet its maturing obligations.

SOLUTIONS TO EXERCISES

EXERCISE 15-1

1. True.
2. True.
3. False. When seeking long-term financing, an advantage of issuing *bonds* over issuing *common stock* is that tax savings result.
4. True.
5. False. *Unsecured* bonds are also known as debenture bonds.
6. False. Bonds that mature in installments are called *serial* bonds.
7. True.
8. True.
9. True.
10. True.

EXERCISE 15-2

	<u>Plan One Issue Stock</u>	<u>Plan Two Issue Bonds</u>
Income before interest and taxes	\$800,000	\$800,000
Interest (\$2,700,000 X 10%)	—	<u>270,000</u>
Income before taxes	800,000	530,000
Income tax expense (30%)	<u>240,000</u>	<u>159,000</u>
Net income	<u>\$560,000</u>	<u>\$371,000</u>
Outstanding shares	<u>150,000</u>	<u>90,000</u>
Earnings per share	<u>\$3.73</u>	<u>\$4.12</u>

EXERCISE 15-3

(a)	Jan. 1	Cash	500,000	
		Bonds Payable.....		500,000
(b)	July 1	Bond Interest Expense	25,000	
		Cash (\$500,000 X 10% X 1/2).....		25,000
(c)	Dec. 31	Bond Interest Expense	25,000	
		Bond Interest Payable.....		25,000

EXERCISE 15-4

(a)	Jan. 1	Cash	300,000	
		Bonds Payable		300,000
(b)	July 1	Bond Interest Expense.....	12,000	
		Cash (\$300,000 X 8% X 1/2).....		12,000
(c)	Dec. 31	Bond Interest Expense.....	12,000	
		Bond Interest Payable		12,000

EXERCISE 15-5

(a)			2010	
	Jan. 1	Cash.....	400,000	
		Bonds Payable		400,000
(b)	July 1	Bond Interest Expense	18,000	
		Cash (\$400,000 X 9% X 1/2)		18,000
(c)	Dec. 31	Bond Interest Expense	18,000	
		Bond Interest Payable.....		18,000
(d)			2020	
	Jan. 1	Bonds Payable	400,000	
		Cash		400,000

EXERCISE 15-6**At 100**

(a)	(1)	Cash	1,000,000	
		Bonds Payable.....		1,000,000

At 98

(2)	Cash	980,000	
	Discount on Bonds Payable	20,000	
	Bonds Payable.....		1,000,000

At 103

(3)	Cash	1,030,000	
	Bonds Payable.....		1,000,000
	Premium on Bonds Payable.....		30,000

Retirement of bonds at maturity

(b)	Bonds Payable	1,000,000	
	Cash		1,000,000

Retirement of bonds before maturity at 98

(c)	Bonds Payable	1,000,000	
	Premium on Bonds Payable	9,000	
	Cash		980,000
	Gain on Bond Redemption		29,000

Conversion of bonds into common stock

(d)	Bonds Payable	1,000,000	
	Common Stock.....		300,000
	Paid-in Capital in Excess of Par Value		700,000

EXERCISE 15-7

(a) (1)	Cash.....	485,000	
	Discount on Bonds Payable	15,000	
	Bonds Payable		500,000

(2)	Semiannual interest payments		
	(\$20,000* X 10)	\$200,000	
	Plus: Bond discount	<u>15,000</u>	
	Total cost of borrowing.....		<u>\$215,000</u>

*($\$500,000 \times .08 \times 6/12$)

OR

	Principal at maturity	\$500,000	
	Semiannual interest payments		
	(\$20,000 X 10).....	<u>200,000</u>	
	Cash to be paid to bondholders.....	700,000	
	Cash received from bondholders	<u>485,000</u>	
	Total cost of borrowing.....		<u>\$215,000</u>

(b) (1)	Cash.....	525,000	
	Bonds Payable		500,000
	Premium on Bonds Payable		25,000

(2)	Semiannual interest payments		
	(\$20,000 X 10).....	\$200,000	
	Less: Bond Premium	<u>25,000</u>	
	Total cost of borrowing.....		<u>\$175,000</u>

OR

	Principal at maturity	\$500,000	
	Semiannual interest payments		
	(\$20,000 X 10).....	<u>200,000</u>	
	Cash to be paid to bondholders.....	700,000	
	Cash received from bondholders	<u>525,000</u>	
	Total cost of borrowing.....		<u>\$175,000</u>

EXERCISE 15-8

(a)	Jan. 1	Bond Interest Payable.....	72,000	
		Cash		72,000
(b)	Jan 1	Bonds Payable	600,000	
		Loss on Bond Redemption	24,000	
		Cash (\$600,000 X 1.04).....		624,000
(c)	July 1	Bond Interest Expense	45,000	
		Cash (\$1,000,000 X 9% X 1/2).....		45,000

EXERCISE 15-9

1.	June 30	Bonds Payable	130,000	
		Loss on Bond Redemption		
		(\$132,600 – \$117,500)	15,100	
		Discount on Bonds Payable		
		(\$130,000 – \$117,500)		12,500
		Cash (\$130,000 X 102%).....		132,600
2.	June 30	Bonds Payable	150,000	
		Premium on Bonds Payable.....	1,000	
		Gain on Bond Redemption		
		(\$151,000 – \$147,000).....		4,000
		Cash (\$150,000 X 98%)		147,000
3.	Dec. 31	Bonds Payable	20,000	
		Common Stock		
		(\$5 X 20* X 30).....		3,000
		Paid-in Capital in Excess of Par Value		17,000

*(\$20,000 ÷ \$1,000)

Note: As per the textbook, the market value of the stock is ignored in the conversion.

EXERCISE 15-10

<u>2010</u>			
Issuance of Note			
Dec. 31	Cash	240,000	
	Mortgage Notes Payable		240,000

<u>2011</u>			
First Installment Payment			
June 30	Interest Expense		
	(\$240,000 X 10% X 6/12)	12,000	
	Mortgage Notes Payable	8,000	
	Cash		20,000

Second Installment Payment			
Dec. 31	Interest Expense		
	[(\$240,000 – \$8,000) X 10% X 6/12]	11,600	
	Mortgage Notes Payable	8,400	
	Cash		20,000

EXERCISE 15-11

January 1, 2010			
(a)	Cash	300,000	
	Mortgage Notes Payable		300,000

June 30, 2010			
	Interest Expense		
	(\$300,000 X 8% X 6/12)	12,000	
	Mortgage Notes Payable	8,000	
	Cash		20,000

December 31, 2010			
	Interest Expense		
	(\$292,000 X 8% X 6/12)	11,680	
	Mortgage Notes Payable	8,320	
	Cash		20,000

EXERCISE 15-11 (Continued)

(b) Current: \$17,652

$$[\$20,000 - (\$283,680 \times 8\% \times 6/12)] + [\$20,000 - (\$275,027 \times 8\% \times 6/12)]$$

$$\text{Long-term: } \$266,028 [(\$300,000 - \$8,000 - \$8,320) - \$17,652]$$

EXERCISE 15-12

(a)	Car Rental Expense	500	
	Cash		500

(b) Jan. 1	Leased Asset-Equipment.....	74,606	
	Lease Liability.....		74,606

EXERCISE 15-13

Long-term liabilities

Bonds payable, due 2015	\$180,000	
Add: Premium on bonds payable.....	<u>32,000</u>	\$212,000
Lease liability		<u>89,500</u>
Total long-term liabilities.....		<u>\$301,500</u>

Note: Bond Interest Payable is a current liability

EXERCISE 15-14

(a)	Total assets	\$1,000,000
	Less: Total liabilities	<u>620,000</u>
	Total stockholders' equity	<u>\$ 380,000</u>

$$(b) \text{ Debt to total assets ratio} = \frac{\text{Total liabilities}}{\text{Total assets}} = \frac{\$620,000}{\$1,000,000} = 62\%$$

$$(c) \text{ Times interest earned ratio} = \frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$$
$$= \frac{\$150,000 + \$100,000 + \$7,000}{\$7,000} = 36.7 \text{ times}$$

***EXERCISE 15-15**

Present value of principal (\$200,000 X .61391)	\$122,782
Present value of interest (\$8,000 X 7.72173)	<u>61,774</u>
Market price of bonds	<u>\$184,556</u>

***EXERCISE 15-16**

(a)	Jan. 1	Cash	562,613	
		Discount on Bonds Payable	37,387	
		Bonds Payable		600,000
(b)	July 1	Bond Interest Expense		
		(\$562,613 X 5%)	28,131	
		Discount on Bonds Payable		1,131
		Cash (\$600,000 X 9% X 1/2)		27,000
(c)	Dec. 31	Bond Interest Expense		
		[((\$562,613 + \$1,131) X 5%)	28,187	
		Discount on Bonds Payable		1,187
		Bond Interest Payable		27,000

***EXERCISE 15-16 (Continued)**

(b), (c)		(A)	(B)	(C)	(D)	(E)
Semiannual Interest Periods	Issue date	Interest to Be Paid (4.5% X \$600,000)	Interest Expense to Be Recorded (5% X Preceding Bond Carrying Value) (E X .05)	Discount Amortization (B) – (A)	Unamortized Discount (D) – (C)	Bond Carrying Value
	1	27,000	28,131	1,131	37,387	562,613
	2	27,000	28,187	1,187	36,256	563,744
					35,069	564,931

***EXERCISE 15-17**

(a)	Jan. 1	Cash	318,694	
		Premium on Bonds Payable		18,694
		Bonds Payable		300,000
(b)	July 1	Bond Interest Expense		
		(\$318,694 X 5%)	15,935	
		Premium on Bonds Payable	565	
		Cash		
		(\$300,000 X 11% X 1/2)		16,500
(c)	Dec. 31	Bond Interest Expense		
		[((\$318,694 – \$565) X 5%)	15,906	
		Premium on Bonds Payable	594	
		Bond Interest Payable		16,500

***EXERCISE 15-17 (Continued)**

(b), (c)					
	(A)	(B)	(C)	(D)	(E)
Semiannual Interest Periods	Interest to Be Paid (5.5% X \$300,000)	Interest Expense to Be Recorded (5.0% X Preceding Bond Carrying Value) (E X .05)	Premium Amortization (A) – (B)	Unamortized Premium (D) – (C)	Bond Carrying Value
Issue date					
1	16,500	15,935	565	18,694	318,694
2	16,500	15,906	594	18,129	318,129
				17,535	317,535

***EXERCISE 15-18**

(a)	Jan.	1	Cash (\$400,000 X 103%).....	412,000	
			Premium on Bonds Payable		12,000
			Bonds Payable		400,000
(b)	July	1	Bond Interest Expense.....	17,700	
			Premium on Bonds Payable		
			(\$12,000 X 1/40)	300	
			Cash (\$400,000 X 9% X 1/2).....		18,000
(c)	Dec.	31	Bond Interest Expense	17,700	
			Premium on Bonds Payable	300	
			Bond Interest Payable.....		18,000
2030					
(d)	Jan.	1	Bonds Payable	400,000	
			Cash		400,000

***EXERCISE 15-19**

(a)		2009		
	Dec. 31	Cash	730,000	
		Discount on Bonds Payable	70,000	
		Bonds Payable		800,000
(b)		2010		
	June 30	Bond Interest Expense	47,500	
		Discount on Bonds Payable		
		(\$70,000 ÷ 20).....		3,500
		Cash (\$800,000 X 11% X 1/2).....		44,000
(c)		2010		
	Dec. 31	Bond Interest Expense	47,500	
		Discount on Bonds Payable		3,500
		Cash (\$800,000 X 11% X 1/2).....		44,000
(d)		2019		
	Dec. 31	Bonds Payable	800,000	
		Cash		800,000

SOLUTIONS TO PROBLEMS

PROBLEM 15-1A

(a)		2010		
	May 1	Cash	600,000	
		Bonds Payable.....		600,000
(b)	Dec. 31	Bond Interest Expense	9,000	
		Bond Interest Payable		
		(\$600,000 X 9% X 2/12)		9,000
(c)	Current Liabilities			
		Bonds Interest Payable		\$ 9,000
	Long-term Liabilities			
		Bonds Payable, due 2015		\$600,000
(d)		2011		
	May 1	Bond Interest Payable.....	9,000	
		Bond Interest Expense		
		(\$600,000 X 9% X 4/12).....	18,000	
		Cash		27,000
(e)	Nov. 1	Bond Interest Expense	27,000	
		Cash (\$600,000 X 9% X 1/2)		27,000
(f)	Nov. 1	Bonds Payable	600,000	
		Loss on Bond Redemption	12,000	
		Cash (\$600,000 X 1.02).....		612,000

PROBLEM 15-2A

(a)		2010		
Jan. 1	Cash (\$500,000 X 1.04)	520,000		
	Bonds Payable		500,000	
	Premium on Bonds Payable		20,000	

(b) Current Liabilities			
	Bond interest payable		
	(\$500,000 X 10% X 1/2)		\$ 25,000

Long-term Liabilities			
	Bonds payable, due 2020	\$500,000	
	Add: Premium on bonds payable	<u>18,000</u>	\$518,000

(c)		2012		
Jan. 1	Bonds Payable	500,000		
	Premium on Bonds Payable	16,000		
	Loss on Bond Redemption	9,000*		
	Cash (\$500,000 X 1.05)		525,000	

*($\$525,000 - \$516,000$)

PROBLEM 15-3A

(a)	Semiannual Interest Period	Cash Payment	Interest Expense	Reduction of Principal	Principal Balance
	Issue Date				\$400,000
	1	\$29,433	\$16,000	\$13,433	386,567
	2	29,433	15,463	13,970	372,597
	3	29,433	14,904	14,529	358,068
	4	29,433	14,323	15,110	342,958

(b)			2009		
	Dec. 31	Cash.....		400,000	
		Mortgage Notes Payable.....			400,000
			2010		
	June 30	Interest Expense.....		16,000	
		Mortgage Notes Payable.....		13,433	
		Cash.....			29,433
	Dec. 31	Interest Expense.....		15,463	
		Mortgage Notes Payable.....		13,970	
		Cash.....			29,433

(c)		<u>12/31/10</u>
	Current Liabilities	
	Current portion of mortgage notes payable	\$ 29,639*
	Long-term Liabilities	
	Mortgage notes payable, due 2019	\$342,958**

***(\$14,529 + \$15,110)**

****(\$372,597 – \$14,529 – \$15,110)**

PROBLEM 15-4A

- (a) **Kear Inc. should record the Jansen Delivery lease as a capital lease because: (1) the lease term is greater than 75% of the estimated economic life of the leased property and (2) the present value of the lease payments is 90% or more of the fair market value of the computer. It should be noted that only one condition needs to be met to require capitalization.**

Both the Flood Co. and Louis Auto leases should be reported as operating leases because none of the four conditions is met to require treatment as a capital lease.

- (b) **The Flood Co. lease is an operating lease. The entry to record the lease payment in 2010 therefore is as follows:**

Rent Expense	4,200	
Cash.....		4,200

- (c) **The Jansen Delivery lease is a capital lease. The entry to record the capital lease on January 1, 2010 therefore is as follows:**

Leased Asset—Computer	31,000	
Lease Liability		31,000

***PROBLEM 15-5A**

(a)		2010	
July	1	Cash	2,271,813
		Bonds Payable.....	2,000,000
		Premium on Bonds Payable	271,813

(b) **ATWATER CORPORATION**
Bond Premium Amortization
Effective-Interest Method—Semiannual Interest Payments
10% Bonds Issued at 8%

	(A)	(B)	(C)	(D)	(E)
Semi-annual Interest Periods	Interest to Be Paid	Interest Expense	Premium Amortization (A) – (B)	Unamortized Premium (D) – (C)	Bond Carrying Value (\$2,000,000 + D)
Issue date				\$271,813	\$2,271,813
1	\$100,000	\$90,873	\$9,127	262,686	2,262,686
2	100,000	90,507	9,493	253,193	2,253,193
3	100,000	90,128	9,872	243,321	2,243,321

(c)		Dec. 31	Bond Interest Expense (\$2,271,813 X 4%)	90,873	
			Premium on Bonds Payable	9,127	
			Bond Interest Payable (\$2,000,000 X 5%)		100,000

(d)		2011	
July	1	Bond Interest Expense [(\$2,271,813 – \$9,127) X 4%]	90,507
		Premium on Bonds Payable	9,493
		Cash	100,000

(e)		Dec. 31	Bond Interest Expense [(\$2,262,686 – \$9,493) X 4%]	90,128	
			Premium on Bonds Payable	9,872	
			Bond Interest Payable.....		100,000

***PROBLEM 15-6A**

(a) (1))		2010		
	July 1	Cash.....	3,501,514	
		Discount on Bonds		
		Payable	498,486	
		Bonds Payable		4,000,000
(2) Dec. 31		Bond Interest Expense		
		(\$3,501,514 X 5%).....	175,076	
		Discount on Bonds		
		Payable.....		15,076
		Bond Interest Payable		
		(\$4,000,000 X 4%).....		160,000
(3)		2011		
	July 1	Bond Interest Expense		
		[(\$3,501,514 + \$15,076) X 5%].....	175,830	
		Discount on Bonds		
		Payable.....		15,830
		Cash.....		160,000
(4) Dec. 31		Bond Interest Expense		
		[(\$3,516,590 + \$15,830) X 5%] ...	176,621	
		Discount on Bonds		
		Payable.....		16,621
		Bond Interest Payable		160,000
(b) Bonds payable			\$4,000,000	
Less: Discount on bonds payable.....			<u>450,959*</u>	3,549,041
*(\$498,486 – \$15,076 – \$15,830 – \$16,621)				

***PROBLEM 15-6A (Continued)**

(c) Dear _____:

Thank you for asking me to clarify some points about the bonds issued by Rossillon Company.

- (1) The amount of interest expense reported for 2011 related to these bonds is \$352,451 (\$175,830 + \$176,621).**
- (2) When the bonds are sold at a discount, the effective-interest method will result in less interest expense reported than the straight-line method in 2011. Straight-line interest expense for 2011 is \$369,848 [\$160,000 + \$160,000 + (\$24,924 + \$24,924)].**
- (3) The total cost of borrowing is \$3,698,486 as shown below:**

Semiannual interest payments	
(\$4,000,000 X 4%) = \$160,000; \$160,000 X 20.....	\$3,200,000
Add: Bond discount (\$4,000,000 – \$3,501,514).....	<u>498,486</u>
Total cost of borrowing.....	<u>\$3,698,486</u>

- (4) The total bond interest expense over the life of the bonds is the same under either method of amortization.**

If you have other questions, please contact me.

Sincerely,

***PROBLEM 15-7A**

		2010		
(a)	Jan. 1	Cash (\$3,000,000 X 1.04).....	3,120,000	
		Bonds Payable		3,000,000
		Premium on Bonds Payable		120,000

(b) See page 15-37.

		2010		
(c)	July 1	Bond Interest Expense.....	144,000	
		Premium on Bonds Payable		
		(\$120,000 ÷ 20).....	6,000	
		Cash.....		150,000
	Dec. 31	Bond Interest Expense.....	144,000	
		Premium on Bonds Payable	6,000	
		Bond Interest Payable		150,000
			2011	
	Jan. 1	Bond Interest Payable	150,000	
		Cash.....		150,000
	July 1	Bond Interest Expense.....	144,000	
		Premium on Bonds Payable	6,000	
		Cash.....		150,000
	Dec. 31	Bond Interest Expense.....	144,000	
		Premium on Bonds Payable	6,000	
		Bond Interest Payable		150,000

(d) Current Liabilities			
	Bond interest payable.....		\$ 150,000

Long-term Liabilities

Bonds payable, due 2020	\$3,000,000	
Add: Premium on bonds payable	<u>96,000</u>	\$3,096,000

***PROBLEM 15-7A (Continued)**

(b)	Semiannual Interest Periods	(A) Interest to Be Paid (5% X \$3,000,000)	(B) Interest Expense to Be Recorded (A) – (C)	(C) Premium Amortization (\$120,000 ÷ 20)	(D) Unamortized Premium (D) – (C)	(E) Bond Carrying Value [\$3,000,000 + (D)]
	Issue date					
	1	\$150,000	\$144,000	\$6,000	\$120,000	\$3,120,000
	2	150,000	144,000	6,000	114,000	3,114,000
	3	150,000	144,000	6,000	108,000	3,108,000
	4	150,000	144,000	6,000	102,000	3,102,000
					96,000	3,096,000

***PROBLEM 15-8A**

(a)

	2010		
July 1	Cash (\$2,500,000 X 104%)	2,600,000	
	Premium on Bonds Payable		100,000
	Bonds Payable		2,500,000
Dec. 31	Bond Interest Expense.....	95,000	
	Premium on Bonds Payable		
	(\$100,000 ÷ 20).....	5,000	
	Bond Interest Payable		
	(\$2,500,000 X 8% X 1/2).....		100,000

(b)

	2010		
July 1	Cash (\$2,500,000 X 98%).....	2,450,000	
	Discount on Bonds Payable.....	50,000	
	Bonds Payable		2,500,000
Dec. 31	Bond Interest Expense.....	102,500	
	Discount on Bonds Payable (\$50,000 ÷ 20)		2,500
	Bond Interest Payable		
	(\$2,500,000 X 8% X 1/2).....		100,000

(c) Premium

Long-term Liabilities			
	Bonds payable, due 2020	\$2,500,000	
	Add: Premium on bonds payable	<u>95,000</u>	\$2,595,000

Discount

Long-term Liabilities			
	Bonds payable, due 2020	\$2,500,000	
	Less: Discount on bonds payable.....	<u>47,500</u>	\$2,452,500

***PROBLEM 15-9A**

(a)		2011			
	Jan.	1	Bond Interest Payable.....	105,000	
			Cash		105,000
(b)	July	1	Bond Interest Expense	95,000	
			Premium on Bonds Payable		
			(\$200,000 ÷ 20)	10,000	
			Cash		105,000
(c)	July	1	Bonds Payable	1,200,000	
			Premium on Bonds Payable	76,000*	
			Gain on Bond Redemption		
			(\$1,276,000 – \$1,212,000).....		64,000
			Cash (\$1,200,000 X 101%).....		1,212,000
			*(\$200,000 – \$10,000) X .40 = \$76,000		
(d)	Dec.	31	Bond Interest Expense	57,000	
			Premium on Bonds Payable	6,000**	
			Bond Interest Payable		
			(\$1,800,000 X 7% X 1/2)		63,000

**\$200,000 – \$10,000 – \$76,000 = \$114,000; $\frac{\$114,000}{19} = \$6,000$ or \$10,000 X .60.

PROBLEM 15-1B

(a)		2010		
June 1	Cash	2,000,000		
	Bonds Payable		2,000,000	
(b) Dec. 31				
	Bond Interest Expense.....	15,000		
	Bond Interest Payable			
	(\$2,000,000 X 9% X 1/12)		15,000	
(c) Current Liabilities				
	Bond Interest Payable		15,000	
Long-term Liabilities				
	Bonds Payable		2,000,000	
(d)		2011		
June 1	Bond Interest Payable	15,000		
	Bond Interest Expense			
	(\$2,000,000 X 9% X 5/12)	75,000		
	Cash.....		90,000	
(e) Dec. 1				
	Bond Interest Expense.....	90,000		
	Cash (\$2,000,000 X 9% X 1/2)		90,000	
(f) Dec. 1				
	Bonds Payable	2,000,000		
	Loss on Bond Redemption	40,000		
	Cash (\$2,000,000 X 1.02).....		2,040,000	

PROBLEM 15-2B

(a)		2010		
Jan. 1	Cash (\$800,000 X 1.05).....	840,000		
	Bonds Payable.....		800,000	
	Premium on Bonds Payable		40,000	
(b)				
Current Liabilities				
	Bond Interest Payable (\$800,000 X 9% X 1/2)	\$36,000		
Long-term Liabilities				
	Bond Payable, due 2020	\$800,000		
	Add: Premium on Bonds Payable	<u>36,000</u>	\$836,000	
(c)		2012		
Jan. 1	Bonds Payable	\$800,000		
	Premium on Bonds Payable	32,000		
	Loss on Bond Redemption	8,000*		
	Cash (\$800,000 X 1.05).....		840,000	
	*(\$840,000 – \$832,000)			

PROBLEM 15-3B

(a)	Semiannual Interest Period	Cash Payment	Interest Expense	Reduction of Principal	Principal Balance
	Issue Date				\$600,000
	1	\$44,149	\$24,000	\$20,149	579,851
	2	44,149	23,194	20,955	558,896
	3	44,149	22,356	21,793	537,103
	4	44,149	21,484	22,665	514,438

(b)			2010		
	Dec. 31	Cash	600,000		
		Mortgage Notes Payable			600,000
			2011		
	June 30	Interest Expense	24,000		
		Mortgage Notes Payable	20,149		
		Cash			44,149
	Dec. 31	Interest Expense	23,194		
		Mortgage Notes Payable	20,955		
		Cash			44,149

(c)		<u>12/31/11</u>
	Current Liabilities	
	Current portion of mortgage notes payable	\$ 44,458*
	Long-term Liabilities	
	Mortgage notes payable	\$514,438**

***(\$21,793 + \$22,665)**

****(\$558,896 – \$44,458)**

PROBLEM 15-4B

- (a) Ortiz Enterprises should record the Flynn Co. lease as a capital lease because the lease term is greater than 75% of the estimated economic life of the leased property.

Both the Miley Inc. and Renner Co. leases should be reported as operating leases because none of the four conditions is met to require treatment as a capital lease.

- (b) The Flynn Co. lease is a capital lease. The entry to record the capital lease on January 1, 2010 therefore is as follows:

Leased Asset—Truck	82,000	
Lease Liability		82,000

- (c) The Miley Inc. lease is an operating lease. The entry to record the lease payment in 2010 therefore is as follows:

Rent Expense	3,000	
Cash		3,000

***PROBLEM 15-5B**

(a)		2010	
July	1	Cash	4,219,600
		Discount on Bonds Payable.....	280,400
		Bonds Payable	4,500,000

(b) **WHEELER SATELLITES**
Bond Discount Amortization
Effective-Interest Method—Semiannual Interest Payments
9% Bonds Issued at 10%

Semi-annual Interest Periods	(A) Interest to Be Paid	(B) Interest Expense to Be Recorded	(C) Discount Amor- tization (B) – (A)	(D) Unamor- tized Discount (D) – (C)	(E) Bond Carrying Value ($\$4,500,000 - D$)
Issue date				\$280,400	\$4,219,600
1	\$202,500	\$210,980	\$8,480	271,920	4,228,080
2	202,500	211,404	8,904	263,016	4,236,984
3	202,500	211,849	9,349	253,667	4,246,333

(c) Dec. 31		Bond Interest Expense	
		$(\$4,219,600 \times 5\%)$	210,980
		Discount on Bonds Payable.....	8,480
		Bond Interest Payable	
		$(\$4,500,000 \times 9\% \times 1/2)$	202,500

(d)		2011	
July	1	Bond Interest Expense	
		$[(\$4,219,600 + \$8,480) \times 5\%]$	211,404
		Discount on Bonds Payable.....	8,904
		Cash.....	202,500

(e) Dec. 31		Bond Interest Expense	
		$[(\$4,228,080 + \$8,904) \times 5\%]$	211,849
		Discount on Bonds Payable.....	9,349
		Bond Interest Payable	202,500

***PROBLEM 15-6B**

(a)	(1)					

***PROBLEM 15-6B (Continued)**

(c) Dear _____:

Thank you for asking me to clarify some points about the bonds issued by Remington Chemical Company.

- (1) The amount of interest expense reported for 2011 related to these bonds is \$361,270 (\$181,015 + \$180,255).**
- (2) When the bonds are sold at a premium, the effective-interest method will result in more interest expense reported than the straight-line method in 2011. Straight-line interest expense for 2011 is \$345,638 [\$200,000 + \$200,000 – (\$27,181 + \$27,181)].**
- (3) The total cost of borrowing is as shown below:**

Semiannual interest payments	
(\$4,000,000 X 10% X 1/2) = \$200,000 X 20	\$4,000,000
Less: Bond premium (\$4,543,627 – \$4,000,000).....	<u>543,627</u>
Total cost of borrowing	<u>\$3,456,373</u>

- (4) The total bond interest expense over the life of the bonds is the same under either method of amortization.**

If you have other questions, please contact me.

Sincerely,

***PROBLEM 15-7B**

(a)		2010	
Jan. 1	Cash (\$6,000,000 X 96%)	5,760,000	
	Discount on Bonds Payable	240,000	
	Bonds Payable.....		6,000,000

(b) See page 15-49.

(c)		2010	
July 1	Bond Interest Expense	276,000	
	Discount on Bonds Payable (\$240,000 ÷ 40).....		6,000
	Cash (\$6,000,000 X 9% X 1/2).....		270,000
Dec. 31	Bond Interest Expense	276,000	
	Discount on Bonds Payable.....		6,000
	Bond Interest Payable.....		270,000

		2011	
Jan. 1	Bond Interest Payable.....	270,000	
	Cash		270,000
July 1	Bond Interest Expense	276,000	
	Discount on Bonds Payable.....		6,000
	Cash (\$6,000,000 X 9% X 1/2).....		270,000
Dec. 31	Bond Interest Expense	276,000	
	Discount on Bonds Payable.....		6,000
	Bond Interest Payable.....		270,000

***PROBLEM 15-7B (Continued)**

(d) Current Liabilities

Bond interest payable.....	\$ 270,000

Long-term Liabilities

Bonds payable	\$6,000,000	
Less: Discount on bonds payable.....	<u>216,000</u>	\$5,784,000

***PROBLEM 15-7B (Continued)**

(b)	Semiannual Interest Periods	(A) Interest to Be Paid (4.5% X \$6,000,000)	(B) Interest Expense to Be Recorded (A) + (C)	(C) Discount Amortization (\$240,000 ÷ 40)	(D) Unamortized Discount (D) – (C)	(E) Bond Carrying Value [\$6,000,000 – (D)]
	Issue date					
	1	\$270,000	\$276,000	\$6,000	\$240,000	\$5,760,000
	2	270,000	276,000	6,000	234,000	5,766,000
	3	270,000	276,000	6,000	228,000	5,772,000
	4	270,000	276,000	6,000	222,000	5,778,000
					216,000	5,784,000

***PROBLEM 15-8B**

(a)	Jan. 1	Cash (\$4,000,000 X 103%)	4,120,000	
		Premium on Bonds Payable		120,000
		Bonds Payable		4,000,000
July 1		Bond Interest Expense	154,000	
		Premium on Bonds Payable		
		(\$120,000 ÷ 20)	6,000	
		Cash (\$4,000,000 X 8% X 1/2)		160,000
Dec. 31		Bond Interest Expense	154,000	
		Premium on Bonds Payable	6,000	
		Bond Interest Payable		160,000
(b)	Jan. 1	Cash (\$4,000,000 X 96%)	3,840,000	
		Discount on Bonds Payable	160,000	
		Bonds Payable		4,000,000
July 1		Bond Interest Expense	168,000	
		Discount on Bonds		
		Payable (\$160,000 ÷ 20)		8,000
		Cash		160,000
Dec. 31		Bond Interest Expense	168,000	
		Discount on Bonds Payable		8,000
		Bond Interest Payable		160,000

***PROBLEM 15-8B (Continued)**

(c) Premium

Current Liabilities

Bond interest payable		\$ 160,000

Long-term Liabilities

Bonds payable, due 2020	\$4,000,000	
Add: Premium on bonds payable.....	<u>108,000</u>	\$4,108,000

Discount

Current Liabilities

Bond interest payable		\$ 160,000

Long-term Liabilities

Bonds payable, due 2020	\$4,000,000	
Less: Discount on bonds payable	<u>144,000</u>	\$3,856,000

*PROBLEM 15-9B

(a)	Jan. 1	Bond Interest Payable	108,000	
		Cash.....		108,000
(b)	July 1	Bond Interest Expense.....	112,500	
		Discount on Bonds Payable (\$90,000 ÷ 20)		4,500
		Cash (\$2,400,000 X .045).....		108,000
(c)	July 1	Bonds Payable	800,000	
		Loss on Bond Redemption.....	44,500	
		Discount on Bonds Payable		28,500*
		Cash (\$800,000 X 102%).....		816,000
		*(\$90,000 – \$4,500) X 1/3 = \$28,500		
(d)	Dec. 31	Bond Interest Expense.....	75,000	
		Discount on Bonds Payable		3,000*
		Bond Interest Payable		72,000**
		*(\$90,000 – \$4,500) X 2/3 = \$57,000; \$57,000 ÷ 19 = \$3,000 or \$4,500 X 2/3 = \$3,000		
		**(\$2,400,000 – \$800,000 = \$1,600,000; \$1,600,000 X 4.5% = \$72,000)		

COMPREHENSIVE PROBLEM: CHAPTERS 13 TO 15

(a)	1.	Cash	22,000	
		Preferred Stock (1,000 X \$20)		20,000
		Paid-in Capital in Excess of Par—PS		2,000
	2.	Cash	23,000	
		Common Stock (1,000 X \$10)		10,000
		Paid-in Capital in Excess of Par—CS		13,000
	3.	Treasury Stock (300 X \$49)	14,700	
		Cash		14,700
	4.	Dividends	6,750*	
		Dividends Payable		6,750
* $\$20,000 \times .06 + [(3,000 + 1,000 - 300) \times \$1.50]$				
	5.	Bad Debts Expense	4,650	
		Allowance for Doubtful Accounts (\$5,100 – \$450)		4,650
	6.	Depreciation Expense—Building	3,000	
		Accumulated Depreciation— Building $[(\$95,000 - \$5,000) \div 30]$		3,000
	7.	Depreciation Expense—Equipment	3,600	
		Accumulated Depreciation— Equipment $[(\$40,000 - \$4,000 \div 10)]$		3,600
	8.	Unearned Rent (\$8,000 X 3/4)	6,000	
		Rent Revenue		6,000
	9.	Bond Interest Expense (\$50,000 X .05)	2,500	
		Bond Interest Payable		2,500

COMPREHENSIVE PROBLEM (Continued)

(b)

NORDHAM CORPORATION
Trial Balance
December 31, 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 53,300	
Accounts Receivable	51,000	
Merchandise Inventory	22,700	
Land	65,000	
Building	95,000	
Equipment	40,000	
Allowance for Doubtful Accounts		\$ 5,100
Accumulated Depreciation—Building		33,000
Accumulated Depreciation—Equipment		18,000
Accounts Payable		19,300
Bond Interest Payable		2,500
Dividends Payable		6,750
Unearned Rent Revenue		2,000
Bonds Payable (10%)		50,000
Common Stock (\$10 par)		40,000
Paid-in Capital in Excess of Par—CS		19,000
Preferred Stock (\$20 par)		20,000
Paid-in Capital in Excess of Par—PS		2,000
Retained Earnings		75,050
Treasury Stock	14,700	
Dividends	6,750	
Sales		570,000
Rent Revenue		6,000
Bad Debts Expense	4,650	
Bond Interest Expense	5,000	
Cost of Goods Sold	400,000	
Depreciation Expense—Buildings	3,000	
Depreciation Expense—Equipment	3,600	
Other Operating Expenses	39,000	
Salaries Expense	65,000	
Total	<u>\$868,700</u>	<u>\$868,700</u>

COMPREHENSIVE PROBLEM (Continued)**(c)**

NORDHAM CORPORATION
Income Statement
For the Year Ended December 31, 2010

Sales		\$570,000
Cost of Goods Sold.....		<u>400,000</u>
Gross Profit		170,000
Operating Expenses		
Salaries Expense.....	\$ 65,000	
Other Operating Expenses	39,000	
Bad Debts Expense	4,650	
Depr. Expense—Equipment	3,600	
Depr. Expense—Building	<u>3,000</u>	
Total Operating Expense		<u>115,250</u>
Income From Operations		54,750
Other Revenues and Gains		
Rent Revenue	6,000	
Other Expenses and Losses		
Bond Interest Expense	<u>(5,000)</u>	<u>1,000</u>
Net Income.....		<u>\$ 55,750</u>

(d)

NORDHAM CORPORATION
Retained Earnings Statement
For the Year Ended December 31, 2010

Balance, January 1.....	\$ 75,050
Add: Net income	<u>55,750</u>
	130,800
Less: Cash dividends	<u>6,750</u>
Balance, December 31	<u>\$124,050</u>

COMPREHENSIVE PROBLEM (Continued)

(e) **NORDHAM CORPORATION**
Balance Sheet
December 31, 2010

Assets**Current assets**

Cash.....		\$ 53,300
Accounts receivable.....	\$51,000	
Less: Allowance for doubtful accounts	<u>5,100</u>	45,900
Merchandise inventory		<u>22,700</u>
Total current assets.....		121,900

Property, Plant, and Equipment

Land		65,000
Building	95,000	
Less: Accumulated Depreciation.....	<u>33,000</u>	62,000
Equipment	40,000	
Less: Accumulated Depreciation.....	<u>18,000</u>	<u>22,000</u>
Total property, plant, and equipment		<u>149,000</u>

Total assets \$270,900

Liabilities and Stockholders' Equity**Current liabilities**

Accounts payable	\$19,300
Dividends payable.....	6,750
Bond interest payable.....	2,500
Unearned rent revenue.....	<u>2,000</u>
Total current liabilities.....	30,550

Long-term liabilities

Bond payable (10%).....	<u>50,000</u>

Total Liabilities \$80,550

COMPREHENSIVE PROBLEM (Continued)

Stockholders' equity

Paid-in capital

Capital stock

6% Preferred stock, \$20 par, 1,000 shares issued \$ 20,000

Common stock \$10 par, 4,000 shares issued,
3,700 shares outstanding 40,000

Total capital stock 60,000

Additional paid-in capital

In excess of par—preferred stock 2,000

In excess of par—common stock 19,000

Total additional paid-in capital 21,000

Total paid-in capital 81,000

Retained earnings 124,050

Total paid-in capital and retained earnings 205,050

Less: Treasury stock—common (300 shares) (14,700)

Total stockholders' equity 190,350

Total liabilities and stockholders' equity \$270,900

- (a) At December 29, 2007, PepsiCo's long-term debt was \$9,641 million. There was a \$1,939 million increase ($\$9,641 - \$7,702$) in long-term debt during the year. Note 9 indicates that long-term debt obligations consist of notes due in 2008–2026 of \$2,673 million, reclassified short-term borrowings of \$1,376 million, zero coupon notes due in 2008–2012 of \$285 million, and other long-term debt of \$395 million. This note also states that \$526 million of current maturities of long-term debt obligations are excluded.**
- (b) All of PepsiCo's leases are accounted for as operating leases rather than capital leases. Consequently, no amount of leases are reported as long-term debt on PepsiCo's financial statements.**
- (c) PepsiCo reported \$10,136 million of long-term contractual commitments as of December 29, 2007.**

(a)	PepsiCo	Coca-Cola
1. Debt to total assets	$\frac{\$17,394}{\$34,628} = 50.2\%$	$\frac{\$21,525^*}{\$43,269} = 49.7\%$
2. Times interest earned	$\frac{\$5,658 + \$1,973 + \$224}{\$224} = 35.1 \text{ times}$	$\frac{\$5,981 + \$1,892 + \$456}{\$456} = 18.3 \text{ times}$

*\$13,225 + \$3,277 + \$3,133 + \$1,890

- (b) The higher the percentage of debt to total assets, the greater the risk that a company may be unable to meet its maturing obligations. PepsiCo's 2007 debt to total assets ratio was approximately 1% more than Coca-Cola's and it would be considered slightly less able to meet its obligations. The times interest earned ratio provides an indication of a company's ability to meet interest payments. Since PepsiCo's times interest earned ratio is higher than Coca-Cola's, PepsiCo has more ability to meet its interest payments than Coca-Cola. However, both times interest earned ratios are excellent and therefore both companies will have no difficulty meeting these payments.
- (c) Since PepsiCo reported \$7,879 million (\$10,136 – \$2,257) of future long-term commitments for the five succeeding years (see Note 9 in the Notes to the Consolidated Financial Statements), it has a significantly greater amount of long-term commitments than Coca-Cola (\$1,531—see Note 9).

- (a) In 1909, Moody's introduced the first bond ratings as part of Moody's Analyses of Railroad Investments.**
- (b) Moody's tracks more than \$35 trillion worth of debt securities.**
- (c) The ultimate value of a rating agency's contribution to that market efficiency depends on its ability to provide ratings that are clear, credible, accurate risk opinions based on a fundamental understanding of credit risk. To provide a reliable frame of reference for investment decisions, the agency's ratings should offer broad coverage and also be based on a globally consistent rating process, supported by rating committees with a multi-national perspective.**

(a) Face value of bonds.....	\$2,400,000
Proceeds from sale of bonds (\$2,400,000 X .95)	<u>2,280,000</u>
Discount on bonds payable	<u>\$ 120,000</u>

Bond discount amortization per year:

$$\$120,000 \div 5 = \$24,000$$

Face value of bonds.....		\$2,400,000
Amount of original discount	\$120,000	
Less: Amortization through January 1, 2010 (2-year)	<u>48,000</u>	<u>72,000</u>
Carrying value of bonds, January 1, 2010		<u>\$2,328,000</u>

(b) 1. Bonds Payable.....	2,400,000	
Discount on Bonds Payable.....		72,000
Gain on Bond Redemption		328,000*
Cash		2,000,000
(To record redemption of 8% bonds)		

$$*\$2,328,000 - \$2,000,000$$

2. Cash	2,000,000	
Bonds Payable.....		2,000,000
(To record sale of 10-year, 11% bonds at par)		

(c) Dear President Carlin:

The early redemption of the 8%, 5-year bonds results in recognizing a gain of \$328,000 that increases current year net income by the after-tax effect of the gain. The amount of the liabilities on the balance sheet will be lowered by the issuance of the new bonds and retirement of the 5-year bonds.

1. The cash flow of the company as it relates to bonds payable will be adversely affected as follows:

Annual interest payments on the new issue	
(\$2,000,000 X .11)	\$220,000
Annual interest payments on the 5-year bonds	
(\$2,400,000 X .08)	<u>192,000</u>
Additional cash outflows per year	<u>\$ 28,000</u>

2. The amount of interest expense shown on the income statement will be higher as a result of the decision to issue new bonds:

Annual interest expense on new bonds		\$220,000
Annual interest expense on 8% bonds:		
Interest payment	\$192,000	
Discount amortization	<u>24,000</u>	<u>216,000</u>
Additional interest expense per year		<u>\$ 4,000</u>

These comparisons hold for only the 3-year remaining life of the 8%, 5-year bonds. The company must acknowledge either redemption of the 8% bonds at maturity, January 1, 2013, or refinancing of that issue at that time and consider what interest rates will be in 2013 in evaluating a redemption and issuance in 2010.

Sincerely,

To: Joe Penner

From: I. M. Student

Subject: Bond Financing

(1) The advantages of bond financing over common stock financing include:

- 1. Stockholder control is not affected.**
- 2. Tax savings result.**
- 3. Earnings per share of common stock may be higher.**

(2) The types of bonds that may be issued are:

- 1. Secured or unsecured bonds. Secured bonds have specific assets of the issuer pledged as collateral. Unsecured bonds are issued against the general credit of the borrower.**
- 2. Term or serial bonds. Term bonds mature at a single specified date, while serial bonds mature in installments.**
- 3. Registered or bearer bonds. Registered bonds are issued in the name of the owner, while bearer bonds are not.**
- 4. Convertible bonds, which can be converted by the bondholder into common stock.**
- 5. Callable bonds, which are subject to early retirement by the issuer at a stated amount.**

(3) State laws grant corporations the power to issue bonds after formal approval by the board of directors and stockholders. The terms of the bond issue are set forth in a legal document called a bond indenture. After the bond indenture is prepared, bond certificates are printed.

(a) The stakeholders in the Galena case are:

- ▶ Sam Farr, president, founder, and majority stockholder.
- ▶ Jill Hutton, minority stockholder.
- ▶ Other minority stockholders.
- ▶ Existing creditors (debt holders).
- ▶ Future bondholders.
- ▶ Employees, suppliers, and customers.

(b) The ethical issues:

The desires of the majority stockholder (Sam Farr) versus the desires of the minority stockholders (Jill Hutton and others).

Doing what is right for the company and others versus doing what is best for oneself.

Questions:

Is what Sam wants to do legal? Is it unethical? Is Sam's action brash and irresponsible? Who may benefit/suffer if Sam arranges a high-risk bond issue? Who may benefit/suffer if Jill Hutton gains control of Galena?

(c) The rationale provided by the student will be more important than the specific position because this is a borderline case with no *right* answer.

Results will vary depending on article chose by the student. Some common signals identified in articles are: bills more than two months in arrears; must make decisions about who to pay; you have a debt judgment filed against you; spending exceeds income; all credit cards are at their maximum; using one credit card to pay off another.

CHAPTER 16

Investments

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Discuss why corporations invest in debt and stock securities.	1		2	1		
2. Explain the accounting for debt investments.	2, 3, 4	1	3	2, 3	1A, 2A	1B, 2B
3. Explain the accounting for stock investments.	5, 6, 7, 8, 9, 10	2, 3	5	4, 5, 6, 7, 8	2A, 3A, 4A, 5A	2B, 3B, 4B, 5B
4. Describe the use of consolidated financial statements.	11		6	9		
5. Indicate how debt and stock investments are reported in financial statements.	10, 12, 13, 14, 15, 16, 17, 18	4, 5, 6, 7, 8		8, 10, 11, 12	1A, 2A, 3A, 5A, 6A	1B, 2B, 3B, 5B, 6B
6. Distinguish between short-term and long-term investments.	19	5, 7, 8		10, 11, 12	1A, 2A, 3A, 5A, 6A	1B, 2B, 3B, 5B, 6B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Journalize debt investment transactions and show financial statement presentation.	Moderate	30–40
2A	Journalize investment transactions, prepare adjusting entry, and show statement presentation.	Moderate	30–40
3A	Journalize transactions and adjusting entry for stock investments.	Moderate	30–40
4A	Prepare entries under the cost and equity methods, and tabulate differences.	Simple	20–30
5A	Journalize stock investment transactions and show statement presentation.	Moderate	40–50
6A	Prepare a balance sheet.	Moderate	30–40
1B	Journalize debt investment transactions and show financial statement presentation.	Moderate	30–40
2B	Journalize investment transactions, prepare adjusting entry, and show statement presentation.	Moderate	30–40
3B	Journalize transactions and adjusting entry for stock investments.	Moderate	30–40
4B	Prepare entries under the cost and equity methods, and tabulate differences.	Simple	20–30
5B	Journalize stock investment transactions and show statement presentation.	Moderate	40–50
6B	Prepare a balance sheet.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 16
INVESTMENTS

Number	SO	BT	Difficulty	Time (min.)
BE1	2	AP	Simple	2–4
BE2	3	AP	Simple	3–5
BE3	3	AP	Simple	3–5
BE4	5	AP	Simple	2–3
BE5	5, 6	AN	Simple	2–4
BE6	5	AN	Simple	2–3
BE7	5, 6	AP	Simple	2–4
BE8	5, 6	AP	Simple	3–5
DI1	2	AP	Moderate	6–8
DI2	3	AP	Simple	6–8
DI3	5	AN	Simple	4–6
DI4	6	K	Simple	4–6
EX1	1	K	Simple	8–10
EX2	2	AP	Moderate	8–10
EX3	2	AP	Moderate	8–10
EX4	3	AP	Simple	8–10
EX5	3	AP	Simple	6–8
EX6	3	AP	Simple	8–10
EX7	3	AP	Simple	6–8
EX8	3, 6	AP	Simple	8–10
EX9	4	K	Simple	6–8
EX10	5, 6	AN	Simple	4–6
EX11	5, 6	AN	Simple	8–10
EX12	5, 6	AN	Simple	6–8
P1A	2, 5, 6	AN	Moderate	30–40
P2A	2, 3, 5, 6	AN	Moderate	30–40
P3A	3, 5, 6	AN	Moderate	30–40
P4A	3	AN	Simple	20–30
P5A	3, 5, 6	AN	Moderate	40–50
P6A	5, 6	AP	Moderate	30–40

INVESTMENTS (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1B	2, 5, 6	AN	Moderate	30–40
P2B	2, 3, 5, 6	AN	Moderate	30–40
P3B	3, 5, 6	AN	Moderate	30–40
P4B	3	AN	Simple	20–30
P5B	3, 5, 6	AN	Moderate	40–50
P6B	5, 6	AP	Moderate	30–40
BYP1	4	C	Simple	10–15
BYP2	4	AN	Simple	10–15
BYP3	—	C	Simple	10–15
BYP4	3	C	Moderate	15–20
BYP5	5	C	Simple	5–10
BYP6	5	E	Simple	10–15
BYP7	—	C	Simple	10–15

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Discuss why corporations invest in debt and stock securities.	Q16-1	E16-1				
2. Explain the accounting for debt investments.	Q16-2	Q16-3 Q16-4	BE16-1 DI16-1	P16-1A P16-2A P16-1B P16-2B		
3. Explain the accounting for stock investments.	Q16-7	Q16-5 Q16-8 Q16-9 Q16-10	Q16-6 BE16-2 BE16-3 DI16-2 E16-4	P16-2A P16-3A P16-4A P16-5A P16-2B P16-3B P16-4B P16-5B		
4. Describe the use of consolidated financial statements.	Q16-11	E16-9				
5. Indicate how debt and stock investments are reported in financial statements.	Q16-12 Q16-17	Q16-10 Q16-13 Q16-18	Q16-14 Q16-16 BE16-4 BE16-7 BE16-8 E16-8 P16-6A P16-6B	Q16-15 BE16-5 BE16-6 DI16-3 E16-10 E16-11 E16-12 P16-1A	P16-2A P16-3A P16-5A P16-1B P16-2B P16-3B P16-5B	
6. Distinguish between short-term and long-term investments.		Q16-19 DI16-4	BE16-7 BE16-8 P16-6A P16-6B	BE16-5 E16-10 E16-11 E16-12 P16-1A P16-2A	P16-3A P16-5A P16-1B P16-2B P16-3B P16-5B	
Broadening Your Perspective		Financial Reporting Exploring the Web Decision Making Across the Organization Communication All About You		Comparative Analysis		Ethics Case

ANSWERS TO QUESTIONS

1. The reasons corporations invest in securities are: (1) excess cash not needed for operations that can be invested, (2) for additional earnings, and (3) strategic reasons.
2. (a) The cost of an investment in bonds consists of all expenditures necessary to acquire the bonds, such as the market price of the bonds plus any brokerage fees.
(b) Interest is recorded as it is earned; that is, over the life of the investment in bonds.
3. (a) Losses and gains on the sale of debt investments are computed by comparing the amortized cost of the securities to the net proceeds from the sale.
(b) Losses are reported in the income statement under other expenses and losses whereas gains are reported under other revenues and gains.
4. Olindo Company is incorrect. The gain is the difference between the net proceeds, exclusive of interest, and the cost of the bonds. The correct gain is \$4,500, or $[(\$45,000 - \$500) - \$40,000]$.
5. The cost of an investment in stock includes all expenditures necessary to acquire the investment. These expenditures include the actual purchase price plus any commissions or brokerage fees.
6. Brokerage fees are part of the cost of the investment. Therefore, the entry is:

Stock Investments	63,200	
Cash		63,200
7. (a) Whenever the investor's influence on the operating and financial affairs of the investee is significant, the equity method should be used. The major factor in determining significant influence is the percentage of ownership interest held by the investor in the investee. The general guideline for use of the equity method is 20%–50% ownership interest. Companies are required to use judgment, however, rather than blindly follow the 20%–50% guideline.
(b) Revenue is recognized as it is earned by the investee.
8. Since Rijo Corporation uses the equity method, the income reported by Pippen Packing (\$80,000) should be multiplied by Rijo's ownership interest (30%) and the result (\$24,000) should be debited to Stock Investments and credited to Revenue from Investment in Pippen Packing. Also, of the total dividend declared and paid by Pippen (\$10,000) Rijo will receive 30% or \$3,000. This amount should be debited to Cash and credited to Stock Investments.
9. Significant influence over an investee may result from representation on the board of directors, participation in policy-making processes, material intercompany transactions. One must also consider whether the stock held by other stockholders is concentrated or dispersed. An investment (direct or indirect) of 20%–50% of the voting stock of an investee constitutes significant influence unless there exists evidence to the contrary.

- 10.** Under the cost method, an investment is originally recorded and reported at cost. Dividends are recorded as revenue. In subsequent periods, it is adjusted to fair value and an unrealized holding gain or loss is recognized and included in income (trading security) or as a separate component of stockholders' equity (available-for-sale security). Under the equity method, the investment is originally recorded and reported at cost; subsequently, the investment account is adjusted during each period for the investor's share of the earnings or losses of the investee. The investor's share of the investee's earnings is recognized in the earnings of the investor. Dividends received from the investee are reductions in the carrying amount of the investment.
- 11.** Consolidated financial statements present the details of the assets and liabilities controlled by the parent company and the total revenues and expenses of the affiliated companies.

Consolidated financial statements are especially useful to the stockholders, board of directors, and management of the parent company. Conversely, they are of limited use to minority stockholders and the creditors of the subsidiary company.

- 12.** The valuation guidelines for investments is as follows:

Category	Valuation and Reporting
Trading	At fair value with changes reported in net income
Available-for-sale	At fair value with changes reported in stockholders' equity
Held-to-maturity	At amortized cost

Investments recorded under the equity method are reported at their carrying value. The carrying value is the cost adjusted for the investor's share of the investee's income and dividends received.

- 13.** Tina should report as follows:

(1) Under current assets in the balance sheet:	
Short-term investment, at fair value	\$70,000
(2) Under other expenses and losses in the income statement:	
Unrealized loss on trading securities	\$ 4,000

- 14.** Tina should report as follows:

(1) Under investments in the balance sheet:	
Investment in stock of less than 20% owned companies, at fair value	\$70,000
(2) Under stockholders' equity in the balance sheet:	
Less: Unrealized loss on available-for-sale securities	\$ (4,000)

- 15.** The entry is:

Market Adjustment—Available-for-Sale	10,000	
Unrealized Gain or Loss—Equity		10,000

- 16.** The entry is:

Market Adjustment—Trading	10,000	
Unrealized Gain—Income		10,000

Questions Chapter 16 (Continued)

17. Unrealized Loss—Equity is reported as a deduction from stockholders' equity. The unrealized loss is not included in the computation of net income.
18. Reporting Unrealized Gains (Losses)—Equity in the stockholders' equity section serves two important purposes: (1) it reduces the volatility of net income due to fluctuations in fair value, and (2) it still informs the financial statement user of the gain or loss that would occur if the securities were sold at fair value.
19. No. The investment in Key Corporation stock is a long-term investment because there is no intent to convert the stock into cash within a year or the operating cycle, whichever is longer.
20. In Note 1, PepsiCo stated the following regarding its accounting policy on consolidated financial statements:

Our financial statements include the consolidated accounts of PepsiCo, Inc. and the affiliates that we control. In addition, we include our share of the results of certain other affiliates based on our economic ownership interest. We do not control these other affiliates, as our ownership in these other affiliates is generally less than 50%.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 16-1

Jan. 1	Debt Investments.....	52,000	
	Cash		52,000
July 1	Cash	2,340	
	Interest Revenue		2,340

BRIEF EXERCISE 16-2

Aug. 1	Stock Investments.....	35,700	
	Cash		35,700
Dec. 1	Cash	40,000	
	Stock Investments.....		35,700
	Gain on Sale of Stock Investments		4,300

BRIEF EXERCISE 16-3

Dec. 31	Stock Investments.....	45,000	
	Revenue from Investment in Fort Company (25% X \$180,000)		45,000
31	Cash (25% X \$50,000).....	12,500	
	Stock Investments.....		12,500

BRIEF EXERCISE 16-4

Dec. 31	Unrealized Loss—Income.....	3,000	
	Market Adjustment—Trading (\$62,000 – \$59,000)		3,000

BRIEF EXERCISE 16-5

Balance Sheet

Current assets

Short-term investments, at fair value	\$59,000

Income Statement

Other expenses and losses

Unrealized loss on trading securities.....	3,000

BRIEF EXERCISE 16-6

Dec. 31	Unrealized Gain or Loss—Equity	6,000	
	Market Adjustment—Available-for-Sale		6,000

BRIEF EXERCISE 16-7

Balance Sheet

Investments

Investment in stock of less than 20% owned companies, at fair value	\$66,000

Stockholders' equity

Less: Unrealized loss on available-for-sale securities.....	\$ (6,000)

BRIEF EXERCISE 16-8

Investments

Investment in stock of less than 20% owned companies, at fair value	\$115,000
Investment in stock of 20–50% owned companies, at equity	<u>270,000</u>
Total investments.....	<u>\$385,000</u>

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 16-1

(a)	Jan. 1	Debt Investments.....	51,500	
		Cash		51,500
	July 1	Cash	3,000	
		Interest Revenue		
		(\$50,000 X 12% X 6/12)		3,000
	July 1	Cash	29,200	
		Loss on Sale of Debt Investments	1,700	
		Debt Investments		
		(\$51,500 X 30/50)		30,900
(b)	Dec. 31	Interest Receivable	1,200	
		Interest Revenue		
		(\$20,000 X 12% X 6/12)		1,200

DO IT! 16-2

(a)	June 17	Stock Investments.....	550,000	
		Cash		550,000
	Sept. 3	Cash	16,000	
		Dividend Revenue		16,000
(b)	Jan. 1	Stock Investments.....	540,000	
		Cash		540,000
	May 15	Cash	45,000	
		Stock Investments		45,000
	Dec. 31	Stock Investments.....	81,000	
		Revenue from Investment in Bandit.....		81,000

DO IT! 16-3

Trading securities:

Unrealized Loss—Income	13,600*	
Market Adjustment—Trading		13,600

*\$11,400 + \$2,200

Available-for-sale securities:

Market Adjustment—Available-for-Sale	11,950**	
Unrealized Gain or Loss—Equity		11,950

**\$7,750 + \$4,200

DO IT! 16-4

Item	Financial statement	Category
1. Loss on sale of investments in stock.	Income statement	Other expenses and losses
2. Unrealized gain on available-for-sale securities.	Balance sheet	Stockholders' equity
3. Market adjustment—trading.	Balance sheet	Current assets
4. Interest earned on investments in bonds.	Income statement	Other revenues and gains
5. Unrealized loss on trading securities.	Income statement	Other expenses and losses

SOLUTIONS TO EXERCISES

EXERCISE 16-1

1. Companies purchase investments in debt or stock securities because they have excess cash, to generate earnings from investment income, or for strategic reasons.
2. A corporation would have excess cash that it does not need for operations due to seasonal fluctuations in sales and as a result of economic cycles.
3. The typical investment when investing cash for short periods of time is low-risk, high liquidity, short-term securities such as government-issued securities.
4. The typical investments when investing cash to generate earnings are debt securities and stock securities.
5. A company would invest in securities that provide no current cash flows for speculative reasons. They are speculating that the investment will increase in value.
6. The typical investment when investing cash for strategic reasons is stock of companies in a related industry or in an unrelated industry that the company wishes to enter.

EXERCISE 16-2

(a)	Jan.	1	Debt Investments.....	50,900	
			Cash (\$50,000 + \$900)		50,900
	July	1	Cash (\$50,000 X 8% X 1/2)	2,000	
			Interest Revenue		2,000
		1	Cash (\$34,000 – \$500)	33,500	
			Debt Investments		
			(\$50,900 X 3/5)		30,540
			Gain on Sale of Debt Investments		
			(\$33,500 – \$30,540)		2,960

EXERCISE 16-2 (Continued)

(b)	Dec. 31	Interest Receivable.....	800	
		Interest Revenue		
		(\$20,000 X 8% X 1/2).....		800

EXERCISE 16-3

January 1, 2010				
Debt Investments		73,500		
Cash.....			73,500	
July 1, 2010				
Cash (\$70,000 X 12% X 6/12)		4,200		
Interest Revenue			4,200	
December 31, 2010				
Interest Receivable		4,200		
Interest Revenue			4,200	
January 1, 2011				
Cash.....		4,200		
Interest Receivable			4,200	
January 1, 2011				
Cash.....		40,100		
Loss On Sale of Debt Investments.....		1,900		
Debt Investments (40/70 X \$73,500).....			42,000	

EXERCISE 16-4

(a)	Feb. 1	Stock Investments.....	6,200	
		Cash (\$6,000 + \$200).....		6,200
	July 1	Cash (600 X \$1).....	600	
		Dividend Revenue		600
	Sept. 1	Cash (\$4,400 – \$100).....	4,300	
		Stock Investments		
		(\$6,200 X 3/6)		3,100
		Gain on Sale of Stock Investments		
		(\$4,300 – \$3,100)		1,200
	Dec. 1	Cash (300 X \$1).....	300	
		Dividend Revenue		300

(b) Dividend revenue and the gain on sale of stock investments are reported under other revenues and gains in the income statement.

EXERCISE 16-5

Jan. 1	Stock Investments.....	142,100	
	Cash (\$140,000 + \$2,100).....		142,100
July 1	Cash (2,500 X \$3).....	7,500	
	Dividend Revenue		7,500
Dec. 1	Cash (\$32,000 – \$800)	31,200	
	Stock Investments (\$142,100 X 1/5).....		28,420
	Gain on Sale of Stock Investments		2,780
Dec. 31	Cash (2,000 X \$3).....	6,000	
	Dividend Revenue		6,000

EXERCISE 16-6

February 1		
Stock Investments	15,400	
Cash [(500 X \$30) + \$400]		15,400
March 20		
Cash (\$2,900 – \$50).....	2,850	
Loss on Sale of Stock Investments	230	
Stock Investments (\$15,400 X 100/500)		3,080
April 25		
Cash (400 X \$1.00)	400	
Dividend Revenue		400
June 15		
Cash (\$7,400 – \$90).....	7,310	
Stock Investments (\$15,400 X 200/500)		6,160
Gain on Sale of Stock Investments		1,150
July 28		
Cash (200 X \$1.25)	250	
Dividend Revenue		250

EXERCISE 16-7

(a)	Jan. 1	Stock Investments	180,000	
		Cash.....		180,000
	Dec. 31	Cash (\$60,000 X 25%)	15,000	
		Stock Investments		15,000
	31	Stock Investments	50,000	
		Revenue from Investment in Connors Corp. (\$200,000 X 25%)		50,000
(b)	Investment in Connors, January 1		\$180,000	
	Less: Dividend received		(15,000)	
	Plus: Share of reported income		50,000	
	Investment in Connors, December 31		<u>\$215,000</u>	

EXERCISE 16-8

1.	2010			
	Mar. 18	Stock Investments	390,000	
		Cash (200,000 X 15% X \$13)		390,000
	June 30	Cash.....	9,000	
		Dividend Revenue		
		(\$60,000 X 15%)		9,000
	Dec. 31	Market Adjustment—Available-for-Sale.....	60,000	
		Unrealized Gain or Loss—Equity		
		(\$450,000 – \$390,000)		60,000
2.	Jan. 1	Stock Investments	81,000	
		Cash (30,000 X 30% X \$9)		81,000
	June 15	Cash.....	9,000	
		Stock Investments		
		(\$30,000 X 30%)		9,000
	Dec. 31	Stock Investments	24,000	
		Revenue from Investment in		
		Parks Corp.		
		(\$80,000 X 30%)		24,000

EXERCISE 16-9

- (a) Since Ryan owns more than 50% of the common stock of Wayne Corporation, Ryan is called the parent company. Wayne is the subsidiary (affiliated) company. Because of its stock ownership, Ryan has a controlling interest in Wayne.
- (b) When a company owns more than 50% of the common stock of another company, consolidated financial statements are usually prepared. Consolidated financial statements present the total assets and liabilities controlled by the parent company. They also present the total revenues and expenses of the affiliated companies.
- (c) Consolidated financial statements are useful because they indicate the magnitude and scope of operations of the companies under common control.

EXERCISE 16-10

(a)	Dec. 31	Unrealized Loss—Income.....	4,000	
		Market Adjustment—Trading.....		4,000

(b) Balance Sheet

Current assets

Short-term investments, at fair value	\$49,000

Income Statement

Other expenses and losses

Unrealized loss on trading securities.....	\$ 4,000

EXERCISE 16-11

(a)	Dec. 31	Unrealized Gain or Loss—Equity	4,000	
		Market Adjustment—Available- for-Sale		4,000

(b) Balance Sheet

Investments

Investment in stock of less than 20% owned companies, at fair value	\$49,000

Stockholders' equity

Less: Unrealized loss on available-for-sale securities.....	\$ 4,000

EXERCISE 16-11 (Continued)

(c) Dear Mr. Linquist:

Investments which are classified as trading (held for sale in the near term) are reported at fair value in the balance sheet, with unrealized gains or losses reported in net income. Investments which are classified as available-for-sale (held longer than trading but not to maturity) are also reported at fair value, but unrealized gains or losses are reported in the stockholders' equity section.

Fair value is used as a reporting basis because it represents the cash realizable value of the securities. Unrealized gains or losses on trading investments are reported in the income statement because of the likelihood that the securities will be sold at fair value in the near term. Unrealized gains or losses on available-for-sale securities are reported in stockholders' equity rather than in income because there is a significant chance that future changes in fair value will reverse unrealized gains or losses. So as to not distort income with these fluctuations, they are reported directly in stockholders' equity.

I hope that the preceding discussion clears up any misunderstandings. Please contact me if you have any questions.

Sincerely,

Student

EXERCISE 16-12

(a) Market Adjustment—Trading		
(\$124,000 – \$120,000)	4,000	
Unrealized Gain—Income		4,000
Unrealized Gain or Loss—Equity	6,000	
Market Adjustment—Available-for-Sale		6,000

(b) Balance Sheet		
Current assets		
Short-term investments, at fair value		\$124,000
Investments		
Investment in stock of less than 20% owned companies, at fair value		94,000
Stockholders' equity		
Less: Unrealized loss on available-for-sale securities		\$ 6,000

Income Statement		
Other revenues and gains		
Unrealized gain on trading securities		\$ 4,000

SOLUTIONS TO PROBLEMS

PROBLEM 16-1A

(a) 2010				
Jan. 1	1	Debt Investments.....	2,000,000	
		Cash		2,000,000
July 1	1	Cash (\$2,000,000 X .08 X 1/2).....	80,000	
		Interest Revenue		80,000
Dec. 31		Interest Receivable	80,000	
		Interest Revenue		80,000
2013				
Jan. 1	1	Cash	80,000	
		Interest Receivable.....		80,000
	1	Cash [(\$1,000,000 X 1.06) – \$6,000]	1,054,000	
		Debt Investments.....		1,000,000
		Gain on Sale of Debt Investments.....		54,000
July 1	1	Cash (\$1,000,000 X .08 X 1/2).....	40,000	
		Interest Revenue		40,000
Dec. 31		Interest Receivable	40,000	
		Interest Revenue		40,000
(b) 2010				
Dec. 31		Market Adjustment—Available-for-Sale	200,000	
		Unrealized Gain or Loss—Equity.....		200,000

PROBLEM 16-1A (Continued)

(c) **Balance Sheet**

Current assets

Interest receivable.....	\$ 80,000

Investments

Debt investments, at fair value	\$2,200,000

The unrealized gain of \$200,000 would be reported in the stockholders' equity section of the balance sheet as an addition to total paid-in capital and retained earnings.

PROBLEM 16-2A

(a)	Feb. 1	Stock Investments.....	32,400	
		Cash (\$31,800 + \$600)		32,400
	Mar. 1	Stock Investments.....	20,400	
		Cash (\$20,000 + \$400)		20,400
	Apr. 1	Debt Investments.....	51,000	
		Cash (\$50,000 + \$1,000).....		51,000
	July 1	Cash (\$.60 X 600)	360	
		Dividend Revenue		360
	Aug. 1	Cash (\$11,600 – \$200)	11,400	
		Stock Investments		
		[((\$32,400 ÷ 600) X 200)].....		10,800
		Gain on Sale of Stock Investments.....		600
	Sept. 1	Cash (\$1 X 800).....	800	
		Dividend Revenue		800
	Oct. 1	Cash (\$50,000 X 7% X 1/2)	1,750	
		Interest Revenue		1,750
	1	Cash (\$50,000 – \$1,000).....	49,000	
		Loss on Sale of Debt Investments		
		(\$51,000 – \$49,000)	2,000	
		Debt Investments.....		51,000

Stock Investments				Debt Investments			
Feb. 1	32,400	Aug. 1	10,800	Apr. 1	51,000	Oct. 1	51,000
Mar. 1	20,400						
Dec. 31 Bal.	42,000			Dec. 31 Bal.	0		

PROBLEM 16-2A (Continued)

(b)	Dec. 31	Unrealized Loss—Income	800
		Market Adjustment—Trading	
		(\$42,000 – \$41,200)	800

<u>Security</u>	<u>Cost</u>	<u>Fair Value</u>	
Hiens common	\$21,600	\$22,000	(400 X \$55)
Pryce common	<u>20,400</u>	<u>19,200</u>	(800 X \$24)
	<u>\$42,000</u>	<u>\$41,200</u>	

(c)	Current assets	
	Short-term investments, at fair value	\$41,200

<u>Income Statement Account</u>	<u>Category</u>
Dividend Revenue	Other revenues and gains
Gain on Sale of Stock Investments	Other revenues and gains
Interest Revenue	Other revenues and gains
Loss on Sale of Debt Investments	Other expenses and losses
Unrealized Loss—Income	Other expenses and losses

PROBLEM 16-3A

		2011		
(a)	July 1	Cash (5,000 X \$1)	5,000	
		Dividend Revenue		5,000
	Aug. 1	Cash (2,000 X \$.50).....	1,000	
		Dividend Revenue		1,000
	Sept. 1	Cash [(1,500 X \$8) – \$300].....	11,700	
		Loss on Sale of Stock Investments		
		(\$13,500 – \$11,700)	1,800	
		Stock Investments (1,500 X \$9).....		13,500
	Oct. 1	Cash [(800 X \$33) – \$500].....	25,900	
		Stock Investments (800 X \$30).....		24,000
		Gain on Sale of Stock Investments		
		(\$25,900 – \$24,000)		1,900
	Nov. 1	Cash (1,500 X \$1)	1,500	
		Dividend Revenue		1,500
	Dec. 15	Cash (1,200 X \$.50).....	600	
		Dividend Revenue		600
	31	Cash (3,500 X \$1)	3,500	
		Dividend Revenue		3,500

Stock Investments

2011 Jan. 1 Balance	135,000	2011 Sept. 1	13,500
		Oct. 1	24,000
2011 Dec. 31 Balance	97,500		

PROBLEM 16-3A (Continued)

(b) Dec. 31	Unrealized Gain or Loss—Equity	
	(\$97,500 – \$93,400).....	4,100
	Market Adjustment—Available-	
	for-Sale.....	4,100

<u>Security</u>	<u>Cost</u>	<u>Fair Value</u>	
Hurst Co. common	\$36,000	\$38,400	(1,200 X \$32)
Pine Co. common	31,500	28,000	(3,500 X \$ 8)
Scott Co. common	30,000	27,000	(1,500 X \$18)
	<u>\$97,500</u>	<u>\$93,400</u>	

(c) Investments	
Investment in stock of less than	
20% owned companies, at fair	
value.....	\$ 93,400

Stockholders' equity		
Common stock.....	\$1,500,000	
Retained earnings.....	<u>1,000,000</u>	
Total paid-in capital and		
retained earnings.....	2,500,000	
Less: Unrealized loss on available-		
for-sale securities.....	<u>4,100</u>	
Total stockholders' equity.....		<u>\$2,495,900</u>

PROBLEM 16-4A

(a)	Jan. 1	Stock Investments	800,000	
		Cash.....		800,000
	Mar. 15	Cash.....	13,500	
		Dividend Revenue (45,000 X \$.30).....		13,500
	June 15	Cash.....	13,500	
		Dividend Revenue		13,500
	Sept. 15	Cash.....	13,500	
		Dividend Revenue		13,500
	Dec. 15	Cash.....	13,500	
		Dividend Revenue		13,500
	31	Market Adjustment—Trading	280,000	
		Unrealized Gain—Income [\$800,000 – (\$24 X 45,000)]		280,000
(b)	Jan. 1	Stock Investments	800,000	
		Cash.....		800,000
	Mar. 15	Cash.....	13,500	
		Stock Investments		13,500
	June 15	Cash.....	13,500	
		Stock Investments		13,500
	Sept. 15	Cash.....	13,500	
		Stock Investments		13,500
	Dec. 15	Cash.....	13,500	
		Stock Investments		13,500

PROBLEM 16-4A (Continued)

Dec. 31	Stock Investments.....	96,000
	Revenue from Investment in	
	Nickels Company	
	(\$320,000 X 30%)	96,000

(c)	Cost	Equity
	Method	Method
Stock Investments		
Common stock	\$1,080,000*	\$842,000**
Unrealized Gain—Income	280,000	
Dividend revenue	54,000	0
Revenue from investment in Nickels		
Company	0	96,000

***\$24 X 45,000 shares**
****\$800,000 + \$96,000 – \$54,000**

PROBLEM 16-5A

(a)	Jan. 20	Cash (\$55,000 – \$600)	54,400	
		Investment in Abel Corp.		
		Common Stock		52,000
		Gain on Sale of Stock Investments.....		2,400
	28	Investment in Rosen Corporation		
		Common Stock	31,680	
		Cash [(400 X \$78) + \$480].....		31,680
	30	Cash	1,610	
		Dividend Revenue		
		(\$1.15 X 1,400)		1,610
Feb. 8		Cash	480	
		Dividend Revenue (\$1.40 X 1,200)		480
	18	Cash [(\$27 X 1,200) – \$360]	32,040	
		Loss on Sale of Stock Investments.....	1,560	
		Investment in Weiss Corp.		
		Preferred Stock.....		33,600
July 30		Cash	1,400	
		Dividend Revenue (\$1.00 X 1,400).....		1,400
Sept. 6		Investment in Rosen Corporation		
		Common Stock	75,000	
		Cash [(\$82 X 900) + \$1,200]		75,000
Dec. 1		Cash	1,950	
		Dividend Revenue		
		(\$1.50 X 1,300)		1,950

(b)							
		Investment in Abel Corp.				Investment in Frey Corporation	
		Common Stock				Common Stock	
1/1 Bal.	52,000	1/20	52,000	1/1 Bal.	84,000		
12/31 Bal.	0			12/31 Bal.	84,000		

PROBLEM 16-5A (Continued)

Investment in Weiss Corp. Preferred Stock				Investment in Rosen Corporation Common Stock		
1/1 Bal.	33,600	2/18	33,600	1/28	31,680	
				9/6	75,000	
12/31 Bal.	0			12/31 Bal.	106,680	

(c)	Dec. 31	Unrealized Gain or Loss—Equity	7,480
		Market Adjustment—Available- for-Sale (\$190,680 – \$183,200).....	7,480

Security	Cost	Fair Value	
Frey Corporation common	\$ 84,000	\$ 89,600	(1,400 X \$64)
Rosen Corporation common	106,680	93,600	(1,300 X \$72)
	<u>\$190,680</u>	<u>\$183,200</u>	

(d)	Investments	
	Investment in stock of less than 20% owned companies, at fair value	\$183,200

Stockholders' equity	
Total paid-in capital and retained earnings	xxxxx
Less: Unrealized loss on available-for-sale securities	7,480
Total stockholders' equity	<u>\$ xxxxx</u>

PROBLEM 16-6A**URBINA CORPORATION
Balance Sheet
December 31, 2010**

Assets			
Current assets			
Cash		\$	42,000
Short-term stock investment, at fair value			180,000
Accounts receivable	\$140,000		
Less: Allowance for doubtful accounts	<u>6,000</u>		134,000
Merchandise inventory			170,000
Prepaid insurance			<u>16,000</u>
Total current assets			542,000
Investments			
Investment in stock of less than 20% of owned companies, at fair value	286,000		
Investment in stock of 20%–50% owned company, at equity	<u>380,000</u>		666,000
Total investments			
Property, plant, and equipment			
Land		390,000	
Buildings	\$950,000		
Less: Accumulated depreciation	<u>180,000</u>	770,000	
Equipment	275,000		
Less: Accumulated depreciation	<u>52,000</u>	<u>223,000</u>	
Total property, plant, and equipment			1,383,000
Intangible assets			
Goodwill			<u>200,000</u>
Total assets			<u>\$2,791,000</u>

URBINA CORPORATION
Balance Sheet (Continued)
December 31, 2010

Liabilities and Stockholders' Equity

Current liabilities

Notes payable	\$ 70,000
Accounts payable	240,000
Income taxes payable	120,000
Dividends payable	<u>80,000</u>
Total current liabilities	510,000

Long-term liabilities

Bonds payable, 10%, due 2018	\$ 500,000
Plus: Premium on bonds payable	<u>40,000</u>
Total long-term liabilities	<u>540,000</u>
Total liabilities	1,050,000

Stockholders' equity**Paid-in capital**

Common stock, \$10 par value,
500,000 shares authorized,
150,000 shares issued and
outstanding

1,500,000

Paid-in capital in excess of par value

130,000

Total paid-in capital

1,630,000

Retained earnings

103,000

Total paid-in capital and retained
earnings

1,733,000

Add: Unrealized gain on available-for-
sale securities

8,000

Total stockholders' equity

1,741,000

Total liabilities and stockholders'
equity

\$2,791,000

PROBLEM 16-1B

(a) 2010				
Jan. 1	Debt Investments.....	400,000		
	Cash		400,000	
July 1	Cash (\$400,000 X .09 X 1/2)	18,000		
	Interest Revenue		18,000	
Dec. 31	Interest Receivable	18,000		
	Interest Revenue		18,000	
2013				
Jan. 1	Cash	18,000		
	Interest Receivable.....		18,000	
1	Cash [(\$200,000 X 1.14) – \$7,000].....	221,000		
	Debt Investments.....		200,000	
	Gain on Sale of Debt Investments.....		21,000	
July 1	Cash (\$200,000 X .09 X 1/2)	9,000		
	Interest Revenue		9,000	
Dec. 31	Interest Receivable	9,000		
	Interest Revenue		9,000	
(b) 2010				
Dec. 31	Unrealized Gain or Loss—Equity	15,000		
	Market Adjustment—Available-for-Sale.....		15,000	

PROBLEM 16-1B (Continued)

(c) **Balance Sheet**

Current assets

Interest receivable.....	\$ 18,000

Investments

Debt investments, at fair value	\$385,000

The unrealized loss of \$15,000 would be reported in the stockholders' equity section of the balance sheet as a deduction from total paid-in capital and retained earnings.

PROBLEM 16-2B

(a)	Feb. 1	Stock Investments.....	30,800	
		Cash (\$30,000 + \$800)		30,800
	Mar. 1	Stock Investments.....	20,300	
		Cash (\$20,000 + \$300)		20,300
	Apr. 1	Debt Investments.....	41,200	
		Cash (\$40,000 + \$1,200).....		41,200
	July 1	Cash (\$.60 X 500)	300	
		Dividend Revenue		300
	Aug. 1	Cash (\$20,700 – \$350)	20,350	
		Gain on Sale of Stock Investments		1,870
		Stock Investments		
		[((\$30,800 ÷ 500) X 300)].....		18,480
	Sept. 1	Cash (\$1 X 600).....	600	
		Dividend Revenue		600
	Oct. 1	Cash (\$40,000 X 9% X 1/2)	1,800	
		Interest Revenue		1,800
	1	Cash (\$45,000 – \$1,000).....	44,000	
		Debt Investments.....		41,200
		Gain on Sale of Debt Investments		
		(\$45,000 – \$41,200)		2,800

Stock Investments				Debt Investments			
Feb. 1	30,800	Aug. 1	18,480	Apr. 1	41,200	Oct. 1	41,200
Mar. 1	20,300						
Dec. 31 Bal.	32,620			Dec. 31 Bal.	0		

PROBLEM 16-2B (Continued)

(b)	Dec. 31	Unrealized Loss—Income	2,020	
		Market Adjustment—Trading		2,020

<u>Security</u>	<u>Cost</u>	<u>Fair Value</u>	
DET common	\$12,320	\$13,200	(200 X \$66)
STL common	<u>20,300</u>	<u>17,400</u>	(600 X \$29)
	<u>\$32,620</u>	<u>\$30,600</u>	

(c)	Current assets	
	Trading securities, at fair value	\$30,600

<u>Income Statement Account</u>	<u>Category</u>
Dividend Revenue	Other revenues and gains
Gain on Sale of Stock Investments	Other revenues and gains
Interest Revenue	Other revenues and gains
Gain on Sale of Debt Investments	Other revenues and gains
Unrealized Loss—Income	Other expenses and losses

PROBLEM 16-3B

(a)		2011	
July 1	Cash (5,000 X \$1)	5,000	
	Dividend Revenue		5,000
Aug. 1	Cash (4,000 X \$.50)	2,000	
	Dividend Revenue		2,000
Sept. 1	Cash [(1,500 X \$8) – \$300]	11,700	
	Stock Investments (1,500 X \$6)		9,000
	Gain on Sale of Stock Investments		2,700
Oct. 1	Cash [(600 X \$30) – \$600]	17,400	
	Stock Investments (600 X \$25)		15,000
	Gain on Sale of Stock Investments		
	[\$17,400 – (\$15,000)]		2,400
Nov. 1	Cash (3,000 X \$1)	3,000	
	Dividend Revenue		3,000
Dec. 15	Cash (3,400 X \$.50)	1,700	
	Dividend Revenue		1,700
31	Cash (3,500 X \$1)	3,500	
	Dividend Revenue		3,500

Stock Investments

2011		2011	
Jan. 1	Balance	190,000	
			9,000
			15,000
2011			
Dec. 31	Balance	166,000	

PROBLEM 16-3B (Continued)

(b)	Dec. 31	Unrealized Gain or Loss—Equity	
		(\$166,000 – \$159,700)	6,300
		Market Adjustment—Available-	
		for-Sale.....	6,300

<u>Security</u>	<u>Cost</u>	<u>Fair Value</u>	
Adel Co. common	\$ 85,000	\$ 78,200	(3,400 X \$23)
Beran Co. common	21,000	24,500	(3,500 X \$7)
Caren Co. common	<u>60,000</u>	<u>57,000</u>	(3,000 X \$19)
	<u>\$166,000</u>	<u>\$159,700</u>	

(c)	Investments	
	Investment in stock of less than	
	20% owned companies, at fair	
	value.....	\$ 159,700

Stockholders' equity		
Common stock.....	\$2,000,000	
Retained earnings	<u>1,200,000</u>	
Total paid-in capital and		
retained earnings.....	3,200,000	
Less: Unrealized loss on available-		
for-sale securities.....	<u>6,300</u>	
Total stockholders' equity.....		<u>\$3,193,700</u>

PROBLEM 16-4B

(a) 2010				
Jan.	1	Stock Investments	1,100,000	
		Cash.....		1,100,000
June	30	Cash.....	20,000	
		Dividend Revenue		
		(40,000 X \$.50).....		20,000
Dec.	31	Cash.....	20,000	
		Dividend Revenue		
		(40,000 X \$.50).....		20,000
	31	Market Adjustment—		
		Available-for-Sale	100,000	
		Unrealized Gain or Loss—		
		Equity		
		[\$1,100,000 – (\$30 X 40,000)].....		100,000
(b) 2010				
Jan.	1	Stock Investments	1,100,000	
		Cash.....		1,100,000
June	30	Cash.....	20,000	
		Stock Investments		20,000
Dec.	31	Cash.....	20,000	
		Stock Investments		20,000
	31	Stock Investments	120,000	
		Revenue from Investment		
		in Blakeley, Inc.		
		(\$600,000 X 20%).....		120,000

PROBLEM 16-4B (Continued)**(c)**

	<u>Cost Method</u>	<u>Equity Method</u>
Stock Investments		
Common stock	\$1,200,000*	\$1,180,000**
Unrealized Gain—Equity	100,000	
Dividend revenue	40,000	0
Revenue from investment in Blakeley, Inc.	0	120,000

\$30 X 40,000 shares***\$1,100,000 + \$120,000 – \$40,000**

PROBLEM 16-5B

(a)	Jan. 7	Cash (\$39,200 – \$700)	38,500	
		Investment in Adler Corp. Common Stock		35,000
		Gain on Sale of Stock Investment.....		3,500
	10	Investment in Pesavento Corporation Common Stock	23,640	
		Cash [(300 X \$78) + \$240].....		23,640
	26	Cash	1,035	
		Dividend Revenue (\$1.15 X 900)		1,035
	Feb. 2	Cash	320	
		Dividend Revenue (\$.40 X 800)		320
	10	Cash [(\$26 X 800) – \$180].....	20,620	
		Loss on Sale of Stock Investment	1,780	
		Investment in Swanson Corporation Preferred Stock.....		22,400
	July 1	Cash	900	
		Dividend Revenue (\$1.00 X 900).....		900
	Sept. 1	Investment in Pesavento Corporation Common Stock	60,900	
		Cash [(\$75 X 800) + \$900].....		60,900
	Dec. 15	Cash	1,650	
		Dividend Revenue (\$1.50 X 1,100).....		1,650

(b)	Investment in Adler Corporation Common Stock				Investment in Lynn Corporation Common Stock			
	1/1 Bal.	35,000	1/7	35,000	1/1 Bal.	42,000		
	12/31 Bal.	0			12/31 Bal.	42,000		

PROBLEM 16-5B (Continued)

Investment in Swanson Corporation Preferred Stock				Investment in Pesavento Corporation Common Stock			
1/1 Bal.	22,400	2/10	22,400	1/10	23,640		
				9/1	60,900		
12/31 Bal.	0			12/31 Bal.	84,540		

(c)	Dec. 31	Unrealized Gain or Loss—Equity	4,140
		Market Adjustment—Available-	
		for-Sale (\$126,540 – \$122,400).....	4,140

Security	Cost	Fair Value	
Lynn Corporation Common	\$ 42,000	\$ 43,200	(900 X \$48)
Pesavento Corporation	84,540	79,200	(1,100 X \$72)
Common	<u>\$126,540</u>	<u>\$122,400</u>	

(d)	Investments	
	Investment in stock of less than 20% owned	
	companies, at fair value	\$122,400

Stockholders' equity	
Total paid-in capital and retained earnings.....	xxxxx
Less: Unrealized loss on available-for-sale	
securities	4,140
Total stockholders' equity.....	<u>\$ xxxxx</u>

PROBLEM 16-6B

NICHOLS CORPORATION
Balance Sheet
December 31, 2010

Assets			
Current assets			
Cash		\$	210,000
Short-term stock investment, at fair value			280,000
Accounts receivable	\$ 135,000		
Less: Allowance for doubtful accounts	<u>10,000</u>		125,000
Merchandise inventory			255,000
Prepaid insurance			<u>25,000</u>
Total current assets			895,000
Investments			
Investment in stock of 20%–50% owned company, at equity			900,000
Property, plant, and equipment			
Land		780,000	
Buildings	\$1,350,000		
Less: Accumulated depreciation	<u>270,000</u>	1,080,000	
Equipment	415,000		
Less: Accumulated depreciation	<u>80,000</u>	<u>335,000</u>	
Total property, plant, and equipment			2,195,000
Intangibles			
Goodwill			<u>300,000</u>
Total assets			<u>\$4,290,000</u>

NICHOLS CORPORATION
Balance Sheet (Continued)
December 31, 2010

Liabilities and Stockholders' Equity

Current liabilities

Notes payable.....	\$ 110,000
Accounts payable	375,000
Income taxes payable	180,000
Dividends payable	<u>75,000</u>
Total current liabilities.....	740,000

Long-term liabilities

Bonds payable, 10%, due 2020.....	\$ 600,000
Less: Discount on bonds payable.....	<u>30,000</u>
Total long-term liabilities.....	<u>570,000</u>

Total liabilities	<u>1,310,000</u>

Stockholders' equity**Paid-in capital**

Common stock, \$5 par value, 500,000 shares authorized, 440,000 shares issued and outstanding.....	\$2,200,000
In excess of par value	<u>300,000</u>
Total paid-in capital	2,500,000

Retained earnings.....	<u>480,000</u>

Total stockholders' equity.....	<u>2,980,000</u>
Total liabilities and stockholder's equity	<u>\$4,290,000</u>

Part I

(a) To: Mindy Feldkamp, Oscar Lopez, and Lori Melton
From: Joe Student
Date: 5/26/2009
Re: Analysis of Partnership vs. Corporate Form of Business Organization

I have examined your situation regarding the establishment of your business. Before discussing my recommendations, I would like to briefly review the advantages and disadvantages of partnerships and corporations.

The primary advantages of a partnership over a corporation are:

- 1. Partnerships are more easily formed than corporations. Partnerships can be formed simply by the voluntary agreement of two or more individuals. Forming a corporation requires preparing and filing documents with governmental agencies, paying incorporation fees, etc.**
- 2. Income from a partnership is subject to less tax than income from a corporation. Even though partnerships are required to file information tax returns (returns that show financial information, but do not require any payment of taxes), they are not considered taxable entities. A partner's share of partnership income is taxed only on the partner's personal income tax return. Corporations are taxable entities and pay taxes on corporate income. In addition, any dividends distributed by corporations to individuals are subject to personal income tax on the personal income tax return. This is known as double taxation.**
- 3. Partnerships have more flexibility in decision making. The decision-making process used in a partnership is determined by the partners, whereas some decisions required in corporations must follow formal procedures described in the bylaws of the corporation.**

The primary advantages of a corporation over a partnership are:

- 1. Mutual agency does not exist in a corporation. This means that the owners of a corporation (stockholders) do not have the power to bind the corporation beyond their authority. For example, a stockholder who is not employed by the firm cannot enter into contracts or other agreements on behalf of the corporation. Owners of a partnership (partners) are bound by the actions of their partners, even when partners act beyond the scope of their authority. This is true as long as the actions seem appropriate for the business.**
- 2. The owners of a corporation have limited liability. When the corporation's assets are not sufficient to pay creditors' claims, the personal assets of the stockholders are protected from the corporation's creditors. In a partnership, once the assets of the partnership have been used to pay creditors' claims, the personal assets of the partners can be taken to satisfy the creditors' demands. A special type of partnership, a limited partnership, protects the personal assets of limited partners, but at least one partner's assets are still at risk. This partner is called a general partner.**
- 3. The life of a corporation is unlimited. When ownership changes occur (e.g., stockholders buy or sell stock), the corporation continues to exist as a legal entity. When ownership changes occur in a partnership (e.g., existing partner leaves, new partner is added), the old partnership no longer exists as a legal entity. A new partnership can be formed and the business can continue, but the original partnership must be dissolved.**

After examining your situation, I believe that you would be wise to choose the corporate form of business organization. There are two reasons for this recommendation. The first reason is that the venture you are about to undertake will require significant capital and, generally, capital is more easily raised via a corporation than a partnership. The other reason is that you will be protected from unlimited liability if you incorporate as opposed to forming a partnership. Given the potential risk of starting a venture of this kind, I believe it is in your best interest to protect your personal assets by using the corporate form of organization.

I wish you the best in your new endeavor and please call upon me when you are in need of further assistance.

COMPREHENSIVE PROBLEM (Continued)

Part II

(b) Equity financing option:

Positives

No fixed interest payments required

Negatives

Control of the corporation is lost
Difficulty of finding an interested investor
Earnings per share are lower

Debt financing option:

Positives

Control stays with three incorporators
No need for additional investor
Earnings per share are higher

Negatives

Interest payments quickly drain cash

Shares outstanding before financing 60,000 shares

	<u>Equity Financing</u>	<u>Debt Financing</u>
Income before interest and taxes	\$300,000	\$300,000
Interest expense	—	126,000
Income before taxes	300,000	174,000
Tax expense	96,000	55,680
Net income	<u>\$204,000</u>	<u>\$118,320</u>
Shares outstanding after financing	200,000	60,000
Earnings per share	\$ 1.02	\$ 1.97

Part III

(c) (1) 6/12/09	Cash.....	100,000	
	Building	200,000	
	Common Stock.....		120,000
	Paid-in Capital in Excess of Par Value		180,000

COMPREHENSIVE PROBLEM (Continued)

7/21/09	Cash	900,000	
	Common Stock		180,000
	Paid-in Capital in Excess of Par Value		720,000
7/27/10	Retained Earnings (150,000 X .10 X \$3)	45,000	
	Common Stock Dividends Distributable		30,000
	Paid-in Capital in Excess of Par Value		15,000
7/31/10	No entry		
8/15/10	Common Stock Dividends Distributable	30,000	
	Common Stock		30,000
12/4/10	Retained Earnings (165,000 X \$.05)	8,250	
	Dividends Payable		8,250
12/14/10	No entry		
12/24/10	Dividends Payable	8,250	
	Cash		8,250

(2) Shares Issued and Outstanding

Date	Event	Number of Shares Issued	Total Shares Issued and Outstanding
6/12/09	Issuance to Incorporators	60,000	60,000
7/21/09	Issuance to Marino	90,000	150,000
8/15/10	Stock dividend issuance	15,000	165,000

Part IV

(d) (1)	6/1/11	Cash	548,000	
		Discount on Bonds Payable	52,000	
		Bonds Payable		600,000

COMPREHENSIVE PROBLEM (Continued)

(2)	12/1/11	Interest Expense	20,600	
		Discount on Bonds Payable (\$52,000 ÷ 20)		2,600
		Cash (\$600,000 X .03).....		18,000
(3)	12/31/11	Interest Expense	3,433	
		Discount on Bonds Payable [(\$52,000 ÷ 20) ÷ 6]		433
		Interest Payable [(\$600,000 X .03) ÷ 6]		3,000
(4)	6/1/12	Interest Payable	3,000	
		Interest Expense (\$20,600 – \$3,433).....	17,167	
		Cash		18,000
		Discount on Bonds Payable (\$2,600 – \$433).....		2,167

Part V

(e)	(1)	2009	Investment in LifePath	900,000	
			Cash		900,000
			Investment in LifePath	18,000	
			Investment Revenue (.6 X \$30,000).....		18,000
			Cash	1,260	
			Investment in LifePath (.6 X \$2,100).....		1,260
		2010	Investment in LifePath	42,000	
			Investment Revenue (.6 X \$70,000).....		42,000
			Cash	12,000	
			Investment in LifePath (.6 X \$20,000).....		12,000

COMPREHENSIVE PROBLEM (Continued)

2011	Investment in LifePath	63,000	
	Investment Revenue		
	(.6 X \$105,000).....		63,000
	Cash.....	30,000	
	Investment in LifePath		
	(.6 X \$50,000).....		30,000

(2)	Investment in LifePath	
	900,000	
	18,000	1,260
	42,000	12,000
	63,000	30,000
	979,740	

- (a) **PepsiCo made the following statement about what was included on its consolidated financial statement:**

Our financial statements include the consolidated accounts of PepsiCo, Inc. and the affiliates that we control. In addition, we include our share of the results of certain other affiliates based on our economic ownership interest. We do not control these other affiliates, as our ownership in these other affiliates is generally less than 50%. Our share of the net income of our anchor bottlers is reported in our income statement as bottling equity income. Bottling equity income also includes any changes in our ownership interests of these affiliates. Bottling equity income includes \$174 million, \$186 million and \$126 million of pre-tax gains on our sales of PBG stock in 2007, 2006 and 2005, respectively. See Note 8 for additional information on our significant noncontrolled bottling affiliates. Intercompany balances and transactions are eliminated. In 2005, we had an additional week of results (53rd week). Our fiscal year ends on the last Saturday of each December, resulting in an additional week of results every five or six years.

- (b) **PepsiCo's Consolidated Statement of Cash Flows shows that \$2,430 million was spent for capital acquisitions (spending) during the year.**

(a)	(in millions)	PepsiCo	Coca-Cola
1.	Cash used for investing activities	\$3,744	\$6,719
2.	Cash used for capital expenditures (spending)	2,430	1,648

- (b) In its Note 1 to the consolidated financial statements, PepsiCo states that its financial statements include the consolidated accounts of *PepsiCo Inc. and the affiliates that it controls*. In addition, PepsiCo includes its share of the results of certain other affiliates based on its ownership interest.

As for specific corporations consolidated, PepsiCo lists the following companies as its principal divisions.

Frito-Lay North America
PepsiCo Beverages North America
Quaker Foods North America
PepsiCo International

Answers will vary depending on company chosen. The following sample solution is provided for Medtronic, Inc.

- (a) 30 analysts rated this company.**
- (b) 10/30 or 33% of the analysts rated it a strong buy.**
- (c) Average rating 2.0 on a scale of 1.0 (strong buy) to 5.0 (strong sell).**
- (d) Average rating: No change.**
- (e) Analysts rank this company 16 of 52.**
- (f) Earnings surprise 0%.**

The dollar amount received upon the sale of the UMW Company stock was \$1,468,000. Since Kemper Corporation has a 30% interest in UMW, the equity method should be used to report dividends and net income. A reconstruction of the correct entries can be prepared for the acquisition, the equity method treatment of dividends and revenue, and the sale. A plug figure for cash will balance the entry for the sale. These entries are provided below.

Both the stockholder and the president are correct. Since the equity method adjusts the investment account for the earnings of the investee, the “very profitable” UMW investment balance has increased during the period the stock was held. The stock was sold at less than its current investment balance and thus a loss was recognized. Stockholder Kerwin is correct in labeling this a very profitable company and in noting that a loss was recognized on its sale.

President Chavez is correct in that the investment was sold at a higher figure than the \$1,300,000 purchase price. The key to the dilemma is to note that the selling price was less than the carrying amount of the investment. The carrying amount has increased due to the recognition of UMW income during the time the stock was held.

Entries for the investment in UMW Company:

Acquisition		
Stock Investments	1,300,000	
Cash.....		1,300,000
Previous Years—Equity Method		
Stock Investments	372,000	
Revenue from Investment in UMW Company (\$1,240,000 X 30%)		372,000
Cash.....	132,000	
Stock Investments (\$440,000 X 30%).....		132,000

BYP 16-4 (Continued)

This Year—Equity Method		
Stock Investments.....	156,000	
Revenue from Investment in UMW		
Company (\$520,000 X 30%)		156,000
Cash	48,000	
Stock Investments (\$160,000 X 30%)		48,000
Sale of the UMW Company Stock		
Cash (Cash is a plug.)	1,468,000	
Loss on Sale of Investments	180,000	
Stock Investments.....		1,648,000*
*\$1,300,000 + (\$372,000 + \$156,000) – (\$132,000 + \$48,000)		

Dear Mr. Scholes:

I am writing this memo to make suggestions regarding the appropriate treatment for the two securities you are holding in your portfolio. Assuming that your investment in Longley Corporation does not represent a significant interest in that firm, it should be accounted for as an available-for-sale security because it is a stock investment that you do not intend on selling in the near future. You will not report any gains or losses on this investment in your income statement until you sell it. On the other hand, your debt investment should be accounted for as a trading security since you purchased it with the intent to generate a short-term profit. Unrealized gains and losses at your balance sheet date should be reported directly in income.

- (a) Classifying the securities as they propose will indeed have the effect on net income that they say it will. Classifying all the gains as trading securities will cause all the gains to flow through the income statement this year and classifying the losses as available-for-sale securities will defer the losses from this year's income statement. Classifying the gains and losses just the opposite will have the opposite effect.
- (b) What each proposes is unethical since it is knowingly not in accordance with GAAP. The financial statements are fraudulently, not fairly, stated. The affected stakeholders are other members of the company's officers and directors, the independent auditors (who may detect these misstatements), the stockholders, and prospective investors.
- (c) The act of selling certain securities (those with gains or those with losses) is management's choice and is not per se unethical. Generally accepted accounting principles allow the sale of selected securities so long as the method of assigning cost adopted by the company is consistently applied. If the officers act in the best interest of the company and its stakeholders, and in accordance with GAAP, and not in their self-interest, their behavior is probably ethical. Knowingly engaging in unsound and poor business and accounting practices that waste assets or that misstate financial statements is unethical behavior.

- (a) ► **Ask**—The lowest price at which a market maker will sell a specified number of shares of a stock at any given time.
- **Margin Account**—A type of account with a broker-dealer, in which the broker agrees to lend the customer part of the amount due for the purchase of securities.
- **Prospectus**—A document that contains important information about an investment company's fees and expenses, investment objectives, investment strategies, risks, performance, pricing, and more.
- **Index Fund**—A type of mutual fund or Unit Investment Trust whose investment objective typically is to achieve the same return as a particular market index, such as the S&P 500 Composite Stock Price Index.
- (b) The SEC quiz is interactive, thus students are provided with feedback regarding their answers.

CHAPTER 17

Statement of Cash Flows

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Indicate the usefulness of the statement of cash flows.	1, 2, 6, 15		2			
2. Distinguish among operating, investing, and financing activities.	3, 4, 5, 6, 7, 8, 9, 16, 22	1, 2, 3	3	1, 2, 3	1A	1B
3. Prepare a statement of cash flows using the indirect method.	10, 11, 12, 13, 14	4, 5, 6, 7	4	4, 5, 6, 7, 8, 9	2A, 3A, 5A, 7A, 9A, 11A	2B, 3B, 5B, 7B, 9B, 11B
4. Analyze the statement of cash flows.		8, 9, 10, 11		7, 9	7A, 8A	7B, 8B
*5. Explain how to use a worksheet to prepare the statement of cash flows using the indirect method.	17	12		10	12A	
*6. Prepare a statement of cash flows using the direct method.	8, 18, 19, 20, 21	13, 14, 15		11, 12, 13, 14	4A, 6A, 8A, 10A	4B, 6B, 8B, 10B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Distinguish among operating, investing, and financing activities.	Simple	10–15
2A	Determine cash flow effects of changes in equity accounts.	Simple	10–15
3A	Prepare the operating activities section—indirect method.	Simple	20–30
*4A	Prepare the operating activities section—direct method.	Simple	20–30
5A	Prepare the operating activities section—indirect method.	Simple	20–30
*6A	Prepare the operating activities section—direct method.	Simple	20–30
7A	Prepare a statement of cash flows—indirect method, and compute free cash flow.	Moderate	40–50
*8A	Prepare a statement of cash flows—direct method, and compute free cash flow.	Moderate	40–50
9A	Prepare a statement of cash flows—indirect method.	Moderate	40–50
*10A	Prepare a statement of cash flows—direct method.	Moderate	40–50
11A	Prepare a statement of cash flows—indirect method.	Moderate	40–50
*12A	Prepare a worksheet—indirect method.	Moderate	40–50
1B	Distinguish among operating, investing, and financing activities.	Simple	10–15
2B	Determine cash flow effects of changes in plant asset accounts.	Simple	10–15
3B	Prepare the operating activities section—indirect method.	Simple	20–30
*4B	Prepare the operating activities section—direct method.	Simple	20–30
5B	Prepare the operating activities section—indirect method.	Simple	20–30
*6B	Prepare the operating activities section—direct method.	Simple	20–30
7B	Prepare a statement of cash flows—indirect method, and compute free cash flow.	Moderate	40–50

ASSIGNMENT CHARACTERISTICS TABLE (Continued)

Problem Number	Description	Difficulty Level	Time Allotted (min.)
*8B	Prepare a statement of cash flows—direct method, and compute free cash flow.	Moderate	40–50
9B	Prepare a statement of cash flows—indirect method.	Moderate	40–50
*10B	Prepare a statement of cash flows—direct method.	Moderate	40–50
11B	Prepare a statement of cash flows—indirect method.	Moderate	40–50

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 17
STATEMENT OF CASH FLOWS

Number	SO	BT	Difficulty	Time (min.)
BE1	2	AP	Simple	3–5
BE2	2	C	Simple	2–4
BE3	2	AP	Simple	3–5
BE4	3	AP	Simple	4–6
BE5	3	AP	Simple	3–5
BE6	3	AP	Simple	4–6
BE7	3	AN	Moderate	3–5
BE8	4	AN	Simple	2–4
BE9	4	AN	Simple	2–3
BE10	4	AN	Simple	2–3
BE11	4	AN	Simple	4–6
BE12	5	AP	Simple	4–6
BE13	6	AP	Simple	2–4
BE14	6	AP	Simple	3–5
BE15	6	AP	Moderate	3–5
DI1	2	C	Simple	2–4
DI2	3	AP	Simple	4–6
DI3	4	AN	Simple	4–6
EX1	2	C	Simple	5–7
EX2	2	C	Simple	6–8
EX3	2	AP	Simple	8–10
EX4	3	AP	Simple	5–7
EX5	3	AP	Simple	6–8
EX6	3	AN	Moderate	10–12
EX7	3, 4	AP	Simple	12–14
EX8	3	AP	Simple	10–12
EX9	3, 4	AP	Simple	12–14
EX10	5	AP	Moderate	16–20
EX11	6	AP	Moderate	6–8
EX12	6	AP	Moderate	6–8
EX13	6	AP	Simple	5–7

STATEMENT OF CASH FLOWS (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX14	6	AP	Moderate	6–8
P1A	2	C	Simple	10–15
P2A	3	AN	Simple	10–15
P3A	3	AP	Simple	20–30
P4A	6	AP	Simple	20–30
P5A	3	AP	Simple	20–30
P6A	6	AP	Simple	20–30
P7A	3, 4	AP, AN	Moderate	40–50
P8A	4, 6	AP, AN	Moderate	40–50
P9A	3	AP	Moderate	40–50
P10A	6	AP	Moderate	40–50
P11A	3	AP	Moderate	40–50
P12A	5	AP	Moderate	40–50
P1B	2	C	Simple	10–15
P2B	3	AN	Simple	10–15
P3B	3	AP	Simple	20–30
P4B	6	AP	Simple	20–30
P5B	3	AP	Simple	20–30
P6B	6	AP	Simple	20–30
P7B	3, 4	AP, AN	Moderate	40–50
P8B	4, 6	AP, AN	Moderate	40–50
P9B	3	AP	Moderate	40–50
P10B	6	AP	Moderate	40–50
P11B	3	AP	Moderate	40–50
BYP1	2	AN	Simple	15–20
BYP2	4	AP, E	Simple	8–12
BYP3	—	C	Simple	15–20
BYP4	—	C	Simple	10–15
BYP5	3	AP, E	Moderate	25–30
BYP6	3	AP	Simple	10–15
BYP7	2	E	Simple	10–15
BYP8	—	E	Simple	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Indicate the usefulness of the statement of cash flows.	Q17-6	Q17-1 Q17-2				
2. Distinguish among operating, investing, and financing activities.	Q17-4 Q17-6 Q17-22 BE17-1	Q17-3 Q17-5 Q17-7 Q17-8 Q17-9 Q17-16	BE17-3 E17-2 E17-3			
3. Prepare a statement of cash flows using the indirect method.	Q17-13	Q17-10 Q17-11 Q17-12 Q17-14	BE17-4 BE17-5 BE17-6 DI17-2 E17-4 E17-5 E17-7	P17-3B P17-5B P17-7B P17-9B P17-11B P17-9A P17-11A	BE17-7 E17-6 P17-2A P17-2B P17-7A P17-7B	
4. Analyze the statement of cash flows.			E17-7 E17-9 P17-7A P17-8A P17-7B	BE17-8 BE17-9 BE17-10 BE17-11 DI17-3	P17-7A P17-8A P17-7B P17-8B	
*5 Explain how to use a worksheet to prepare the statement of cash flows using the indirect method.		Q17-17	BE17-12 E17-10 P17-12A			
*6. Prepare a statement of cash flows using the direct method.	Q17-18	Q17-8 Q17-20 Q17-21	Q17-19 BE17-13 BE17-14 BE17-15 E17-11 E17-12	E17-13 P17-4B P17-6B P17-8B P17-10B P17-8A P17-10A	P17-8A P17-8B	
Broadening Your Perspective		Exploring the Web	Comparative Analysis Decision Making Across the Organization Communication	Financial Reporting		Comp. Analysis Decision Making Across the Organization Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) The statement of cash flows reports the cash receipts, cash payments, and net change in cash resulting from the operating, investing, and financing activities of a company during a period.
(b) Disagree. The statement of cash flows is required. It is the fourth basic financial statement.
2. The statement of cash flows answers the following questions about cash: (a) Where did the cash come from during the period? (b) What was the cash used for during the period? and (c) What was the change in the cash balance during the period?
3. The three types of activities are:
Operating activities include the cash effects of transactions that create revenues and expenses and thus enter into the determination of net income.
Investing activities include: (a) acquiring and disposing of investments and property, plant and equipment and (b) lending money and collecting loans.
Financing activities include: (a) obtaining cash from issuing debt and repaying amounts borrowed and (b) obtaining cash from stockholders, repurchasing shares, and paying dividends.
4. (a) Major inflows of cash in a statement of cash flows include cash from operations; issuance of debt; collection of loans; issuance of capital stock; sale of investments; and the sale of property, plant, and equipment.
(b) Major outflows of cash include purchase of inventory, payment of wages and other operating expenses, payment of cash dividends; redemption of debt; purchase of investments; making loans; redemption of capital stock; and the purchase of property, plant, and equipment.
5. The statement of cash flows presents investing and financing activities so that even noncash transactions of an investing and financing nature are disclosed in the financial statements. If they affect financial conditions significantly, the FASB requires that they be disclosed in either a separate schedule at the bottom of the statement of cash flows or in a separate note or supplementary schedule to the financial statements.
6. Examples of significant noncash activities are: (1) issuance of stock for assets, (2) conversion of bonds into common stock, (3) issuance of bonds or notes for assets, and (4) noncash exchanges of property, plant, and equipment.
7. Comparative balance sheets, a current income statement, and certain transaction data all provide information necessary for preparation of the statement of cash flows. Comparative balance sheets indicate how assets, liabilities, and equities have changed during the period. A current income statement provides information about the amount of cash provided or used by operations. Certain transactions provide additional detailed information needed to determine how cash was provided or used during the period.
8. The advantage of the **direct method** is that it presents the major categories of cash receipts and cash payments in a format that is similar to the income statement and familiar to statement users. Its principal disadvantage is that the necessary data can be expensive and time-consuming to accumulate.

The advantage of the **indirect method** is it is often considered easier to prepare, and it focuses on the differences between net income and net cash provided by operating activities. It also tends to reveal less company information to competitors. Its primary disadvantage is the difficulty in understanding the adjustments that comprise the reconciliation.

Both methods are acceptable but the FASB expressed a preference for the direct method. Yet, the indirect method is the overwhelming favorite of companies.

Questions Chapter 17 (Continued)

9. When total cash inflows exceed total cash outflows, the excess is identified as a “net increase in cash” near the bottom of the statement of cash flows.
10. The indirect method involves converting accrual net income to net cash provided by operating activities. This is done by starting with accrual net income and adding or subtracting noncash items included in net income. Examples of adjustments include depreciation and other noncash expenses, gains and losses on the sale of noncurrent assets, and changes in the balances of current asset and current liability accounts from one period to the next.
11. It is necessary to convert accrual-based net income to cash-basis income because the unadjusted net income includes items that do not provide or use cash. An example would be an increase in accounts receivable. If accounts receivable increased during the period, revenues reported on the accrual basis would be higher than the actual cash revenues received. Thus, accrual-basis net income must be adjusted to reflect the net cash provided by operating activities.
12. A number of factors could have caused an increase in cash despite the net loss. These are (1) high cash revenues relative to low cash expenses; (2) sales of property, plant, and equipment; (3) sales of investments; (4) issuance of debt or capital stock, and (5) differences between cash and accrual accounting, e.g. depreciation.
13. Depreciation expense.
Gain or loss on sale of a noncurrent asset.
Increase/decrease in accounts receivable.
Increase/decrease in inventory.
Increase/decrease in accounts payable.
14. Under the indirect method, depreciation is added back to net income to reconcile net income to net cash provided by operating activities because depreciation is an expense but not a cash payment.
15. The statement of cash flows is useful because it provides information to the investors, creditors, and other users about: (1) the company’s ability to generate future cash flows, (2) the company’s ability to pay dividends and meet obligations, (3) the reasons for the difference between net income and net cash provided by operating activities, and (4) the cash investing and financing transactions during the period.
16. This transaction is reported in the note or schedule entitled “Noncash investing and financing activities” as follows: “Retirement of bonds payable through issuance of common stock, \$1,700,000.”
- *17. A worksheet is desirable because it allows the accumulation and classification of data that will appear on the statement of cash flows. It is an optional but efficient device that aids in the preparation of the statement of cash flows.
- *18. Net cash provided by operating activities under the direct approach is the difference between cash revenues and cash expenses. The direct approach adjusts the revenues and expenses directly to reflect the cash basis. This results in cash net income, which is equal to “net cash provided by operating activities.”

Questions Chapter 17 (Continued)

***19.** (a) Cash receipts from customers = Revenues from sales $\begin{cases} + \text{Decrease in accounts receivable} \\ - \text{Increase in accounts receivable} \end{cases}$

(b) Purchases = Cost of goods sold $\begin{cases} + \text{Increase in inventory} \\ - \text{Decrease in inventory} \end{cases}$

Cash payments to suppliers = Purchases $\begin{cases} + \text{Decrease in accounts payable} \\ - \text{Increase in accounts payable} \end{cases}$

*20. Sales	\$2,000,000
Add: Decrease in accounts receivable	<u>200,000</u>
Cash receipts from customers	<u>\$2,200,000</u>

***21.** Depreciation expense is not listed in the direct method operating activities section because it is not a cash flow item—it does not affect cash.

22. In its 2007 statement of cash flows, PepsiCo reported \$6,934 million net cash provided by operating activities, \$3,744 million used for investing activities, and \$4,006 million used for financing activities.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 17-1

- (a) Cash inflow from financing activity, \$200,000.
- (b) Cash outflow from investing activity, \$150,000.
- (c) Cash inflow from investing activity, \$20,000.
- (d) Cash outflow from financing activity, \$50,000.

BRIEF EXERCISE 17-2

(a) Investing activity.	(d) Operating activity.
(b) Investing activity.	(e) Financing activity.
(c) Financing activity.	(f) Financing activity.

BRIEF EXERCISE 17-3

Cash flows from financing activities

Proceeds from issuance of bonds payable.....	\$300,000
Payment of dividends	<u>(50,000)</u>
Net cash provided by financing activities.....	<u>\$250,000</u>

BRIEF EXERCISE 17-4

Net income.....		\$2,500,000
Adjustments to reconcile net income		
to net cash provided by operating activities		
Depreciation expense	\$160,000	
Accounts receivable decrease.....	350,000	
Accounts payable decrease	<u>(280,000)</u>	<u>230,000</u>
Net cash provided by operating activities		<u>\$2,730,000</u>

BRIEF EXERCISE 17-5

Cash flows from operating activities

Net income		\$280,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$ 70,000	
Loss on sale of plant assets	<u>12,000</u>	<u>82,000</u>
Net cash provided by operating activities		<u>\$362,000</u>

BRIEF EXERCISE 17-6

Net income		\$200,000
Adjustments to reconcile net income to net cash provided by operating activities		
Decrease in accounts receivable	\$ 80,000	
Increase in prepaid expenses.....	(28,000)	
Increase in inventories.....	<u>(30,000)</u>	<u>22,000</u>
Net cash provided by operating activities.....		<u>\$222,000</u>

BRIEF EXERCISE 17-7

Original cost of equipment sold	\$22,000
Less: Accumulated depreciation	<u>5,500</u>
Book value of equipment sold	16,500
Less: Loss on sale of equipment.....	<u>5,500</u>
Cash received from sale of equipment.....	<u>\$11,000</u>

BRIEF EXERCISE 17-8

$$\text{Free cash flow} = \$155,793,000 - \$132,280,000 - \$0 = \$23,513,000$$

BRIEF EXERCISE 17-9

$$\text{Free cash flow} = \$360,000 - \$200,000 - \$0 = \$160,000$$

BRIEF EXERCISE 17-10

$$\text{Free cash flow} = \$45,600,000 - \$1,600,000 = \$44,000,000$$

BRIEF EXERCISE 17-11

Free cash flow is cash provided by operations less capital expenditures and cash dividends paid. For Radar Inc. this would be \$384,000 (\$734,000 – \$280,000 – \$70,000). Since it has positive free cash flow that far exceeds its dividend, an increase in the dividend might be possible. However, other factors should be considered. For example, it must have adequate retained earnings, and it should be convinced that a larger dividend can be sustained over future years. It should also use the free cash flow to expand its operations or pay down its debt.

*BRIEF EXERCISE 17-12

<u>Balance Sheet Accounts</u>	<u>Balance 1/1/10</u>	<u>Reconciling Items</u>		<u>Balance 12/31/10</u>
		<u>Debit</u>	<u>Credit</u>	
Prepaid expenses	18,600		(a) 6,600	12,000
Accrued expenses payable	8,200		(b) 2,400	10,600

Statement of Cash Flow Effects

Operating activities

Decrease in prepaid expenses	(a) 6,600	
Increase in accrued expenses payable	(b) <u>2,400</u>	
	<u>9,000</u>	<u>9,000</u>

*BRIEF EXERCISE 17-13

$$\begin{array}{lcl} \text{Receipts from} & = & \text{Sales} \\ \text{customers} & & \text{revenues} \end{array} \left\{ \begin{array}{l} + \text{ Decrease in accounts receivable} \\ - \text{ Increase in accounts receivable} \end{array} \right.$$

$$\$1,033,678,000 = \$1,095,307,000 - \$61,629,000 \text{ (Increase in accounts receivable)}$$

*BRIEF EXERCISE 17-14

$$\begin{array}{lcl} \text{Cash payment} & = & \text{Income Tax} \\ \text{for income taxes} & & \text{Expense} \end{array} \left[\begin{array}{l} + \text{ Decrease in income taxes payable} \\ - \text{ Increase in income taxes payable} \end{array} \right]$$

$$\$95,000,000 = \$340,000,000 - \$245,000,000^*$$

$$*\$522,000,000 - \$277,000,000 = \$245,000,000 \text{ (Increase in income taxes payable)}$$

*BRIEF EXERCISE 17-15

$$\begin{array}{lcl} \text{Cash} & & \text{Operating} \\ \text{payments for} & = & \text{expenses,} \\ \text{operating} & & \text{excluding} \\ \text{expenses} & & \text{depreciation} \end{array} \left[\begin{array}{l} + \text{ Increase in prepaid expenses} \\ - \text{ Decrease in prepaid expenses} \end{array} \right] \text{ and}$$
$$\left[\begin{array}{l} + \text{ Decrease in accrued expenses payable} \\ - \text{ Increase in accrued expenses payable} \end{array} \right]$$

$$\$69,000 = \$80,000 - \$6,600 - \$4,400$$

SOLUTIONS TO DO IT! REVIEW EXERCISES

DO IT! 17-1

1. Financing activity
2. Operating activity
3. Financing activity
4. Investing activity
5. Investing activity

DO IT! 17-2

Cash flows from operating activities

Net income.....		\$100,000
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation expense	\$6,000	
Patent amortization expense.....	2,000	
Gain on sale of equipment	(3,600)	
Decrease in accounts receivable	6,000	
Increase in accounts payable	<u>3,200</u>	<u>13,600</u>
Net cash provided by operating activities		<u>\$113,600</u>

DO IT! 17-3

- (a) Free cash flow = \$73,700 – \$27,000 – \$15,000 = \$31,700
- (b) Cash provided by operating activities fails to take into account that a company must invest in new plant assets just to maintain the current level of operations. Companies must also maintain dividends at current levels to satisfy investors. The measurement of free cash flow provides additional insight regarding a company's cash-generating ability.

SOLUTIONS TO EXERCISES

EXERCISE 17-1

- (a) Financing activities.
- (b) Noncash investing and financing activities.
- (c) Noncash investing and financing activities.
- (d) Financing activities.
- (e) Investing activities.
- (f) Operating activities.
- (g) Operating activities.

EXERCISE 17-2

(a) Operating activity.	(i) Operating activity.
(b) Noncash investing and financing activity.	(j) Noncash investing and financing activity.
(c) Investing activity.	(k) Investing activity.
(d) Financing activity.	(l) Noncash investing and financing activity.
(e) Operating activity.	(m) Operating activity (loss); investing activity (cash proceeds from sale).
(f) Operating activity.	(n) Financing activity.
(g) Operating activity.	
(h) Financing activity.	

EXERCISE 17-3

1. (a) Cash 15,000
Land 12,000
Gain on Disposal 3,000
- (b) The cash receipt (\$15,000) is reported in the investing section. The gain (\$3,000) is deducted from net income in the operating section.
2. (a) Cash 20,000
Common Stock 20,000
- (b) The cash receipt (\$20,000) is reported in the financing section.
3. (a) Depreciation Expense 17,000
Accumulated Depreciation 17,000
- (b) Depreciation expense (\$17,000) is added to net income in the operating section.

EXERCISE 17-3 (Continued)

4. (a) Salaries Expense..... 9,000
Cash 9,000
- (b) Salaries expense is not reported separately on the statement of cash flows. It is part of the computation of net income in the income statement, and is included in the net income amount on the statement of cash flows.
5. (a) Equipment 8,000
Common Stock 1,000
Paid-in Capital in Excess of Par Value 7,000
- (b) The issuance of common stock for equipment (\$8,000) is reported as a noncash financing and investing activity at the bottom of the statement of cash flows.
6. (a) Cash 1,200
Loss on Disposal 1,800
Accumulated Depreciation 7,000
Equipment 10,000
- (b) The cash receipt (\$1,200) is reported in the investing section. The loss (\$1,800) is added to net income in the operating section.

EXERCISE 17-4

VILLA COMPANY
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income.....		\$195,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$45,000	
Loss on sale of equipment.....	5,000	
Increase in accounts payable	17,000	
Decrease in accounts receivable	15,000	
Decrease in prepaid expenses.....	4,000	86,000
Net cash provided by operating activities		<u>\$281,000</u>

EXERCISE 17-5

BELLINHAM INC.
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income		\$153,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$24,000	
Decrease in inventory	14,000	
Increase in accrued expenses payable	10,000	
Increase in prepaid expenses.....	(5,000)	
Decrease in accounts payable	(7,000)	
Increase in accounts receivable	(21,000)	<u>15,000</u>
Net cash provided by operating activities		<u>\$168,000</u>

EXERCISE 17-6

CESAR CORP
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income.....		\$ 67,000

Adjustments to reconcile net income to net cash provided by operating activities		

Depreciation expense	\$ 28,000	

Loss on sale of equipment.....	<u>5,000</u>	<u>33,000</u>

Net cash provided by operating activities.....		100,000

Cash flows from investing activities

Sale of equipment	14,000*	

Construction of equipment.....	(53,000)	

Purchase of equipment	<u>(70,000)</u>	

Net cash used by investing activities.....		(109,000)

Cash flows from financing activities

Payment of cash dividends		(14,000)

*Cost of equipment sold	\$ 49,000	

Accumulated depreciation	<u>(30,000)</u>	

Book value	19,000	

Loss on sale of equipment.....	<u>(5,000)</u>	

Cash proceeds	<u>\$ 14,000</u>	

EXERCISE 17-7**(a)**

SCULLY CORPORATION
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$ 22,630
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$ 5,000	
Loss on sale of land	1,100	
Decrease in accounts receivable	2,200	
Decrease in accounts payable	(18,730)	(10,430)
Net cash provided by operating activities		12,200
 Cash flows from investing activities		
Sale of land		4,900
 Cash flows from financing activities		
Issuance of common stock	\$ 6,000	
Payment of dividends	(19,500)	
Net cash used by financing activities		(13,500)
 Net increase in cash		3,600
Cash at beginning of period		10,700
Cash at end of period		<u>\$ 14,300</u>

(b) \$12,200 – \$0 – \$19,500 = (\$7,300)

EXERCISE 17-8

TAGUCHI COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income.....		\$103,000

**Adjustments to reconcile net income
to net cash provided by operating
activities**

Depreciation expense	\$34,000	
Decrease in inventory	19,000	
Decrease in accounts payable.....	(8,000)	
Increase in accounts receivable.....	<u>(9,000)</u>	<u>36,000</u>
Net cash provided by operating activities.....		139,000

Cash flows from investing activities

Sale of land.....	25,000	
Purchase of equipment	<u>(60,000)</u>	
Net cash used by investing activities.....		(35,000)

Cash flows from financing activities

Issuance of common stock.....	42,000	
Payment of cash dividends.....	(45,000)	
Redemption of bonds	<u>(50,000)</u>	
Net cash used by financing activities.....		<u>(53,000)</u>

Net increase in cash.....	51,000

Cash at beginning of period	<u>22,000</u>

Cash at end of period	<u>\$ 73,000</u>

EXERCISE 17-9**(a)**

MULDUR CORPORATION
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$ 18,300
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$ 5,200*	
Loss on sale of equipment	5,500**	
Increase in accounts payable	3,500	
Increase in accounts receivable	(2,900)	11,300
Net cash provided by operating activities		29,600
Cash flows from investing activities		
Sale of equipment	3,300	
Purchase of investments	(4,000)	
Net cash used by investing activities		(700)
Cash flows from financing activities		
Issuance of common stock	\$ 5,000	
Payment of dividends	(16,400)	
Retirement of bonds	(20,000)	
Net cash used by financing activities		(31,400)
Net increase in cash		(2,500)
Cash at beginning of period		17,700
Cash at end of period		<u>\$ 15,200</u>

*[\$14,000 – (\$10,000 – \$1,200)]

**[\$3,300 – (\$10,000 – \$1,200)]

(b) \$29,600 – \$0 – \$16,400 = \$13,200

***EXERCISE 17-10**

EDDIE MURPHY COMPANY
Worksheet
Statement of Cash Flows
For the Year Ended December 31, 2010

Balance Sheet Accounts	Balance 12/31/09	Reconciling Items		Balance 12/31/10
		Debit	Credit	
<u>Debits</u>				
Cash	22,000	(k)	41,000	63,000
Accounts receivable	76,000	(a)	9,000	85,000
Inventories	189,000		(b) 9,000	180,000
Land	100,000		(e) 25,000	75,000
Equipment	200,000	(f)	60,000	260,000
Total	<u>587,000</u>			<u>663,000</u>
<u>Credits</u>				
Accumulated depreciation—equipment	42,000		(d) 24,000	66,000
Accounts payable	47,000	(c)	13,000	34,000
Bonds payable	200,000	(h)	50,000	150,000
Common stock	164,000		(i) 50,000	214,000
Retained earnings	<u>134,000</u>	(g)	60,000	<u>199,000</u>
Total	<u>587,000</u>		(j) 125,000	<u>663,000</u>

Statement of Cash Flow Effects**Operating activities**

Net income	(j) 125,000	
Increase in accounts receivable		(a) 9,000
Decrease in inventories	(b) 9,000	
Decrease in accounts payable		(c) 13,000
Depreciation expense	(d) 24,000	

Investing activities

Sale of land	(e) 25,000	
Purchase of equipment		(f) 60,000

Financing activities

Payment of dividends		(g) 60,000
Redemption of bonds		(h) 50,000
Issuance of common stock	(i) 50,000	

Totals	<u>466,000</u>	<u>425,000</u>

Increase in cash		(k) <u>41,000</u>

Totals	<u>466,000</u>	<u>466,000</u>

***EXERCISE 17-11**

Revenues.....	\$192,000	
Deduct: Increase in accounts receivable	<u>(60,000)</u>	
Cash receipts from customers*		\$132,000
Operating expenses.....	78,000	
Deduct: Increase in accounts payable	<u>(23,000)</u>	
Cash payments for operating expenses**		<u>55,000</u>
Net cash provided by operating activities.....		<u>\$ 77,000</u>

*** Accounts Receivable**

Balance, Beginning of year	0		
Revenues for the year	192,000	Cash receipts for year	132,000
Balance, End of year	60,000		

**** Accounts Payable**

		Balance, Beginning of year	0
Payments for the year	55,000	Operating expenses for year	78,000
		Balance, End of year	23,000

EXERCISE 17-12*(a) Cash payments to suppliers**

Cost of goods sold	\$4,852.7 million
Add: Increase in inventory	<u>18.1</u>
Cost of purchases	\$4,870.8 million
Deduct: Increase in accounts payable	<u>(136.9)</u>
Cash payments to suppliers	<u>\$4,733.9 million</u>

(b) Cash payments for operating expenses

Operating expenses exclusive of depreciation	\$9,470.5 million
(\$10,671.5 – \$1,201)	
Add: Increase in prepaid expenses	\$ 56.3
Deduct: Increase in accrued expenses payable	<u>(160.9)</u> <u>(104.6)</u>
Cash payments for operating expenses	<u>\$9,365.9 million</u>

***EXERCISE 17-13**

Cash flows from operating activities

Cash receipts from

Customers	\$230,000*	
Dividend revenue	<u>18,000</u>	\$248,000

Less cash payments:

To suppliers for merchandise	115,000	
For salaries and wages	53,000	
For operating expenses	28,000	
For income taxes	12,000	
For interest	<u>10,000</u>	<u>218,000</u>
Net cash provided by operating activities		<u>\$ 30,000</u>

***\$48,000 + \$182,000**

***EXERCISE 17-14**

Cash payments for rentals

Rent expense	\$ 40,000
Add: Increase in prepaid rent	<u>3,100</u>
Cash payments for rent.....	<u>\$ 43,100</u>

Cash payments for salaries

Salaries expense	\$ 54,000
Add: Decrease in salaries payable.....	<u>2,000</u>
Cash payments for salaries	<u>\$ 56,000</u>

Cash receipts from customers

Revenue from sales.....	\$170,000
Add: Decrease in accounts receivable	<u>9,000</u>
Cash receipts from customers	<u>\$179,000</u>

SOLUTIONS TO PROBLEMS

PROBLEM 17-1A

	Transaction	Where Reported	Cash Inflow, Outflow, or No Effect?
(a)	Recorded depreciation expense on the plant assets.	O	No cash flow effect
(b)	Recorded and paid interest expense.	O	Cash outflow
(c)	Recorded cash proceeds from a sale of plant assets.	I	Cash inflow
(d)	Acquired land by issuing common stock.	NC	No cash flow effect
(e)	Paid a cash dividend to preferred stockholders.	F	Cash outflow
(f)	Distributed a stock dividend to common stockholders.	NC	No cash flow effect
(g)	Recorded cash sales.	O	Cash inflow
(h)	Recorded sales on account.	O	No cash flow effect
(i)	Purchased inventory for cash.	O	Cash outflow
(j)	Purchased inventory on account.	O	No cash flow effect

PROBLEM 17-2A

- (a) Net income can be determined by analyzing the retained earnings account.

Retained earnings beginning of year	\$260,000
Add: Net income (plug)	<u>65,500*</u>
	325,500
Less: Cash dividends	15,000
Stock dividends.....	<u>10,500</u>
Retained earnings, end of year	<u>\$300,000</u>

*($\$300,000 + \$10,500 + \$15,000 - \$260,000$)

- (b) Cash inflow from the issue of stock was \$9,500 ($\$160,000 - \$140,000 - \$10,500$).

Common Stock		
	140,000	
	10,500	Stock Dividend
	9,500	Shares Issued for Cash
	<u>160,000</u>	

Cash outflow for dividends was \$15,000. The stock dividend does not use cash.

- (c) Both of the above activities (issue of common stock and payment of dividends) would be classified as financing activities on the statement of cash flows.

PROBLEM 17-3A

ELBERT COMPANY
Partial Statement of Cash Flows
For the Year Ended November 30, 2010

Cash flows from operating activities

Net income		\$1,650,000
Adjustments to reconcile net income to net cash provided by operating activities activities		
Depreciation expense	\$ 90,000	
Decrease in inventory	500,000	
Decrease in accrued expenses payable	(100,000)	
Increase in prepaid expenses	(150,000)	
Increase in accounts receivable	(250,000)	
Decrease in accounts payable	<u>(340,000)</u>	<u>(250,000)</u>
Net cash provided by operating activities		<u>\$1,400,000</u>

ELBERT COMPANY
Partial Statement of Cash Flows
For the Year Ended November 30, 2010

Cash flows from operating activities	
Cash receipts from customers	\$7,450,000 (1)
Less cash payments:	
To suppliers	\$4,740,000 (2)
For operating expenses	<u>1,310,000 (3)</u>
Net cash provided by operating activities.....	<u>6,050,000</u>
	<u>\$1,400,000</u>

Computations:

(1) Cash receipts from customers	
Sales	\$7,700,000
Deduct: Increase in accounts receivable.....	<u>(250,000)</u>
Cash receipts from customers	<u>\$7,450,000</u>
(2) Cash payments to suppliers	
Cost of goods sold	\$4,900,000
Deduct: Decrease in inventories.....	<u>(500,000)</u>
Cost of purchases.....	4,400,000
Add: Decrease in accounts payable	<u>340,000</u>
Cash payments to suppliers.....	<u>\$4,740,000</u>
(3) Cash payments for operating expenses	
Operating expenses, exclusive of depreciation.....	\$1,060,000*
Add: Increase in prepaid expenses.....	\$150,000
Decrease in accrued expenses payable	<u>100,000</u>
Cash payments for operating expenses	<u>250,000</u>
	<u>\$1,310,000</u>

***\$450,000 + (\$700,000 – \$90,000)**

PROBLEM 17-5A

GRANIA COMPANY
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income		\$230,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$ 60,000	
Loss on sale of equipment	16,000	
Increase in accounts payable	13,000	
Increase in income taxes payable.....	4,000	
Increase in accounts receivable	(15,000)	<u>78,000</u>
Net cash provided by operating activities		<u>\$308,000</u>

GRANIA COMPANY
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers		\$955,000 (1)
Less cash payments:		
For operating expenses	\$611,000 (2)	
For income taxes	<u>36,000 (3)</u>	<u>647,000</u>
Net cash provided by operating activities.....		<u>\$308,000</u>
 (1) <u>Computation of cash receipts from customers</u>		
Revenues		\$970,000
Deduct: Increase in accounts receivable		
(\$75,000 – \$60,000).....		<u>(15,000)</u>
Cash receipts from customers		<u>\$955,000</u>
 (2) <u>Computation of cash payments for operating expenses</u>		
Operating expenses per income statement		\$624,000
Deduct: Increase in accounts payable		
(\$41,000 – \$28,000).....		<u>(13,000)</u>
Cash payments for operating expenses.....		<u>\$611,000</u>
 (3) <u>Computation of cash payments for income taxes</u>		
Income tax expense per income statement.....		\$ 40,000
Deduct: Increase in income taxes payable		
(\$11,000 – \$7,000).....		<u>(4,000)</u>
Cash payments for income taxes		<u>\$ 36,000</u>

PROBLEM 17-7A

(a)

WELLER COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$32,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$14,500	
Increase in accounts payable	14,000	
Decrease in income taxes payable	(1,000)	
Increase in merchandise inventory	(7,000)	
Increase in accounts receivable	(19,000)	1,500
Net cash provided by operating activities		33,500
 Cash flows from investing activities		
Sale of equipment		8,500
 Cash flows from financing activities		
Issuance of common stock	4,000	
Redemption of bonds	(6,000)	
Payment of dividends	(25,000)	
Net cash used by financing activities		(27,000)
 Net increase in cash		15,000
Cash at beginning of period		20,000
Cash at end of period		<u>\$35,000</u>

^(A) \$18,000 (cost of equipment) – \$8,500 (book value) = \$9,500 (accumulated depreciation for equipment sold)

(b) \$33,500 – \$0 – \$25,000 = \$8,500

(a)

WELLER COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers		\$223,000 (1)
Less cash payments:		
To suppliers	\$168,000 (2)	
For operating expenses	9,500 (3)	
For interest	3,000	
For income taxes	<u>9,000 (4)</u>	<u>189,500</u>
Net cash provided by operating activities.....		33,500
 Cash flows from investing activities		
Sale of equipment		8,500
 Cash flows from financing activities		
Issuance of common stock.....	4,000	
Redemption of bonds	(6,000)	
Payment of dividends	<u>(25,000)</u>	
Net cash used by financing activities.....		<u>(27,000)</u>
 Net decrease in cash.....		 15,000
Cash at beginning of period		<u>20,000</u>
Cash at end of period		<u>\$ 35,000</u>

Computations:

(1) Cash receipts from customers		
Sales		\$242,000
Deduct: Increase in accounts receivable.....		<u>(19,000)</u>
Cash receipts from customers		<u>\$223,000</u>

***PROBLEM 17-8A (Continued)**

(2) Cash payments to suppliers	
Cost of goods sold	\$175,000
Add: Increase in inventory	7,000
Cost of purchases	182,000
Deduct: Increase in accounts payable	14,000
Cash payments to suppliers	<u>\$168,000</u>
 (3) Cash payments for operating expenses	
Operating expenses	\$ 24,000
Deduct: Depreciation.....	14,500
Cash payments for operating expenses	<u>\$ 9,500</u>
 (4) Cash payments for income taxes	
Income tax expense	\$ 8,000
Add: Decrease in income taxes payable.....	1,000
Cash payments for income taxes.....	<u>\$ 9,000</u>

(b) \$33,500 – \$0 – \$25,000 = \$8,500

PROBLEM 17-9A

ARMA INC.
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income.....		\$158,900
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$46,500	
Loss on sale of plant assets.....	7,500	
Increase in accounts payable	44,700	
Decrease in accrued expenses payable.....	(500)	
Increase in prepaid expenses	(2,400)	
Increase in inventory	(9,650)	
Increase in accounts receivable.....	<u>(59,800)</u>	<u>26,350</u>
Net cash provided by operating activities.....		185,250

Cash flows from investing activities

Sale of plant assets	1,500	
Purchase of investments.....	(24,000)	
Purchase of plant assets	<u>(85,000)</u>	
Net cash used by investing activities.....		(107,500)

Cash flows from financing activities

Sale of common stock.....	45,000	
Redemption of bonds	(40,000)	
Payment of cash dividends	<u>(40,350)</u>	
Net cash used by financing activities		<u>(35,350)</u>

Net increase in cash.....	42,400
Cash at beginning of period	<u>48,400</u>
Cash at end of period	<u>\$ 90,800</u>

ARMA INC.
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers.....		\$332,980 (1)
Less cash payments:		
To suppliers.....	\$100,410 (2)	
For income taxes	27,280	
For operating expenses.....	15,310 (3)	
For interest.....	4,730	147,730
Net cash provided by operating activities		185,250
Cash flows from investing activities		
Sale of plant assets.....	1,500	
Purchase of investments	(24,000)	
Purchase of plant assets.....	(85,000)	
Net cash used by investing activities		(107,500)
Cash flows from financing activities		
Sale of common stock	45,000	
Redemption of bonds.....	(40,000)	
Payment of cash dividends.....	(40,350)	
Net cash used by financing activities		(35,350)
Net increase in cash		42,400
Cash at beginning of period.....		48,400
Cash at end of period		<u>\$ 90,800</u>

Computations:

(1) Cash receipts from customers		
Sales.....		\$392,780
Deduct: Increase in accounts receivable.....		<u>(59,800)</u>
Cash receipts from customers.....		<u>\$332,980</u>

***PROBLEM 17-10A (Continued)**

(2) Cash payments to suppliers

Cost of goods sold		\$135,460
Add: Increase in inventory		<u>9,650</u>
Cost of purchases		145,110
Deduct: Increase in accounts payable		<u>44,700</u>
Cash payments to suppliers		<u><u>\$100,410</u></u>

(3) Cash payments for operating expenses

Operating expenses exclusive of depreciation			\$ 12,410
Add: Increase in prepaid expenses	\$2,400		
Decrease in accrued expenses payable		<u>500</u>	<u>2,900</u>
Cash payment for operating expenses			<u><u>\$ 15,310</u></u>

RAMIREZ COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$ 37,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$42,000	
Loss on sale of equipment	4,000*	
Decrease in accounts receivable	18,000	
Increase in accounts payable	7,730	
Decrease in prepaid expenses	5,720	
Increase in inventory	(9,450)	68,000
Net cash provided by operating activities		105,000
Cash flows from investing activities		
Sale of land	25,000	
Sale of equipment.....	6,000	
Purchase of equipment.....	(95,000)	
Net cash used by investing activities		(64,000)
Cash flows from financing activities		
Payment of cash dividends	(15,000)	
Net cash used by financing activities		(15,000)
Net increase in cash		26,000
Cash at beginning of period.....		45,000
Cash at end of period		<u>\$ 71,000</u>
<u>Noncash investing and financing activities</u>		
Conversion of bonds by issuance of common stock		<u>\$ 40,000</u>

*((\$6,000 – \$10,000))

OPRAH COMPANY
Worksheet—Statement of Cash Flows
For the Year Ended December 31, 2010

Balance Sheet Accounts	Balance 12/31/09		Reconciling Items		Balance 12/31/10
			Debit	Credit	
Debits					
Cash	47,250	(m)	45,450		92,700
Accounts receivable	57,000	(a)	33,800		90,800
Inventories	102,650	(b)	19,250		121,900
Investments	87,000			(e) 2,500	84,500
Plant assets	205,000	(f)	92,000	(h) 47,000	250,000
Totals	<u>498,900</u>				<u>639,900</u>
Credits					
Accumulated depreciation—plant assets	40,000	(h)	40,200	(g) 49,700	49,500
Accounts payable	48,280			(c) 9,420	57,700
Accrued expenses payable	18,830	(d)	6,730		12,100
Bonds payable	70,000			(i) 30,000	100,000
Common stock	200,000			(j) 50,000	250,000
Retained earnings	121,790	(l)	83,400	(k) 132,210	170,600
Totals	<u>498,900</u>				<u>639,900</u>

Statement of Cash Flow Effects

Operating activities				
Net income	(k)	132,210		
Increase in accounts receivable			(a)	33,800
Increase in inventories			(b)	19,250
Increase in accounts payable	(c)	9,420		
Decrease in accrued expenses payable			(d)	6,730
Depreciation expense	(g)	49,700		
Gain on sale of plant assets			(h)	8,750
Investing activities				
Sale of investments	(e)	2,500		
Sale of plant assets	(h)	15,550		
Purchase of plant assets			(f)	92,000
Financing activities				
Sale of common stock	(j)	50,000		
Issuance of bonds	(i)	30,000		
Payment of dividends			(l)	83,400
Totals		<u>610,210</u>		<u>564,760</u>
Increase in cash			(m)	45,450
Totals		<u>610,210</u>		<u>610,210</u>

PROBLEM 17-1B

	Transaction	Where reported?	Cash inflow, outflow, or no cash flow effect?
(a)	Recorded depreciation expense on the plant assets.	O	No cash flow effect
(b)	Incurred a loss on disposal of plant assets.	O	No cash flow effect
(c)	Acquired a building by paying cash.	I	Cash outflow
(d)	Made principal repayments on a mortgage.	F	Cash outflow
(e)	Issued common stock	F	Cash inflow
(f)	Purchased shares of another company to be held as a long-term equity investment.	I	Cash outflow
(g)	Paid dividends to common stockholders.	F	Cash outflow
(h)	Sold inventory on credit. The company uses a perpetual inventory system.	O	No cash flow effect
(i)	Purchased inventory on credit.	O	No cash flow effect
(j)	Paid wages to employees.	O	Cash outflow

PROBLEM 17-2B

(a) Cash inflows (outflows) related to plant assets 2010:

Equipment purchase	(\$95,000)
Land purchase	(30,000)
Proceeds from equipment sales	11,000*

*Cost of equipment sold \$240,000 + \$95,000 – \$300,000 = \$35,000

Accumulated depreciation removed from accounts for sale of equipment

Accumulated depreciation—
Equipment

	96,000	
Plug 16,000	64,000	Depreciation Expense
	144,000	

Cash proceeds = Cost \$35,000 – accumulated depreciation \$16,000 – loss \$8,000 = \$11,000

Note to instructor—some students may find journal entries helpful in understanding this exercise.

Equipment	95,000	
Cash.....		95,000
Land.....	30,000	
Cash.....		30,000
Cash (plug)	11,000	
Accumulated depreciation	16,000	
Loss on sale of equipment.....	8,000	
Equipment		35,000

(b) Equipment purchase	Investing activities (outflow)
Land purchase	Investing activities (outflow)
Proceeds from equipment sale	Investing activities (inflow)

PROBLEM 17-3B

ROSENTHAL COMPANY
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income		\$1,020,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$105,000	
Amortization expense	20,000	
Decrease in accounts receivable	320,000	
Increase in accrued expenses payable	155,000	
Increase in accounts payable	50,000	
Increase in inventory	(120,000)	
Increase in prepaid expenses.....	(175,000)	<u>355,000</u>
Net cash provided by operating activities		<u>\$1,375,000</u>

ROSENTHAL COMPANY
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers		\$5,720,000 (1)
Less cash payments:		
To suppliers	\$3,380,000 (2)	
For operating expenses	<u>965,000 (3)</u>	<u>4,345,000</u>
Net cash provided by operating activities.....		<u>\$1,375,000</u>

Computations:

(1) Cash receipts from customers		
Sales		\$5,400,000
Add: Decrease in accounts receivable		<u>320,000</u>
Cash receipts from customers		<u>\$5,720,000</u>
(2) Cash payments to suppliers		
Cost of goods sold		\$3,310,000
Add: Increase in inventories		<u>120,000</u>
Cost of purchases.....		3,430,000
Deduct: Increase in accounts payable.....		<u>(50,000)</u>
Cash payments to suppliers.....		<u>\$3,380,000</u>
(3) Cash payments for operating expenses		
Operating expenses		\$ 945,000
Add: Increase in prepaid expenses	\$ 175,000	
Deduct: Increase in accrued expenses payable.....	<u>(155,000)</u>	<u>20,000</u>
Cash payments for operating expenses		<u>\$ 965,000</u>

PROBLEM 17-5B

BRISLIN INC.
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income		\$109,000

Adjustments to reconcile net income

to net cash provided by operating activities

Decrease in accounts receivable	\$ 20,000	

Increase in income taxes payable	6,000	

Decrease in accounts payable	(21,000)	<u>5,000</u>

Net cash provided by operating activities.....		<u>\$114,000</u>

BRISLIN INC.
Partial Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Cash receipts from customers		\$565,000 (1)
Less cash payments:		
For operating expenses	\$421,000 (2)	
For income taxes	<u>30,000 (3)</u>	<u>451,000</u>
Net cash provided by operating activities.....		<u>\$114,000</u>

(1) Computation of cash receipts from customers

Revenues	\$545,000
Add: Decrease in accounts receivable (\$70,000 – \$50,000).....	<u>20,000</u>
Cash receipts from customers	<u>\$565,000</u>

(2) Computation of cash payments for operating expenses

Operating expenses	\$400,000
Add: Decrease in accounts payable (\$51,000 – \$30,000).....	<u>21,000</u>
Cash payments for operating expenses.....	<u>\$421,000</u>

(3) Income tax expense	\$ 36,000
Deduct: Increase in income taxes payable (\$10,000 – \$4,000).....	<u>(6,000)</u>
Cash payments for income taxes	<u>\$ 30,000</u>

(a)

ORTEGA COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$28,000
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$ 8,000	
Increase in income taxes payable	4,000	
Increase in accounts receivable	(11,000)	
Decrease in accounts payable	(12,000)	
Increase in inventory	(16,000)	(27,000)
Net cash provided by operating activities		1,000
Cash flows from investing activities		
Sale of equipment	10,000	
Purchase of equipment	(7,000)	
Net cash provided by investing activities		3,000
Cash flows from financing activities		
Issuance of bonds	10,000	
Payment of cash dividends	(23,000)	
Net cash used by financing activities		(13,000)
Net decrease in cash		(9,000)
Cash at beginning of period		33,000
Cash at end of period		<u>\$24,000</u>

(b) $\$1,000 - \$7,000 - \$23,000 = (\$29,000)$

(a)

ORTEGA COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers		\$275,000 (1)
Less cash payments:		
To suppliers	\$232,000 (2)	
For operating expenses		
(\$37,000 – \$8,000)	29,000	
For interest	7,000	
For income taxes	6,000 (3)	<u>274,000</u>
Net cash provided by operating activities.....		1,000
 Cash flows from investing activities		
Sale of equipment	10,000	
Purchase of equipment	<u>(7,000)</u>	
Net cash provided by investing activities		3,000
 Cash flows from financing activities		
Issuance of bonds.....	10,000	
Payment of cash dividends.....	<u>(23,000)</u>	
Net cash used by financing activities.....		<u>(13,000)</u>
Net decrease in cash.....		(9,000)
Cash at beginning of period		<u>33,000</u>
Cash at end of period		<u>\$ 24,000</u>

Computations:

(1) Cash receipts from customers	
Sales	\$286,000
Deduct: Increase in accounts receivable.....	<u>(11,000)</u>
Cash receipts from customers	<u>\$275,000</u>

***PROBLEM 17-8B (Continued)**

(2) Cash payments to suppliers

Cost of goods sold	\$204,000
Add: Increase in inventory	<u>16,000</u>
Cost of purchases	220,000
Add: Decrease in accounts payable.....	<u>12,000</u>
Cash payments to suppliers	<u>\$232,000</u>

(3) Cash payments for income taxes

Income tax expense	\$ 10,000
Deduct: Increase in income taxes payable	<u>(4,000)</u>
Cash payments for income taxes	<u>\$ 6,000</u>

(b) $\$1,000 - \$7,000 - \$23,000 = (\$29,000)$

ZIEBERT COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities

Net income.....		\$ 112,660
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$ 30,500	
Gain on sale of plant assets	(5,000)	
Increase in accounts payable	9,420	
Decrease in accrued expenses payable	(3,730)	
Increase in accounts receivable.....	(23,800)	
Increase in inventory	(24,250)	(16,860)
Net cash provided by operating activities.....		95,800

Cash flows from investing activities

Sale of investments	27,500	
Sale of plant assets	15,000	
Purchase of plant assets	(146,000)	
Net cash used by investing activities.....		(103,500)

Cash flows from financing activities

Issuance of bonds	75,000	
Sale of common stock.....	50,000	
Payment of cash dividends	(48,000)	
Net cash provided by financing activities.....		77,000

Net increase in cash.....	69,300
Cash at beginning of period	33,400
Cash at end of period	<u>\$ 102,700</u>

ZIEBERT COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Cash receipts from customers.....		\$273,700 (1)
Less cash payments:		
To suppliers.....	\$ 114,290 (2)	
For income taxes	37,270	
For operating expenses.....	23,400 (3)	
For interest.....	<u>2,940</u>	<u>177,900</u>
Net cash provided by operating activities		95,800
 Cash flows from investing activities		
Sale of investments.....	27,500	
Sale of plant assets.....	15,000	
Purchase of plant assets.....	<u>(146,000)</u>	
Net cash used by investing activities		(103,500)
 Cash flows from financing activities		
Issuance of bonds	75,000	
Sale of common stock	50,000	
Payment of cash dividends	<u>(48,000)</u>	
Net cash provided by financing activities.....		<u>77,000</u>
Net increase in cash		69,300
Cash at beginning of period.....		<u>33,400</u>
Cash at end of period		<u>\$102,700</u>

***PROBLEM 17-10B (Continued)**

Computations:

(1) Cash receipts from customers

Sales	\$297,500
Deduct: Increase in accounts receivable.....	<u>(23,800)</u>
Cash receipts from customers	<u>\$273,700</u>

(2) Cash payments to suppliers

Cost of goods sold	\$ 99,460
Add: Increase in inventory	<u>24,250</u>
Cost of purchases.....	123,710
Deduct: Increase in accounts payable.....	<u>(9,420)</u>
Cash payments to suppliers.....	<u>\$114,290</u>

(3) Cash payments for operating expenses

Operating expenses	\$ 19,670
Add: Decrease in accrued expenses payable	<u>3,730</u>
Cash payments for operating expenses.....	<u>\$ 23,400</u>

MARIN COMPANY
Statement of Cash Flows
For the Year Ended December 31, 2010

Cash flows from operating activities		
Net income		\$47,890
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense.....	\$ 55,000	
Gain on sale of equipment.....	(4,000)*	
Increase in accounts payable	13,000	
Decrease in prepaid expenses	4,400	
Increase in accounts receivable	(13,000)	
Increase in inventory	(32,000)	23,400
Net cash provided by operating activities		71,290
Cash flows from investing activities		
Sale of land	40,000	
Sale of equipment.....	37,000	
Purchase of equipment.....	(80,000)	
Net cash used by investing activities		(3,000)
Cash flows from financing activities		
Payment of cash dividends		(84,290)
Net decrease in cash		(16,000)
Cash at beginning of period.....		57,000
Cash at end of period		<u>\$41,000</u>
<u>Noncash investing and financing activities</u>		
Conversion of bonds by issuance of stock		<u>\$30,000</u>

*(**\$37,000 – \$33,000**)

(a) Net cash provided by operating activities:

2007	\$6,934 million
2006	\$6,084 million

- (b) The decrease in cash and cash equivalents for the year ended December 29, 2007 was \$741 million, and the decrease was \$65 million for the year ended December 30, 2006.**
- (c) PepsiCo uses the indirect method of computing and presenting the net cash provided by operating activities.**
- (d) The change in accounts and notes receivable required cash of \$405 million in 2007. The change in inventories required cash of \$204 million in 2007. The change in accounts payable (and other current liabilities) provided cash of \$500 million in 2007.**
- (e) The net cash used by investing activities in 2007 was \$3,744 million.**
- (f) In note 14, under the “Other Supplemental Information” section cash flow information disclosed interest paid of \$251 million and income taxes paid of \$1,731 million in 2007.**

		<u>PepsiCo</u>	<u>Coca-Cola</u>
(a)	$\$6,934 - \$2,430 - \$2,204 =$	$\$2,300$	
	$\$7,150 - \$1,648 - \$3,149 =$		$\$2,353$

All amounts in millions

- (b) The companies are similar in their ability to generate cash. Both had a significant amount of “free cash” available after covering capital expenditures and cash dividends.

- (a) **Crucial to the SEC's effectiveness is its enforcement authority. Each year the SEC brings hundreds of civil enforcement actions against individuals and companies that break the securities laws. Typical infractions include insider trading, accounting fraud, and providing false or misleading information about securities and the companies that issue them.**
- (b) **The main purposes of these laws can be reduced to two common-sense notions:**
- ▶ **Companies publicly offering securities for investment dollars must tell the public the truth about their businesses, the securities they are selling, and the risks involved in investing.**
 - ▶ **People who sell and trade securities—brokers, dealers, and exchanges—must treat investors fairly and honestly, putting investors' interests first.**
- (c) **President Franklin Delano Roosevelt appointed Joseph P. Kennedy, President John F. Kennedy's father, to serve as the first Chairman of the SEC.**

Answers will vary depending on the company chosen by the student.

(a)

CARPINO COMPANY
Statement of Cash Flows
For the Year Ended January 31, 2010

Cash flows from operating activities		
Net loss		\$ (30,000)*
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation expense	\$ 55,000	
Gain from sale of investment	(5,000)	50,000
Net cash provided by operating activities.....		20,000
Cash flows from investing activities		
Sale of investment	80,000	
Purchase of investment	(75,000)	
Purchase of fixtures and equipment	(330,000)	
Net cash used by investing activities.....		(325,000)
Cash flows from financing activities		
Sale of capital stock	420,000	
Purchase of treasury stock.....	(10,000)	
Net cash provided by financing activities.....		410,000
Net increase in cash.....		105,000
Cash at beginning of period		140,000
Cash at end of period		\$245,000
Noncash investing and financing activities		
Issuance of note for truck		\$ 20,000

***Computation of net income (loss)**

Sales of merchandise		\$380,000
Interest revenue		6,000
Gain on sale of investment (\$80,000 – \$75,000).....		<u>5,000</u>
Total revenues and gains		391,000
Merchandise purchased	\$258,000	
Operating expenses (\$160,000 – \$55,000)	105,000	
Depreciation	55,000	
Interest expense	<u>3,000</u>	
Total expenses		<u>421,000</u>
Net loss		<u>\$ (30,000)</u>

- (b) From the information given, it appears that from an operating standpoint, Carpino Company did not have a superb first year, having suffered a \$30,000 net loss. Lisa is correct; the statement of cash flows is not prepared in correct form. The correct format classifies cash flows from three activities—operating, investing, and financing; and it also presents significant noncash investing and financing activities in a separate schedule. Lisa is wrong, however, about the actual increase in cash not being \$105,000; \$105,000 is the correct increase in cash.

MEMO

To: Kyle Benson

From: Student

Re: Statement of cash flows

The statement of cash flows provides information about the cash receipts and cash payments of a firm, classified as operating, investing, and financing activities. The operating activities section of the company's statement of cash flows shows that cash increased by \$172,000 as a result of transactions which affected net income. This amount is computed by adjusting net income for those items which affect net income, but do not affect cash, such as sales on account which remain uncollected at year-end.

The investing activities section of the statement reports cash flows resulting from changes in investments and other long-term assets. The company had a cash outflow from investing activities due to purchases of buildings and equipment.

The financing activities section of the statement reports cash flows resulting from changes in long-term liabilities and stockholders' equity. The company had a cash inflow from financing activities due to the issuance of common stock and an outflow due to the payment of cash dividends.

If you have any further questions, please do not hesitate to contact me.

- (a) The stakeholders in this situation are:
- Willie Morton, president of Tappit Corporation.
 - Robert Jennings, controller.
 - The Board of Directors.
 - The stockholders of Tappit Corporation.
- (b) The president's statement, "We must get that amount above \$1 million," puts undue pressure on the controller. This statement along with his statement, "I know you won't let me down, Robert," encourages Robert to do something unethical.

Controller Robert Jennings' reclassification (intentional misclassification) of a cash inflow from a long-term note (financing activity) issuance to an "increase in payables" (operating activity) is inappropriate and unethical.

- (c) It is unlikely that any board members (other than board members who are also officers of the company) would discover the misclassification. Board members generally do not have detailed enough knowledge of their company's transactions to detect this misstatement. It is possible that an officer of the bank that made the loan would detect the misclassification upon close reading of Tappit Corporation's statement of cash flows. It is also possible that close scrutiny of the balance sheet showing an increase in notes payable (long-term debt) would reveal that there is no comparable financing activity item (proceeds from note payable) in the statement of cash flows.

- (a) The article describes three factors that determine how much money you should set aside. (1) *Your willingness to take risk.* You need to evaluate how willing you are to experience wide swings in your financial position. (2) *Your needs.* Your need to carefully evaluate your situation and evaluate the possibility of various events and what the financial implications would be. This is also impacted by the number of dependents you have. (3) *Your upcoming expenses.* Here you need to look further out into the horizon and consider the implications of larger events such as a big trip, a wedding, or education costs.
- (b) They recommend having at least three months of living expenses set aside, and up to six months.
- (c) Responses to this question will vary. What is most important is that students begin the process of considering their cash needs and developing a plan to set aside enough money to provide a cushion in the event of a financial “hiccup.”

CHAPTER 18

Financial Statement Analysis

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>Problems</u>
1. Discuss the need for comparative analysis.	1, 2, 3, 5	1	3		
2. Identify the tools of financial statement analysis.	2, 3, 5, 6	2	5		
3. Explain and apply horizontal analysis.	3, 4, 5, 25	2, 3, 5, 6, 7	6	1, 3, 4	
4. Describe and apply vertical analysis.	3, 4, 5, 25	2, 4, 8	3, 4, 5, 6, 7	2, 3, 4	1
5. Identify and compute ratios used in analyzing a firm's liquidity, profitability, and solvency.	5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	2, 9, 10, 11, 12, 13		5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7
6. Understand the concept of earning power, and how irregular items are presented.	20, 21, 22, 23	14, 15		12, 13	8, 9
7. Understand the concept of quality of earnings.	24				

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1	Prepare vertical analysis and comment on profitability.	Simple	20–30
2	Compute ratios from balance sheet and income statement.	Simple	20–30
3	Perform ratio analysis, and evaluate financial position and operating results.	Simple	20–30
4	Compute ratios, and comment on overall liquidity and profitability.	Moderate	30–40
5	Compute selected ratios, and compare liquidity, profitability, and solvency for two companies.	Moderate	50–60
6	Compute numerous ratios.	Simple	30–40
7	Compute missing information given a set of ratios.	Complex	30–40
8	Prepare income statement with discontinued operations and extraordinary loss.	Moderate	30–40
9	Prepare income statement with nontypical items.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 18
FINANCIAL STATEMENT ANALYSIS

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Moderate	10–12
BE2	2–5	K, AP	Simple	8–10
BE3	3	AP	Simple	6–8
BE4	4	AP	Simple	6–8
BE5	3	AP	Simple	4–6
BE6	3	AP	Simple	4–6
BE7	3	AP	Simple	4–6
BE8	4	AP	Simple	5–7
BE9	5	AP	Simple	4–6
BE10	5	AP	Simple	3–5
BE11	5	AN	Simple	6–8
BE12	5	AN	Moderate	6–8
BE13	5	AN	Moderate	6–8
BE14	6	AP	Simple	4–6
BE15	6	AP	Simple	3–5
DI1	3	AP	Simple	6–8
DI2	5	AP	Simple	10–12
DI3	6	AP	Simple	6–8
DI4	3–7	C	Simple	3–5
EX1	3	AP	Simple	10–12
EX2	4	AP	Simple	10–12
EX3	3, 4	AP	Simple	12–15
EX4	3, 4	AP	Simple	10–12
EX5	5	AN	Simple	8–10
EX6	5	AP	Simple	8–10
EX7	5	AP	Simple	6–8
EX8	5	AP	Simple	6–8
EX9	5	AP	Simple	6–8
EX10	5	AP	Moderate	8–10

FINANCIAL STATEMENT ANALYSIS (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX11	5	AP	Simple	10–12
EX12	6	AP	Moderate	8–10
EX13	6	AP	Simple	6–8
P1	4, 5	AN	Simple	20–30
P2	5	AP, AN	Simple	20–30
P3	5	AP, AN	Simple	20–30
P4	5	AN	Moderate	30–40
P5	5	AP	Moderate	50–60
P6	5	AP	Simple	30–40
P7	5	AN	Complex	30–40
P8	6	AP	Moderate	30–40
P9	6	AP	Moderate	30–40
BYP1	3, 5	AN, E	Moderate	20–25
BYP2	3, 5	AN, E	Simple	15–20
BYP3	—	AN	Simple	15–20
BYP4	5	C, E	Moderate	15–20
BYP5	6	AP	Moderate	20–25
BYP6	1, 7	C	Simple	15–20
BYP7	5	E	Simple	10–15
BYP8	—	E	Simple	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Discuss the need for comparative analysis.		Q18-1 Q18-2 Q18-3				
2. Identify the tools of financial statement analysis.	Q18-6 BE18-2	Q18-2 Q18-3	BE18-2			
3. Explain and apply horizontal analysis.	BE18-2 Q18-25	Q18-3 Q18-5 DI18-4	Q18-4 BE18-2 BE18-3 BE18-5 BE18-6 BE18-7 DI18-1 E18-1 E18-3 E18-4			
4. Describe and apply vertical analysis.	BE18-2 Q18-25	Q18-3 DI18-4	Q18-4 BE18-2 BE18-4 BE18-8	P18-1		
5. Identify and compute ratios used in analyzing a firm's liquidity, profitability, and solvency.	Q18-6 Q18-8 BE18-2	Q18-5 Q18-7 Q18-9 Q18-10 Q18-11 Q18-12 Q18-13	Q18-19 BE18-2 BE18-9 BE18-10 DI18-2 E18-6 E18-7	BE18-11 BE18-12 BE18-13 E18-5 E18-11 P18-1	P18-2 P18-3 P18-4 P18-5 P18-7	
6. Understand the concept of earning power, and how irregular items are presented.		Q18-20 Q18-21 Q18-22 Q18-23	BE18-14 BE18-15 DI18-3 E18-12			
7. Understand the concept of quality of earnings.		Q18-24 DI18-4				
Broadening Your Perspective		Decision Making Across the Organization Communication		Financial Reporting Comp. Analysis Exploring the Web		Financial Reporting Comp. Analysis Decision Making Across the Organization Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) Juan is not correct. There are three characteristics: liquidity, profitability, and solvency.
(b) The three parties are not primarily interested in the same characteristics of a company. Short-term creditors are primarily interested in the liquidity of the enterprise. In contrast, long-term creditors and stockholders are primarily interested in the profitability and solvency of the company.
2. (a) Comparison of financial information can be made on an intracompany basis, an intercompany basis, and an industry average basis (or norms).
 - (1) An **intracompany basis** compares an item or financial relationship within a company in the current year with the same item or relationship in one or more prior years.
 - (2) The **industry averages basis** compares an item or financial relationship of a company with industry averages (or norms) published by financial rating services.
 - (3) An **intercompany basis** compares an item or financial relationship of one company with the same item or relationship in one or more competing companies.

(b) The **intracompany basis** of comparison is useful in detecting changes in financial relationships and significant trends within a company.

The **industry averages basis** provides information as to a company's relative performance within the industry.

The **intercompany basis** of comparison provides insight into a company's competitive position.
3. Horizontal analysis (also called trend analysis) measures the dollar and percentage increase or decrease of an item over a period of time. In this approach, the amount of the item on one statement is compared with the amount of that same item on one or more earlier statements. Vertical analysis (also called common-size analysis) expresses each item within a financial statement in terms of a percent of a base amount.
4. (a) $\$360,000 \times 1.245 = \$448,200$, 2011 net income.
(b) $\$360,000 \div .06 = \$6,000,000$, 2010 revenue.
5. A ratio expresses the mathematical relationship between one quantity and another. The relationship is expressed in terms of either a percentage (200%), a rate (2 times), or a simple proportion (2:1). Ratios can provide clues to underlying conditions that may not be apparent from individual financial statement components. The ratio is more meaningful when compared to the same ratio in earlier periods or to competitors' ratios or to industry ratios.
6. (a) Liquidity ratios: Current ratio, acid-test ratio, receivables turnover, and inventory turnover.
(b) Solvency ratios: Debt to total assets and times interest earned.
7. Cindy is correct. A single ratio by itself may not be very meaningful and is best interpreted by comparison with: (1) past ratios of the same company, (2) ratios of other companies, or (3) industry norms or predetermined standards. In addition, other ratios of the enterprise are necessary to determine overall financial well-being.
8. (a) Liquidity ratios measure the short-term ability of the enterprise to pay its maturing obligations and to meet unexpected needs for cash.
(b) Profitability ratios measure the income or operating success of a company for a given period of time.
(c) Solvency ratios measure the ability of the company to survive over a long period of time.

9. The current ratio relates current assets to current liabilities. The acid-test ratio relates cash, short-term investments, and net receivables to current liabilities. The current ratio includes inventory and prepaid expenses while the acid-test ratio excludes these. The acid-test ratio provides additional information about short-term liquidity and is an important complement to the current ratio.
10. Donte Company does not necessarily have a problem. The receivables turnover ratio can be misleading in that some companies encourage credit and revolving charge sales and slow collections in order to earn a healthy return on the outstanding receivables in the form of high rates of interest.
11. (a) Asset turnover.
(b) Inventory turnover.
(c) Return on common stockholders' equity.
(d) Times interest earned.
12. The price earnings (P/E) ratio is a reflection of investors' assessments of a company's future earnings. In this question, investors favor Microsoft because it has the higher P/E ratio. The investors feel that Microsoft will be able to generate even higher future earnings and so the investors are willing to pay more for the stock.
13. The payout ratio is cash dividends divided by net income. In a growth company, the payout ratio is often low because the company is reinvesting earnings in the business.
14. (a) The increase in profit margin is good news because it means that a greater percentage of net sales is going towards income.
(b) The decrease in inventory turnover signals bad news because it is taking the company longer to sell the inventory and consequently there is a greater chance of inventory obsolescence.
(c) An increase in the current ratio signals good news because the company improved its ability to meet maturing short-term obligations.
(d) The earnings per share ratio is a deceptive ratio. The decrease might be bad news to the company because it could mean a decrease in net income. If there is an increase in stockholders' investment (as a result of issuing additional shares) and a decrease in EPS, then this means that the additional investment is earning a lower return (as compared to the return on common equity before the additional investment). Generally, this is undesirable.
(e) The increase in the price-earnings ratio is generally good news because it means that the market price per share of stock has increased and investors are willing to pay that higher price for the stock. An increase in the P/E ratio is good news for investors who own the stock and don't want to buy any more. It is bad news for investors who want to buy (or buy more of) the stock.
(f) The increase in the debt to total assets ratio is bad news because it means that the company has increased its obligations to creditors and has lowered its equity "buffer."
(g) The decrease in the times interest earned ratio is bad news because it means that the company's ability to meet interest payments as they come due has weakened.

$$15. \quad \text{Return on assets} = \frac{\text{Net Income}}{\text{Average Assets}} \\ (7.6\%)$$

$$\text{Return on common stockholders' equity} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Common Stockholders' Equity}} \\ (12.8\%)$$

The difference between the two rates can be explained by looking at the denominator value and by remembering the basic accounting equation, $A = L + SE$. The asset value will clearly be the larger of the two denominator values; therefore, it will also give the smaller return.

16. (a) The times interest earned ratio, which is an indication of the company's ability to meet interest payments, and the debt to total assets ratio, which indicates the company's ability to withstand losses without impairing the interests of creditors.
- (b) The current ratio and the acid-test ratio, which indicate a company's liquidity and short-term debt-paying ability.
- (c) The earnings per share and the return on stockholders' equity, both of which indicate the earning power of the investment.
17. Earnings per share means earnings per share of common stock. Preferred stock dividends are subtracted from net income in computing EPS in order to obtain income available to common stockholders.
18. (a) Trading on the equity means that the company has borrowed money at a lower rate of interest than it is able to earn by using the borrowed money. Simply stated, it is using money supplied by nonowners to increase the return to the owners.
- (b) A comparison of the return on total assets with the rate of interest paid for borrowed money indicates the profitability of trading on the equity.

$$19. \quad \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average common shares outstanding}} = \text{Earnings per share}$$

$$\frac{\$160,000 - \$40,000}{50,000} = \$2.40$$

EPS of \$2.40 is high relative to what? Is it high relative to last year's EPS? The president may be comparing the EPS of \$2.40 to the market price of the company's stock.

20. Discontinued operations refers to the disposal of a significant component of the business such as the stopping of an entire activity or eliminating a major class of customers. It is important to report discontinued operations separately from continuing operations because the discontinued component will not affect future income statements.
21. EPS on income before extraordinary items usually is more relevant to an investment decision than EPS on net income. Income before extraordinary items represents the results of continuing and ordinary business activity. It is therefore a better basis for predicting future operating results than an EPS figure which includes the effect of extraordinary items that are not expected to recur again in the foreseeable future.

- 22.** Extraordinary items are events and transactions that are unusual in nature and infrequent in occurrence. Therefore, an extraordinary item is a one-time item which is not typical of the company's operations. When comparing EPS trends, extraordinary items should be omitted since they are not reflective of normal operations. In this example, the trend is unfavorable because EPS, exclusive of extraordinary items, has decreased from \$3.20 to \$2.99.
- 23.** Items (a), (d), and (g) are extraordinary items.
- 24.** (1) Use of alternative accounting methods. Variations among companies in the application of generally accepted accounting principles may hamper comparability.
- (2) Use of pro forma income measures that do not follow GAAP. Pro forma income is calculated by excluding items that the company believes are unusual or nonrecurring. It is often difficult to determine what was included and excluded.
- (3) Improper revenue and expense recognition. Many high-profile cases of inappropriate accounting involve recording items in the wrong period.
- 25.** The following provide examples of horizontal and vertical analysis:
- Horizontal Analysis: Financial Highlights; Results of operations-consolidated reviews; Result of Operations–Division Review; and Reconciliation of GAAP and Non-GAAP information.
- Vertical Analysis: Pie charts; Asset category allocation; and Reconciliation of GAAP and Non-GAAP information.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 18-1

Dear Uncle Frank,

It was so good to hear from you! I hope you and Aunt Irene are still enjoying your new house.

You asked some interesting questions. They relate very well to the material that we are studying now in my financial accounting class. You said you heard that different users of financial statements are interested in different characteristics of companies. This is true. A short-term creditor, such as a bank, is interested in the company's liquidity, or ability to pay obligations as they become due. The liquidity of a borrower is extremely important in evaluating the safety of a loan. A long-term creditor, such as a bondholder, would be interested in solvency, the company's ability to survive over a long period of time. A long-term creditor would also be interested in profitability. They are interested in the likelihood that the company will survive over the life of the debt and be able to meet interest payments. Stockholders are also interested in profitability, and in the solvency of the company. They want to assess the likelihood of dividends and the growth potential of the stock.

It is important to compare different financial statement elements to other items. The amount of a financial statement element such as cash does not have much meaning unless it is compared to something else. Comparisons can be done on an intracompany basis. This basis compares an item or financial relationship within a company for the current year to one or more previous years. Intracompany comparisons are useful in detecting changes in financial relationships and significant trends. Comparisons can also be done with industry averages. This basis compares an item or financial relationship with industry averages or norms. Comparisons with industry averages provide information as to a company's relative performance within the industry. Finally, comparisons can be done on an intercompany basis. This basis compares an item or financial relationship with the same item or relationship in one or more competing companies. Intercompany comparisons are useful in determining a company's competitive position.

I hope this answers your questions. If it does not, or you have more questions, please write me again or call. We could even meet for lunch sometime; it would be great to see you!

Love,

Your niece (or nephew)

BRIEF EXERCISE 18-2

- (a) The three tools of financial statement analysis are horizontal analysis, vertical analysis, and ratio analysis. Horizontal analysis evaluates a series of financial statement data over a period of time. Vertical analysis evaluates financial statement data by expressing each item in a financial statement as a percent of a base amount. Ratio analysis expresses the relationship among selected items of financial statement data.

(b) Horizontal Analysis

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Current assets	100%	115%	120%

(115 = \$230,000/\$200,000; 120 = \$240,000/\$200,000)

Vertical Analysis

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Current assets*	40%	38%	39%

*as a percentage of total assets

(40% = \$200,000/\$500,000; 38% = \$230,000/\$600,000;

39% = \$240,000/\$620,000)

Ratio Analysis

	<u>2009</u>	<u>2010</u>	<u>2011</u>
Current ratio	1.25	1.37	1.30

(1.25 = \$200,000/\$160,000; 1.37 = \$230,000/\$168,000;

1.30 = \$240,000/\$184,000)

BRIEF EXERCISE 18-3

Horizontal analysis:

	<u>Dec. 31, 2011</u>	<u>Dec. 31, 2010</u>	<u>Increase or (Decrease)</u>	
			<u>Amount</u>	<u>Percentage</u>
Accounts receivable	\$ 520,000	\$ 400,000	\$120,000	30%
Inventory	\$ 840,000	\$ 600,000	\$240,000	40%
Total assets	\$3,000,000	\$2,500,000	\$500,000	20%
$\frac{120,000}{400,000} = .30$	$\frac{240,000}{600,000} = .40$	$\frac{500,000}{2,500,000} = .20$		

BRIEF EXERCISE 18-4

Vertical analysis:

	<u>Dec. 31, 2011</u>		<u>Dec. 31, 2010</u>	
	<u>Amount</u>	<u>Percentage*</u>	<u>Amount</u>	<u>Percentage**</u>
Accounts receivable	\$ 520,000	17.3%	\$ 400,000	16.0%
Inventory	\$ 840,000	28.0%	\$ 600,000	24.0%
Total assets	\$3,000,000	100%	\$2,500,000	100%

$$* \frac{520,000}{3,000,000} = .173$$

$$** \frac{400,000}{2,500,000} = .16$$

$$* \frac{840,000}{3,000,000} = .28$$

$$** \frac{600,000}{2,500,000} = .24$$

BRIEF EXERCISE 18-5

	<u>2011</u>	<u>2010</u>	<u>2009</u>
Net income	\$522,000	\$450,000	\$500,000

	<u>Increase or (Decrease)</u>	
	<u>Amount</u>	<u>Percentage</u>
(a) 2009–2010	(50,000)	(10%)
(b) 2010–2011	72,000	16%

$$\frac{50,000}{500,000} = .10$$

$$\frac{72,000}{450,000} = .16$$

BRIEF EXERCISE 18-6

	<u>2011</u>	<u>2010</u>	<u>Increase</u>
Net income	\$585,000	X	30%

$$.30 = \frac{585,000 - X}{X}$$

$$.30X = 585,000 - X$$

BRIEF EXERCISE 18-6 (Continued)

$$1.30X = 585,000$$

$$X = 450,000$$

$$2010 \text{ Net income} = \underline{\$450,000}$$

BRIEF EXERCISE 18-7

Comparing the percentages presented results in the following conclusions: The net income for Epstein increased in 2010 because of the combination of an increase in sales and a decrease in both cost of goods sold and expenses. However, the reverse was true in 2011 as sales decreased while both cost of goods sold and expenses increased. This resulted in a decrease in net income.

BRIEF EXERCISE 18-8

	<u>2011</u>	<u>2010</u>	<u>2009</u>
Sales	100.0	100.0	100.0
Cost of goods sold	59.2	62.4	64.5
Expenses	<u>25.0</u>	<u>25.6</u>	<u>27.5</u>
Net income	<u>15.8</u>	<u>12.0</u>	<u>8.0</u>

Net income as a percent of sales for Charles increased over the three-year period because cost of goods sold and expenses both decreased as a percent of sales every year.

BRIEF EXERCISE 18-9

(a) Working capital = Current assets – Current liabilities

Current assets	\$45,918,000
Current liabilities	<u>40,644,000</u>
Working capital	<u>\$ 5,274,000</u>

BRIEF EXERCISE 18-9 (Continued)

(b) Current ratio:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{\$45,918,000}{\$40,644,000}$$
$$= \underline{1.13:1}$$

(c) Acid-test ratio:

$$\frac{\begin{array}{l} \text{Cash + Short-term investments} \\ + \text{Receivables (net)} \end{array}}{\text{Current liabilities}} = \frac{\$8,041,000 + \$4,947,000 + \$12,545,000}{\$40,644,000}$$
$$= \frac{\$25,533,000}{\$40,644,000}$$
$$= \underline{.63:1}$$

BRIEF EXERCISE 18-10

$$\text{(a) Asset turnover} = \frac{\text{Net sales}}{\text{Average assets}}$$
$$= \frac{\$80,000,000}{\frac{\$14,000,000 + \$18,000,000}{2}}$$
$$= \underline{5 \text{ times}}$$

$$\text{(b) Profit margin} = \frac{\text{Net income}}{\text{Net sales}}$$
$$= \frac{\$11,440,000}{\$80,000,000}$$
$$= \underline{14.3\%}$$

BRIEF EXERCISE 18-11

(a) Receivables turnover = $\frac{\text{Net credit sales}}{\text{Average net receivables}}$

	2011	2010
(1)	$\frac{\$3,960,000}{\$535,000^*} = 7.4 \text{ times}$ $*(\$520,000 + \$550,000) \div 2$	$\frac{\$3,100,000}{\$500,000^{**}} = 6.2 \text{ times}$ $**(\$480,000 + \$520,000) \div 2$
(2)	Average collection period $\frac{365}{7.4} = 49.3 \text{ days}$	$\frac{365}{6.2} = 58.9 \text{ days}$

- (b) Marino Company should be pleased with the effectiveness of its credit and collection policies. The company has decreased the average collection period by 9.6 days and the collection period of approximately 49 days is well within the 60 days allowed in the credit terms.

BRIEF EXERCISE 18-12

(a) Inventory turnover = $\frac{\text{Cost of goods sold}}{\text{Average inventory}}$

(1)	2011	2010
	$\frac{\$4,300,000}{\left(\frac{\$980,000 + \$1,020,000}{2} \right)} = 4.3 \text{ times}$	$\frac{\$4,541,000}{\left(\frac{\$860,000 + \$980,000}{2} \right)} = 4.9 \text{ times}$
	Beginning inventory	\$ 980,000
	Purchases	<u>4,340,000</u>
	Goods available for sale	5,320,000
	Ending inventory	<u>1,020,000</u>
	Cost of goods sold	<u>\$4,300,000</u>
		\$ 860,000
		<u>4,661,000</u>
		5,521,000
		<u>980,000</u>
		<u>\$4,541,000</u>

(2) Days in inventory

$\frac{365}{4.3} = 84.9 \text{ days}$	$\frac{365}{4.9} = 74.5 \text{ days}$

BRIEF EXERCISE 18-12 (Continued)

- (b) Management should be concerned with the fact that inventory is moving slower in 2011 than it did in 2010. The decrease in the turnover could be because of poor pricing decisions or because the company is stuck with obsolete inventory.

BRIEF EXERCISE 18-13

$$\text{Payout ratio} = \frac{\text{Cash dividends}}{\text{Net income}}$$

$$.20 = \frac{X}{\$66,000}$$

$$X = \$66,000 (.20) = \$13,200$$

$$\text{Cash dividends} = \underline{\underline{\$13,200}}$$

$$\text{Return on assets} = \frac{\text{Net income}}{\text{Average assets}}$$

$$.15 = \frac{\$66,000}{X}$$

$$.15X = \$66,000$$

$$X = \frac{\$66,000}{.15}$$

$$X = \$440,000$$

$$\text{Average assets} = \underline{\underline{\$440,000}}$$

BRIEF EXERCISE 18-14

MING CORPORATION
Partial Income Statement

Income before income taxes	\$400,000
Income tax expense (\$400,000 X 30%).....	<u>120,000</u>
Income before extraordinary item	280,000
Extraordinary loss from flood, net of \$21,000 tax savings (\$70,000 X 30%)	<u>49,000</u>
Net income	<u>\$231,000</u>

BRIEF EXERCISE 18-15

REEVES CORPORATION
Partial Income Statement

Loss from operations of Mexico facility, net of \$90,000 tax saving (\$300,000 X 30%).....	\$210,000	
Loss on disposal of Mexico facility, net of \$36,000 tax saving (\$120,000 X 30%)	<u>84,000</u>	<u>\$294,000</u>

SOLUTIONS FOR DO IT! REVIEW EXERCISES**DO IT! 18-1**

	Increase in 2011	
	Amount	Percent
Current assets	\$(21,000)	(9.5)% [(\$199,000 – \$220,000) ÷ \$220,000]
Plant assets	<u>41,000</u>	5.3% [(\$821,000 – \$780,000) ÷ \$780,000]
Total assets	<u>\$ 20,000</u>	2.0% [(\$1,020,000 – \$1,000,000) ÷ \$1,000,000]

	<u>2010</u>	<u>2009</u>
(a) Current ratio: $\$1,380 \div \$900 =$ $\$1,310 \div \$790 =$	1.53:1	1.66:1
(b) Inventory turnover: $\$970 / [(\$460 + \$390) \div 2] =$ $\$890 / [(\$390 + \$340) \div 2] =$	2.28 times	2.44 times
(c) Profit margin ratio: $\$252 \div \$3,800 =$ $\$88 \div \$3,460 =$	6.6%	2.5%
(d) Return on assets: $\$252 / [(\$2,340 + \$2,210) \div 2] =$ $\$88 / [(\$2,210 + \$1,900) \div 2] =$	11.1%	4.3%
(e) Return on common stockholders' equity: $\$252 / [(\$1,030 + \$1,040) \div 2] =$ $\$88 / [(\$1,040 + \$900) \div 2] =$	24.3%	9.1%
(f) Debt to total assets ratio: $\$1,310 \div \$2,340 =$ $\$1,170 \div \$2,210 =$	56.0%	52.9%
(g) Times interest earned: $(\$252 + \$168 + \$10) \div \$10 =$ $(\$88 + \$132 + \$20) \div \$20 =$	43 times	12 times

SUPPLY CORPORATION
Income Statement (Partial)

Income before income taxes		\$500,000
Income tax expense		<u>200,000</u>
Income from continuing operations		300,000
Discontinued operations		
Loss from operations of music		
division, net of \$24,000 tax saving	\$36,000	
Gain from disposal of music		
division, net of \$16,000, taxes	<u>24,000</u>	<u>12,000</u>
Income before extraordinary item		288,000
Extraordinary earthquake loss,		
net of \$60,000 tax saving		<u>90,000</u>
Net income		<u>\$198,000</u>

DO IT! 18-4

1. Current ratio:	A measure used to evaluate a company's liquidity.
2. Pro forma income:	Usually excludes items that a company thinks are unusual or nonrecurring.
3. Quality of earnings:	Indicates the level of full and transparent information provided to users of the financial statements.
4. Discontinued operations:	The disposal of a significant segment of a business.
5. Horizontal analysis:	Determines increases or decreases in a series of financial statement data.
6. Comprehensive income:	Includes all changes in stockholders' equity during a period except those resulting from investments by stockholders and distributions to stockholders.

SOLUTIONS TO EXERCISES

EXERCISE 18-1

BLEVINS INC. Condensed Balance Sheets December 31

			<u>Increase or (Decrease)</u>	
	<u>2011</u>	<u>2010</u>	<u>Amount</u>	<u>Percentage</u>
Assets				
Current assets	\$125,000	\$100,000	\$25,000	25.0%
Plant assets (net)	<u>396,000</u>	<u>330,000</u>	<u>66,000</u>	20.0%
Total assets	<u>\$521,000</u>	<u>\$430,000</u>	<u>91,000</u>	21.2%
Liabilities				
Current liabilities	\$ 91,000	\$ 70,000	\$21,000	30.0%
Long-term liabilities	<u>133,000</u>	<u>95,000</u>	<u>38,000</u>	40.0%
Total liabilities	<u>224,000</u>	<u>165,000</u>	<u>59,000</u>	35.8%
Stockholders' Equity				
Common stock, \$1 par	161,000	115,000	46,000	40.0%
Retained earnings	<u>136,000</u>	<u>150,000</u>	<u>(14,000)</u>	(9.3%)
Total stockholders' equity	<u>297,000</u>	<u>265,000</u>	<u>32,000</u>	12.1%
Total liabilities and stockholders' equity	<u>\$521,000</u>	<u>\$430,000</u>	<u>\$91,000</u>	21.2%

EXERCISE 18-2

GALLUP CORPORATION
Condensed Income Statements
For the Years Ended December 31

	2011		2010	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Sales	\$750,000	100.0%	\$600,000	100.0%
Cost of goods sold	<u>465,000</u>	<u>62.0%</u>	<u>390,000</u>	<u>65.0%</u>
Gross profit	<u>285,000</u>	<u>38.0%</u>	<u>210,000</u>	<u>35.0%</u>
Selling expenses	120,000	16.0%	72,000	12.0%
Administrative expenses	<u>60,000</u>	<u>8.0%</u>	<u>54,000</u>	<u>9.0%</u>
Total operating expenses	<u>180,000</u>	<u>24.0%</u>	<u>126,000</u>	<u>21.0%</u>
Income before income taxes	105,000	14.0%	84,000	14.0%
Income tax expense	<u>33,000</u>	<u>4.4%</u>	<u>24,000</u>	<u>4.0%</u>
Net income	<u>\$ 72,000</u>	<u>9.6%</u>	<u>\$ 60,000</u>	<u>10.0%</u>

EXERCISE 18-3**(a)**

CONARD CORPORATION
Condensed Balance Sheets
December 31

			<u>Percentage Change from 2010</u>
	<u>2011</u>	<u>2010</u>	
Assets			
Current assets	\$ 74,000	\$ 80,000	(7.5%)
Property, plant & equipment (net)	99,000	90,000	10.0%
Intangibles	<u>27,000</u>	<u>40,000</u>	(32.5%)
Total assets	<u>\$200,000</u>	<u>\$210,000</u>	(4.8%)

EXERCISE 18-3 (Continued)

CONARD CORPORATION
Condensed Balance Sheets (Continued)
December 31

	<u>2011</u>	<u>2010</u>	<u>Increase (Decrease)</u>	<u>Percentage Change from 2010</u>
Liabilities and stockholders' equity				
Current liabilities	\$ 42,000	\$ 48,000	\$ (6,000)	(12.5%)
Long-term liabilities	143,000	150,000	(7,000)	(4.7%)
Stockholders' equity	<u>15,000</u>	<u>12,000</u>	<u>3,000</u>	25.0%
Total liabilities and stockholders' equity	<u>\$200,000</u>	<u>\$210,000</u>	<u>\$(10,000)</u>	(4.8%)

(b)

CONARD CORPORATION
Condensed Balance Sheet
December 31, 2011

	<u>Amount</u>	<u>Percent</u>
Assets		
Current assets	\$ 74,000	37.0%
Property, plant, and equipment (net)	99,000	49.5%
Intangibles	<u>27,000</u>	<u>13.5%</u>
Total assets	<u>\$200,000</u>	<u>100.0%</u>
Liabilities and stockholders' equity		
Current liabilities	\$ 42,000	21.0%
Long-term liabilities	143,000	71.5%
Stockholders' equity	<u>15,000</u>	<u>7.5%</u>
Total liabilities and stockholders' equity	<u>\$200,000</u>	<u>100.0%</u>

EXERCISE 18-4**(a)**

HENDI CORPORATION
Condensed Income Statements
For the Years Ended December 31

	<u>2011</u>	<u>2010</u>	<u>Increase or (Decrease)</u> <u>During 2010</u>	
			<u>Amount</u>	<u>Percentage</u>
Net sales	\$600,000	\$500,000	\$100,000	20.0%
Cost of goods sold	483,000	420,000	63,000	15.0%
Gross profit	117,000	80,000	37,000	46.3%
Operating expenses	57,200	44,000	13,200	30.0%
Net income	<u>\$ 59,800</u>	<u>\$ 36,000</u>	<u>\$ 23,800</u>	<u>66.1%</u>

(b)

HENDI CORPORATION
Condensed Income Statements
For the Years Ended December 31

	<u>2011</u>		<u>2010</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Net sales	\$600,000	100.0%	\$500,000	100.0%
Cost of goods sold	483,000	80.5%	420,000	84.0%
Gross profit	117,000	19.5%	80,000	16.0%
Operating expenses	57,200	9.5%	44,000	8.8%
Net income	<u>\$ 59,800</u>	<u>10.0%</u>	<u>\$ 36,000</u>	<u>7.2%</u>

EXERCISE 18-5

- (a) Current ratio = 2.1:1 (\$3,361 ÷ \$1,635)**
Acid-test ratio = 1.31:1 (\$2,146 ÷ \$1,635)
Receivables turnover = 7.1 times (\$8,828 ÷ \$1,236)*
Inventory turnover = 5.7 times (\$5,526 ÷ \$976.5)**

***(\$1,788 + \$684) ÷ 2**

**** (956 + 997) ÷ 2**

EXERCISE 18-5 (Continued)

(b)	<u>Ratio</u>	<u>Nordstrom</u>	<u>J.C. Penney</u>	<u>Industry</u>
	Current	2.1:1	2.0:1	1.06:1
	Acid-test	1.31:1	.87:1	.29:1
	Receivables turnover	7.1	57.0	28.2
	Inventory turnover	5.7	3.5	7.0

Nordstrom is above J.C. Penney for the current and acid-test ratios, but significantly below for the receivables turnover. Nordstrom is also better than J.C. Penney for inventory turnover.

Nordstrom is better than the industry average for the current and acid test ratios but below the industry average for the receivables turnover and the inventory turnover ratio.

EXERCISE 18-6

(a) Current ratio as of February 1, 2010 = 2.6:1 ($\$130,000 \div \$50,000$).

Feb.	3	2.6:1	No change in total current assets or liabilities.
	7	2.0:1	($\$102,000 \div \$50,000$).
	11	2.0:1	No change in total current assets or liabilities.
	14	2.4:1	($\$90,000 \div \$38,000$).
	18	2.1:1	($\$90,000 \div \$43,000$).

(b) Acid-test ratio as of February 1, 2010 = 2.3:1 ($\$113,000^* \div \$50,000$).

* $\$130,000 - \$15,000 - \$2,000$

Feb.	3	2.3:1	No change in total quick assets or current liabilities.
	7	1.7:1	($\$85,000 \div \$50,000$).
	11	1.6:1	($\$82,000 \div \$50,000$).
	14	1.8:1	($\$70,000 \div \$38,000$).
	18	1.6:1	($\$70,000 \div \$43,000$).

EXERCISE 18-7

(a) $\frac{\$145,000}{\$50,000} = 2.9:1.$

(b) $\frac{\$85,000}{\$50,000} = 1.7:1.$

(c) $\frac{\$390,000}{\$65,000 (1)} = 6.0 \text{ times.}$

(d) $\frac{\$198,000}{\$55,000 (2)} = 3.6 \text{ times.}$

(1) $\frac{\$70,000 + \$60,000}{2}$

(2) $\frac{\$60,000 + \$50,000}{2}$

EXERCISE 18-8

(a) Profit margin $\frac{\$50,000}{\$760,000} = 6.6\%.$

(b) Asset turnover $\frac{\$760,000}{\left[\frac{\$500,000 + \$580,000}{2} \right]} = 1.4 \text{ times.}$

(c) Return on assets $\frac{\$50,000}{\$540,000} = 9.3\%.$

(d) Return on common stockholders' equity $\frac{\$50,000}{\left[\frac{\$325,000 + \$430,000}{2} \right]} = 13.2\%.$

EXERCISE 18-9

$$(a) \frac{\$65,000 - \$5,000}{30,000 \text{ shares}} = \$2.00.$$

$$(b) \frac{\$13.00}{\$2.00} = 6.5 \text{ times.}$$

$$(c) \frac{\$26,000}{\$65,000} = 40\%.$$

$$(d) \frac{\$65,000 + \$16,000 + \$24,000}{\$16,000} = \frac{\$105,000}{\$16,000} = 6.6 \text{ times.}$$

EXERCISE 18-10

$$(a) \text{ Inventory turnover} = 3.5 = \frac{\text{Cost of goods sold}}{\left[\frac{\$200,000 + \$180,000}{2} \right]}$$

$3.5 \times \$190,000 = \text{Cost of goods sold}$
 $\text{Cost of goods sold} = \$665,000.$

$$(b) \text{ Receivables turnover} = 8.8 = \frac{\text{Net sales (credit)}}{\left[\frac{\$72,500 + \$126,000}{2} \right]}$$

$8.8 \times \$99,250 = \text{Net sales (credit)} = \$873,400.$

$$(c) \text{ Return on common stockholders' equity} = 24\% =$$

$$\frac{\text{Net income}}{\left[\frac{\$400,000 + \$113,500 + \$400,000 + \$101,000}{2} \right]}$$

$.24 \times \$507,250 = \text{Net income} = \$121,740.$

EXERCISE 18-10 (Continued)

$$(d) \text{ Return on assets} = 20\% = \frac{\$121,740 [\text{see (c) above}]}{\text{Average assets}}$$

$$\text{Average assets} = \frac{\$121,740}{.20} = \$608,700$$

$$\frac{\text{Total assets (Dec. 31, 2011)} + \$605,000}{2} = \$608,700$$

$$\text{Total assets (Dec. 31, 2011)} = (\$608,700 \times 2) - \$605,000 = \$612,400.$$

EXERCISE 18-11

- (a) $(\$4,300 + \$21,200 + \$10,000)/\$12,370 = \underline{2.87:1}$
- (b) $(\$4,300 + \$21,200)/\$12,370 = \underline{2.06:1}$
- (c) $\$100,000/[(\$21,200 + \$23,400)/2] = \underline{4.48 \text{ times}}$
- (d) $\$60,000/[(\$10,000 + \$7,000)/2] = \underline{7.06 \text{ times}}$
- (e) $\$15,000/\$100,000 = \underline{15\%}$
- (f) $\$100,000/[(\$110,500 + \$120,100)/2] = \underline{.87}$
- (g) $\$15,000/[(\$110,500 + \$120,100)/2] = \underline{13\%}$
- (h) $\$15,000/[(\$98,130 + \$89,000)/2] = \underline{16\%}$
- (i) $\$12,370/\$110,500 = \underline{11.2\%}$

EXERCISE 18-12

- (a) **MOLINI CORPORATION**
Partial Income Statement
For the Year Ended October 31, 2010

Income before income taxes	\$540,000
Income tax expense (\$540,000 X 30%)	<u>162,000</u>
Income before extraordinary item	378,000
Extraordinary loss from flood, net of \$45,000 tax savings (\$150,000 X 30%)	<u>105,000</u>
Net income	<u>\$273,000</u>

EXERCISE 18-12 (Continued)

(b) To: Chief Accountant

From: Your name, Independent Auditor

After reviewing your income statement for the year ended 10/31/10, we believe it is misleading for the following reasons:

The amount reported for income before extraordinary items is overstated by \$45,000. The income tax expense should be 30% of \$540,000, or \$162,000, not \$117,000.

Also, the effect of the extraordinary loss on net income is only \$105,000, not \$150,000. An income tax savings of \$45,000 should be netted against the extraordinary loss.

EXERCISE 18-13

(a) **YADIER CORPORATION**
Partial Income Statement
For the Year Ended December 31, 2010

Income from continuing operations.....	\$290,000
Discontinued operations	
Gain on discontinued division, net of \$9,000	
income taxes.....	<u>21,000</u>
Income before extraordinary item.....	311,000
Extraordinary item	
Extraordinary loss, net of \$24,000 income tax saving.....	<u>56,000</u>
Net income	<u>\$255,000</u>

(b) The correction of an error in last year's financial statements is a prior period adjustment. The correction is reported in the 2010 retained earnings statement as an adjustment that increases the reported beginning balance of retained earnings by \$14,000, or [\$20,000 – (\$20,000 X 30%)].

SOLUTIONS TO PROBLEMS

PROBLEM 18-1

(a) **Condensed Income Statement
For the Year Ended December 31, 2011**

	Douglas Company		Maulder Company	
	Dollars	Percent	Dollars	Percent
Net sales	\$1,549,035	100.0%	\$339,038	100.0%
Cost of goods sold	1,080,490	69.8%	241,000	71.1%
Gross profit	468,545	30.2%	98,038	28.9%
Operating expenses	302,275	19.5%	79,000	23.3%
Income from operations	166,270	10.7%	19,038	5.6%
Other expenses and losses				
Interest expense	8,980	.6%	2,252	.7%
Income before income taxes	157,290	10.1%	16,786	4.9%
Income tax expense	54,500	3.5%	6,650	1.9%
Net income	\$ 102,790	6.6%	\$ 10,136	3.0%

- (b) Douglas Company appears to be more profitable. It has higher relative gross profit, income from operations, income before taxes, and net income. Douglas's return on assets of 12.4% $\left(\frac{\$102,790}{\$829,848} \right)^a$ is higher than Maulder's return on assets of 4.7% $\left(\frac{\$10,136}{\$214,172} \right)^b$. Also, Douglas's return on common stockholders' equity of 15.6% $\left(\frac{\$102,790}{\$660,028} \right)^c$ is higher than Maulder's return on stockholders' equity of 6.6% $\left(\frac{\$10,136}{\$154,047} \right)^d$.

PROBLEM 18-1 (Continued)

^a\$102,790 is Douglas's 2011 net income. \$829,848 is Douglas's 2011 average assets:

	2011	2010	
Current assets	<u>\$325,975</u>	<u>\$312,410</u>	
Plant assets	<u>521,310</u>	<u>500,000</u>	
Total assets	<u>\$847,285</u>	<u>\$812,410</u>	= $\frac{\$1,659,695}{2}$

^b\$10,136 is Maulder's 2011 net income. \$214,172 is Maulder's 2011 average assets:

	2011	2010	
Current assets	<u>\$ 83,336</u>	<u>\$ 79,467</u>	
Plant assets	<u>139,728</u>	<u>125,812</u>	
Total assets	<u>\$223,064</u>	<u>\$205,279</u>	= $\frac{\$428,343}{2}$

^c\$102,790 is Douglas's 2011 net income. \$660,028 is Douglas's 2011 average stockholders' equity:

	2011	2010	
Common stock	<u>\$500,000</u>	<u>\$500,000</u>	
Retained earnings	<u>173,460</u>	<u>146,595</u>	
Stockholders' equity	<u>\$673,460</u>	<u>\$646,595</u>	= $\frac{\$1,320,055}{2}$

^d\$10,136 is Maulder's 2011 net income. \$154,047 is Maulder's 2011 average stockholders' equity:

	2011	2010	
Common stock	<u>\$120,000</u>	<u>\$120,000</u>	
Retained earnings	<u>38,096</u>	<u>29,998</u>	
Stockholders' equity	<u>\$158,096</u>	<u>\$149,998</u>	= $\frac{\$308,094}{2}$

PROBLEM 18-2

$$(a) \text{ Earnings per share} = \frac{\$192,000}{57,000} = \$3.37.$$

$$\begin{aligned}(b) \text{ Return on common stockholders' equity} &= \frac{\$192,000}{\left[\frac{\$465,400 + \$566,700}{2} \right]} \\ &= \frac{\$192,000}{\$516,050} \\ &= 37.2\%.\end{aligned}$$

$$(c) \text{ Return on assets} = \frac{\$192,000}{\left[\frac{\$852,800 + \$970,200}{2} \right]} = \frac{\$192,000}{\$911,500} = 21.1\%.$$

$$(d) \text{ Current ratio} = \frac{\$369,900}{\$203,500} = 1.82:1$$

$$(e) \text{ Acid-test ratio} = \frac{\$246,900}{\$203,500} = 1.21:1$$

$$\begin{aligned}(f) \text{ Receivables turnover} &= \frac{\$1,818,500}{\left[\frac{(\$102,800 + \$117,800)}{2} \right]} \\ &= \frac{\$1,818,500}{\$110,300} \\ &= 16.5 \text{ times.}\end{aligned}$$

PROBLEM 18-2 (Continued)

$$(g) \text{ Inventory turnover} = \frac{\$1,011,500}{\left[\frac{\$115,500 + \$123,000}{2} \right]} = \frac{\$1,011,500}{\$119,250} = 8.5 \text{ times.}$$

$$(h) \text{ Times interest earned} = \frac{\$291,000}{\$18,000} = 16.2 \text{ times.}$$

$$(i) \text{ Asset turnover} = \frac{\$1,818,500}{\$911,500^*} = 2.0 \text{ times.}$$

$$*(\$852,800 + \$970,200) \div 2$$

$$(j) \text{ Debt to total assets} = \frac{\$403,500}{\$970,200} = 41.6\%.$$

PROBLEM 18-3

(a)	2010	2011
(1) Profit margin.	$\frac{\$30,000}{\$650,000} = 4.6\%$	$\frac{\$45,000}{\$700,000} = 6.4\%$
(2) Asset turnover.	$\frac{\$650,000}{\left[\frac{\$533,000 + \$600,000}{2} \right]} = 1.1 \text{ times}$	$\frac{\$700,000}{\left[\frac{\$600,000 + \$640,000}{2} \right]} = 1.1 \text{ times}$
(3) Earnings per share.	$\frac{\$30,000}{31,000} = \$.97$	$\frac{\$45,000}{32,000} = \$1.41$
(4) Price-earnings ratio.	$\frac{\$5.00}{\$.97} = 5.2 \text{ times}$	$\frac{\$8.00}{\$1.41} = 5.7 \text{ times}$
(5) Payout ratio.	$\frac{\$18,000^*}{\$30,000} = 60.0\%$ $*(\$113,000 + \$30,000 - \$125,000)$	$\frac{\$25,000^{**}}{\$45,000} = 55.6\%$ $^{**}(\$125,000 + \$45,000 - \$145,000)$
(6) Debt to total assets.	$\frac{\$165,000}{\$600,000} = 27.5\%$	$\frac{\$155,000}{\$640,000} = 24.2\%$

PROBLEM 18-3 (Continued)

- (b) The underlying profitability of the corporation appears to have improved. For example, profit margin and earnings per share have both increased. In addition, the corporation's price-earnings ratio has increased, which suggests that investors may be looking more favorably at the corporation. Also, the corporation appears to be involved in attempting to reduce its debt burden as its debt to total assets ratio has decreased. Similarly, its payout ratio has decreased, which should help its overall solvency.**

PROBLEM 18-4

(a) LIQUIDITY

	2010	2011	Change
Current	$\frac{\$343,000}{\$182,000} = 1.9:1$	$\frac{\$374,000}{\$198,000} = 1.9:1$	No change
Acid-test	$\frac{\$185,000}{\$182,000} = 1.0:1$	$\frac{\$220,000}{\$198,000} = 1.1:1$	Increase
Receivables turnover	$\frac{\$790,000}{\$84,000^*} = 9.4 \text{ times}$	$\frac{\$850,000}{\$89,000^{**}} = 9.6 \text{ times}$	Increase
	$*(\$88,000 + \$80,000) \div 2$	$**(\$80,000 + \$98,000) \div 2$	
Inventory turnover	$\frac{\$575,000}{\$126,500^*} = 4.5 \text{ times}$	$\frac{\$620,000}{\$130,000^{**}} = 4.8 \text{ times}$	Increase
	$*(\$118,000 + \$135,000) \div 2$	$**(\$135,000 + \$125,000) \div 2$	

An overall increase in short-term liquidity has occurred.

PROFITABILITY

Profit margin	$\frac{\$42,000}{\$790,000} = 5.3\%$	$\frac{\$43,000}{\$850,000} = 5.1\%$	Decrease
Asset turnover	$\frac{\$790,000}{\$639,000} = 1.2 \text{ times}$	$\frac{\$850,000}{\$666,000} = 1.3 \text{ times}$	Increase
Return on assets	$\frac{\$42,000}{\$639,000} = 6.6\%$	$\frac{\$43,000}{\$666,000} = 6.5\%$	Decrease
Earnings per share	$\frac{\$42,000}{20,000} = \$2.10$	$\frac{\$43,000}{20,000} = \$2.15$	Increase

Profitability has remained relatively the same.

PROBLEM 18-4 (Continued)

(b)		2011	2012	Change
1.	Return on common stockholders' equity	$\frac{\$43,000}{\$326,000 \text{ (a)}} = 13.2\%$	$\frac{\$50,000}{\$451,000 \text{ (b)}} = 11.1\%$	Decrease
2.	Debt to total assets	$\frac{\$348,000 \text{ (c)}}{\$684,000} = 50.9\%$	$\frac{\$248,000}{\$700,000} = 35.4\%$	Decrease
3.	Price-earnings ratio	$\frac{\$9.00}{\$2.15} = 4.2 \text{ times}$	$\frac{\$12.80}{\$2.50 \text{ (d)}} = 5.1 \text{ times}$	Increase

(a) $(\$200,000 + \$136,000 + \$200,000 + \$116,000) \div 2$.

(b) $(\$380,000 + \$186,000 + \$200,000 + \$136,000) \div 2$.

(c) $\$100,000 + \$48,000 + \$50,000 + \$150,000$.

(d) $\$50,000 \div 20,000$.

PROBLEM 18-5

(a)	Ratio	Target		Wal-Mart	
		(All Dollars Are in Millions)			
(1)	Current	1.6:1	(\$18,906 ÷ \$11,782)	.8:1	(\$47,585 ÷ \$58,454)
(2)	Receivables turnover	8.6	(\$61,471 ÷ \$7,124)	115.3	(\$374,526 ÷ \$3,247)
(3)	Average collection period	42.4	(365 ÷ 8.6)	3.2	(365 ÷ 115.3)
(4)	Inventory turnover	6.4	(\$41,895 ÷ \$6,517)	8.3	(\$286,515 ÷ \$34,433)
(5)	Days in inventory	57.0	(365 ÷ 6.4)	44.0	(365 ÷ 8.3)
(6)	Profit margin	4.6%	(\$2,849 ÷ \$61,471)	3.4%	(\$12,731 ÷ \$374,526)
(7)	Asset turnover	1.5	(\$61,471 ÷ \$40,954.5 ^a)	2.5	(\$374,526 ÷ \$157,550.5 ^c)
(8)	Return on assets	7.0%	(\$2,849 ÷ \$40,954.5 ^a)	8.1%	(\$12,731 ÷ \$157,550.5 ^c)
(9)	Return on common stockholders' equity	18.4%	(\$2,849 ÷ \$15,470 ^b)	20.2%	(\$12,731 ÷ \$63,090.5 ^d)
(10)	Debt to total assets	65.6%	(\$29,253 ÷ \$44,560)	60.5%	(\$98,906 ÷ \$163,514)
(11)	Times interest earned	8.1	(\$5,272 ÷ \$647)	11.9	(\$21,437 ÷ \$1,798)

$$^a(\$44,560 + \$37,349) \div 2$$

$$^b(\$15,307 + \$15,633) \div 2$$

$$^c(\$163,514 + \$151,587) \div 2$$

$$^d(\$64,608 + \$61,573) \div 2$$

(b) The comparison of the two companies shows the following:

Liquidity—Target's current ratio of 1.6:1 is significantly better than Wal-Mart's .8:1. However, Wal-Mart has a better inventory turnover ratio than Target and its receivables turnover is substantially better than Target's.

Profitability—With the exception of profit margin, Wal-Mart betters Target in all of the profitability ratios. Thus, it is more profitable than Target.

Solvency—Wal-Mart betters Target in both of the solvency ratios. Thus, it is more solvent than Target.

PROBLEM 18-6

(a) **Current ratio** = $\frac{\$215,000}{\$145,000} = 1.5:1.$

(b) **Acid-test ratio** = $\frac{\$21,000 + \$18,000 + \$86,000}{\$145,000} = 0.86:1.$

(c) **Receivables turnover** =
$$\frac{\$600,000}{\left[\frac{(\$86,000 + \$74,000)}{2} \right]}$$

= 7.5 times.

(d) **Inventory turnover** =
$$\frac{\$415,000}{\left[\frac{\$90,000 + \$70,000}{2} \right]} = 5.2 \text{ times.}$$

(e) **Profit margin ratio** = $\frac{\$38,400}{\$600,000} = 6.4\%.$

(f) **Asset turnover** =
$$\frac{\$600,000}{\left[\frac{\$638,000 + \$560,000}{2} \right]} = 1.0 \text{ times.}$$

(g) **Return on assets** =
$$\frac{\$38,400}{\left[\frac{\$638,000 + \$560,000}{2} \right]} = 6.4\%.$$

(h) **Return on common stockholders' equity** =
$$\frac{\$38,400}{\left[\frac{\$373,000 + \$350,000}{2} \right]}$$

= 10.6%.

PROBLEM 18-6 (Continued)

(i) Earnings per share = $\frac{\$38,400}{30,000 (1)}$ = \$1.28.

(1) $\$150,000 \div \$5.00$

(j) Price-earnings ratio = $\frac{\$19.50}{\$1.28}$ = 15.2 times.

(k) Payout ratio = $\frac{\$15,400 (2)}{\$38,400}$ = 40.1%.

(2) $\$200,000 + \$38,400 - \$223,000$

(l) Debt to total assets = $\frac{\$265,000}{\$638,000}$ = 41.5%.

(m) Times interest earned = $\frac{\$64,200 (3)}{\$7,800}$ = 8.2 times.

(3) $\$38,400 + \$18,000 + \$7,800$

PROBLEM 18-7

$$\text{Receivables turnover} = 10 = \frac{\$11,000,000}{\text{Average receivables}}$$

$$\text{Average receivables} = \frac{\$11,000,000}{10} = \$1,100,000$$

$$\frac{\text{Net receivables 12/31/11} + \$950,000}{2} = \$1,100,000$$

$$\text{Net receivables 12/31/11} + \$950,000 = \$2,200,000$$

$$\text{Net receivables 12/31/11} = \underline{\underline{\$1,250,000}}$$

$$\text{Profit margin} = 14.5\% = .145 = \frac{\text{Net income}}{\$11,000,000}$$

$$\text{Net income} = \$11,000,000 \times .145 = \underline{\underline{\$1,595,000}}$$

$$\text{Income before income taxes} = \$1,595,000 + \$560,000 = \underline{\underline{\$2,155,000}}$$

$$\text{Return on assets} = 22\% = .22 = \frac{\$1,595,000}{\text{Average assets}}$$

$$\text{Average assets} = \$1,595,000 \div .22 = \$7,250,000$$

$$\frac{\text{Assets (12/31/11)} + \$7,000,000}{2} = \$7,250,000$$

$$\text{Assets (12/31/11)} = \underline{\underline{\$7,500,000}}$$

$$\text{Total current assets} = \$7,500,000 - \$4,620,000 = \underline{\underline{\$2,880,000}}$$

$$\text{Inventory} = \$2,880,000 - \$1,250,000 - \$450,000 = \underline{\underline{\$1,180,000}}$$

$$\text{Total liabilities and stockholders' equity} = \underline{\underline{\$7,500,000}}$$

$$\text{Total liabilities} = \$7,500,000 - \$3,400,000 = \underline{\underline{\$4,100,000}}$$

PROBLEM 18-7 (Continued)

$$\text{Current ratio} = 3.0 = \frac{\$2,880,000}{\text{Current liabilities}}$$

$$\text{Current liabilities} = \$2,880,000 \div 3.0 = \underline{\underline{\$960,000}}$$

$$\text{Long-term notes payable} = \$4,100,000 - \$960,000 = \underline{\underline{\$3,140,000}}$$

$$\text{Inventory turnover} = 4.8 = \frac{\text{Cost of goods sold}}{\left[\frac{\$1,720,000 + \$1,180,000}{2} \right]}$$

$$\text{Cost of goods sold} = \$1,450,000 \times 4.8 = \underline{\underline{\$6,960,000}}$$

$$\text{Gross profit} = \$11,000,000 - \$6,960,000 = \underline{\underline{\$4,040,000}}$$

$$\text{Income from operations} = \$4,040,000 - \$1,665,000 = \underline{\underline{\$2,375,000}}$$

$$\text{Interest expense} = \$2,375,000 - \$2,155,000 = \underline{\underline{\$220,000}}$$

PROBLEM 18-8

CHEANEY CORPORATION
Condensed Income Statement
For the Year Ended December 31, 2010

Operating revenues		
(\$12,850,000 – \$2,000,000).....		\$10,850,000
Operating expenses		
(\$8,700,000 – \$2,400,000).....		<u>6,300,000</u>
Income from operations		4,550,000
Other revenues and gains		<u>100,000</u>
Income before income taxes.....		4,650,000
Income tax expense (\$4,650,000 X 30%).....		<u>1,395,000</u>
Income from continuing operations.....		3,255,000
Discontinued operations		
Loss from operations of hotel chain*, net of \$120,000 income tax savings	\$280,000	
Gain on sale of hotels, net of \$60,000 income taxes	<u>140,000</u>	<u>140,000</u>
Income before extraordinary item.....		3,115,000
Extraordinary item		
Extraordinary loss, net of \$240,000 income tax saving		<u>560,000</u>
Net income		<u>\$ 2,555,000</u>

*\$2,000,000 – \$2,400,000 = (\$400,000)

PROBLEM 18-9

LARUSSA CORPORATION
Income Statement
For the Year Ended December 31, 2010

Net sales.....		\$1,700,000
Cost of goods sold		<u>1,100,000</u>
Gross profit		600,000
Selling and administrative expenses		<u>270,000</u>
Income from operations.....		330,000
Other revenues and gains	\$20,000	
Other expenses and losses	<u>28,000</u>	<u>8,000</u>
Income before income taxes		322,000
Income tax expense (\$322,000 X 30%).....		<u>96,600</u>
Income from continuing operations		225,400
Discontinued operations		
Income from operations of discontinued		
division, net of \$6,000 income taxes.....	14,000	
Loss on sale of discontinued division,		
net of \$27,000 income tax saving	<u>63,000</u>	<u>49,000</u>
Income before extraordinary item		176,400
Extraordinary item		
Gain from expropriation, net of \$36,000		
income taxes		<u>84,000</u>
Net income.....		<u>\$ 260,400</u>

(a)

PEPSICO, INC.
Trend Analysis of Net Sales and Net Income
For the Five Years Ended 2007

Base Period 2003—(in millions)

	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>
(1) Net sales	\$39,474	\$35,137	\$32,562	\$29,261	\$26,971
Trend	146%	130%	121%	108%	100%
(2) Net income	5,658	5,642	4,078	4,212	3,568
Trend	159%	158%	114%	118%	100%

Between 2003 and 2005 PepsiCo's net sales increased by 21%. Its net sales also increased 21% from 2005 to 2007. PepsiCo's net income increased by 59% between 2003 and 2007 or about 15% per annum.

(b) (dollar amounts in millions)

(1) Profit Margin

$$2007: \$5,658 \div \$39,474 = 14.3\%$$

$$2006: \$5,642 \div \$35,137 = 16.1\%$$

(2) Asset Turnover

$$2007: \$39,474 \div [(\$34,628 + \$29,930) \div 2] = 1.22 \text{ times}$$

$$2006: \$35,137 \div [(\$29,930 + \$31,727) \div 2] = 1.14 \text{ times}$$

(3) Return on Assets

$$2007: \$5,658 \div [(\$34,628 + \$29,930) \div 2] = 17.5\%$$

$$2006: \$5,642 \div [(\$29,930 + \$31,727) \div 2] = 18.3\%$$

(4) Return on Common Stockholders' Equity

$$2007: \$5,658 \div [(\$17,325 + \$15,447) \div 2] = 34.5\%$$

$$2006: \$5,642 \div [(\$15,447 + \$14,320) \div 2] = 37.9\%$$

In general, PepsiCo's profitability has decreased from 2006 to 2007.

(c) (dollar amounts in millions)

(1) Debt to Total Assets

$$2007: \$17,394 \div \$34,628 = 50.2\%$$

$$2006: \$14,562 \div \$29,930 = 48.7\%$$

(2) Times Interest Earned

$$2007: (\$7,631 + \$224) \div \$224 = 35.1 \text{ times}$$

$$2006: (\$6,989 + \$239) \div \$239 = 30.2 \text{ times}$$

Although creditors are providing more than 50% of PepsiCo's total assets, its long-term solvency is not in jeopardy. PepsiCo has the ability to pay the interest on its debt as indicated by the times interest earned ratio of about 35 in 2007.

- (d) Substantial amounts of important information about a company are not in its financial statements. Events involving such things as industry changes, management changes, competitors' actions, technological developments, governmental actions, and union activities are often critical to the successful operation of a company. Financial reports in the media and publications of financial service firms (Standard & Poors, Dun & Bradstreet) will provide relevant information not usually found in the annual report.**

		PepsiCo	Coca-Cola Company
(1) (i)	Percentage increase in net sales	$\frac{\$39,474 - \$35,137}{\$35,137} = 12.3\%$	$\frac{\$28,857 - \$24,088}{\$24,088} = 19.8\%$
	(ii) Percentage increase (decrease) in net income	$\frac{\$5,658 - \$5,642}{\$5,642} = 0.3\%$	$\frac{\$5,981 - \$5,080}{\$5,080} = 17.7\%$
(2) (i)	Percentage increase (decrease) in total assets	$\frac{\$34,628 - \$29,930}{\$29,930} = 15.7\%$	$\frac{\$43,269 - \$29,963}{\$29,963} = 44.4\%$
	(ii) Percentage increase (decrease) in total common stockholders' equity	$\frac{\$17,325 - \$15,447}{\$15,447} = 12.2\%$	$\frac{\$21,744 - \$16,920}{\$16,920} = 28.5\%$
(3)	Basic earnings per share	\$3.48*	\$2.59*
	Price-earnings ratio	$\frac{\$77.03}{\$3.48} = 22.1 \text{ times}$	$\frac{\$61.37}{\$2.59} = 23.7 \text{ times}$

*Given on income statement

- (b) PepsiCo's net sales increased 12.3% while Coca-Cola's increased 19.8%. PepsiCo's net income increased 0.3% while Coca-Cola's net income increased 17.7% from 2006 to 2007. PepsiCo's total assets increased 15.7% while Coca-Cola increased its assets 44.4%.

PepsiCo increased stockholders' equity by 12.1% while Coca-Cola's stockholders' equity increased 28.5%. The absolute amounts of earnings per share, \$3.48 for PepsiCo and \$2.59 for Coca-Cola, are not comparable in a qualitative way since these amounts are dependent on the number of shares outstanding.

PepsiCo's net income increased only 0.3%, even though its net sales increased over 12%. In comparison, Coca-Cola's net income increased almost 18% while its net sales approximately 20%.

(a) Optional elements include:

- ▶ Financial highlights
- ▶ Letter to stockholders
- ▶ Corporate message
- ▶ Report of management
- ▶ Board of directors and management
- ▶ Stockholder information

(b) SEC-required elements include:

- ▶ Auditors' report
- ▶ Management discussion
- ▶ Financial statements and notes
- ▶ Selected financial data

(c) **Management discussion.** This series of short, detailed reports discusses and analyzes the company's performance. It covers results of operations, and the adequacy of liquid and capital resources to fund operations.

(d) **Auditors' report.** This summary of the findings of an independent firm of certified public accountants shows whether the financial statements are complete, reasonable, and prepared consistent with generally accepted accounting principles (GAAP) at a set time.

(e) **Selected financial data.** This information summarizes a company's financial condition and performance over five years or longer. Data for making comparisons over time may include revenue (sales), gross profit, net earnings (net income), earnings per share, dividends per share, financial ratios such as return on equity, number of shares outstanding, and the market price per share.

The current ratio increase is a favorable indication as to liquidity, but alone tells little about the going-concern prospects of the client. From this ratio change alone, it is impossible to know the amount and direction of the changes in individual accounts, total current assets, and total current liabilities. Also unknown are the reasons for the changes.

The acid-test ratio decrease is an unfavorable indication as to liquidity, especially when the current-ratio increase is also considered. This decline is also unfavorable as to the going-concern prospects of the client because it reflects a declining cash position and raises questions as to reasons for the increases in other current assets, such as inventories.

The change in asset turnover cannot alone tell anything about either solvency or going-concern prospects. There is no way to know the amount and direction of the changes in sales and assets. An increase in sales would be favorable for going-concern prospects, while a decrease in assets could represent a number of possible scenarios and would need to be investigated further.

The increase in net income is a favorable indicator for both solvency and going-concern prospects, although much depends on the quality of receivables generated from sales and how quickly they can be converted into cash. If there has been a decline in sales, a significant factor is that management has been able to reduce costs to produce an increase in earnings. Indirectly, the improved income picture may have a favorable impact on solvency and going-concern potential by enabling the client to borrow currently (if it needs to do so) to meet cash requirements.

The 32-percent increase in earnings per share, which is identical to the percentage increase in net income, is an indication that there has probably been no change in the number of shares of common stock outstanding. This, in turn, indicates that financing was not obtained through the issuance of common stock. It is not possible to reach conclusions about solvency and going-concern prospects without additional information about the nature and extent of financing.

BYP 18-4 (Continued)

The collective implications of these data alone are that the client entity is about as solvent and as viable a going concern at the end of the current year as it was at the beginning although there may be a need for short-term operating cash.

(a) **GENERAL DYNAMICS CORPORATION**
Income Statement
For the Year Ended December 31, 2010

		(In Millions of Dollars)
Net sales		\$8,163.8
Cost of goods sold		<u>6,958.8</u>
Gross profit.....		1,205.0
Selling and administrative expenses		<u>537.0</u>
Income from operations		668.0
Other revenues and gains		
Interest revenue	\$ 3.6	
Other expenses and losses		
Interest expense	<u>17.2</u>	<u>13.6</u>
Income before income taxes		654.4
Income tax expense		<u>282.9</u>
Income from continuing operations		371.5
Discontinued operations		
Earnings from operation of Quincy		
Division, net of \$12.5 income taxes.....	15.8	
Loss from disposal of Quincy Division,		
net of \$4.3 income tax saving	<u>5.0</u>	<u>10.8</u>
Net income		<u>\$ 382.3</u>
Earnings per share of common stock		
Income from continuing operations		\$ 8.78
Gain from discontinued operations		<u>.26</u>
Net income.....		<u>\$ 9.04</u>

- (b) (1) In the preceding year, Quincy had net earnings from discontinued operations of \$28.8 million (\$51.6 – \$22.8). Therefore, the average number of common shares outstanding during the year is 47.2 million shares. This amount is found by dividing the income from discontinued operations, \$28.8 million, by its earning per share amount \$0.61.
- (2) In the preceding year, Quincy had income from continuing operations of \$352.6 million (47.2 million shares X \$7.47/share).

To: Beth Harlan
From: Accounting Major
Subject: Financial Statement Analysis

There are two fundamental considerations in financial statement analysis: (1) the bases of comparison and (2) the factors affecting quality of earnings. Each of these considerations is explained below.

1. **Bases of comparison.** The bases of comparison are:

- a. **Intracompany**—This basis compares an item or financial relationship within a company in the current year with the same item or relationship in one or more prior years.
- b. **Industry averages**—This basis compares an item or financial relationship of a company with industry averages (or norms).
- c. **Intercompany**—This basis compares an item or financial relationship of one company with the same item or relationship in one or more competing companies.

2. **Factors affecting quality of earnings** are:

- a. **Alternative accounting methods**—Variations among companies in the application of generally accepted accounting principles may hamper comparability and reduce quality of earnings.
- b. **Pro forma income**—This income figure usually excludes items that the company thinks are unusual or nonrecurring.
- c. **Improper recognition**—Because some managers have felt pressure from investors to continually increase earnings, they have manipulated the earnings numbers to meet these expectations.

- (a) The stakeholders in this case are:
- ▶ Jack McClintock, president of McClintock Industries.
 - ▶ Jeremy Phelps, public relations director.
 - ▶ You, as controller of McClintock Industries.
 - ▶ Stockholders of McClintock Industries.
 - ▶ Potential investors in McClintock Industries.
 - ▶ Any readers of the press release.
- (b) The president's press release is deceptive and incomplete and to that extent his actions are unethical.
- (c) As controller you should at least inform Jeremy, the public relations director, about the biased content of the release. He should be aware that the information he is about to release, while factually accurate, is deceptive and incomplete. Both the controller and the public relations director (if he agrees) have the responsibility to inform the president of the bias of the about to be released information.

Student responses will vary. We suggest that in class you ask for a few students to share their responses in order to increase students understanding of the various reasons why different people will choose different investment vehicles.

CHAPTER 19

Managerial Accounting

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain the distinguishing features of managerial accounting.	1, 2, 3	1	1, 2	1		
2. Identify the three broad functions of management.	4, 5, 6, 7	2, 3	3, 4			
3. Define the three classes of manufacturing costs.	10, 11	4, 5, 7	6	2, 3, 4, 5, 6	1A, 2A	1B, 2B
4. Distinguish between product and period costs.	12	6	8	3, 4, 5, 7, 13	1A, 2A	1B, 2B
5. Explain the difference between a merchandising and a manufacturing income statement.	8, 13			8, 12, 13, 14, 15, 17	3A, 4A, 5A	3B, 4B, 5B
6. Indicate how cost of goods manufactured is determined.	14, 15, 16, 17	8, 10, 11		8, 9, 10, 11, 12, 13, 14, 15, 16, 17	3A, 4A, 5A	3B, 4B, 5B
7. Explain the difference between a merchandising and a manufacturing balance sheet.	9, 18	9		14, 15, 16, 17	3A, 4A	3B, 4B
8. Identify trends in managerial accounting.	19, 20, 21, 22			18		

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
2A	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
3A	Indicate the missing amount of different cost items, and prepare a condensed cost of goods manufactured schedule, an income statement, and a partial balance sheet.	Moderate	30–40
4A	Prepare a cost of goods manufactured schedule, a partial income statement, and a partial balance sheet.	Moderate	30–40
5A	Prepare a cost of goods manufactured schedule and a correct income statement.	Moderate	30–40
1B	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
2B	Classify manufacturing costs into different categories and compute the unit cost.	Simple	20–30
3B	Indicate the missing amount of different cost items, and prepare a condensed cost of goods manufactured schedule, an income statement, and a partial balance sheet.	Moderate	30–40
4B	Prepare a cost of goods manufactured schedule, a partial income statement, and a partial balance sheet.	Moderate	30–40
5B	Prepare a cost of goods manufactured schedule and a correct income statement.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E**CHAPTER 19****MANAGERIAL ACCOUNTING**

Number	SO	BT	Difficulty	Time (min.)
BE1	1	C	Simple	6–8
BE2	2	C	Moderate	3–5
BE3	2	C	Simple	1–2
BE4	3	C	Simple	1–2
BE5	3	C	Simple	2–4
BE6	4	C	Simple	1–2
BE7	3	C	Simple	1–2
BE8	6	AP	Simple	2–4
BE9	7	AP	Simple	2–4
BE10	6	AP	Simple	3–5
BE11	6	AP	Moderate	3–5
DI1	1, 2	C	Simple	2–4
DI2	3, 4	C	Simple	6–8
DI3	6	AP	Simple	6–8
DI4	8	C	Simple	4–6
EX1	1	C	Simple	6–8
EX2	3	C	Simple	3–5
EX3	3, 4	C	Simple	4–6
EX4	3, 4	AP	Simple	6–8
EX5	3, 4	C	Simple	3–5
EX6	3	C	Simple	3–5
EX7	4	AP	Simple	8–10
EX8	5, 6	AP	Simple	10–12
EX9	6	AP	Moderate	8–10
EX10	6	AN	Moderate	10–12
EX11	6	AN	Moderate	10–12
EX12	5, 6	AP	Simple	10–12
EX13	4–6	AN	Moderate	8–10
EX14	5–7	AP	Moderate	12–15

MANAGERIAL ACCOUNTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	5–7	C	Simple	4–6
EX16	6, 7	AP	Simple	10–12
EX17	5–7	AP	Moderate	12–15
EX18	8	C	Simple	2–4
P1A	3, 4	AP	Simple	20–30
P2A	3, 4	AP	Simple	20–30
P3A	5–7	AN	Moderate	30–40
P4A	5–7	AP	Moderate	30–40
P5A	5, 6	AN	Moderate	30–40
P1B	3, 4	AP	Simple	20–30
P2B	3, 4	AP	Simple	20–30
P3B	5–7	AN	Moderate	30–40
P4B	5–7	AP	Moderate	30–40
P5B	5, 6	AN	Moderate	30–40
BYP1	6, 7	AN	Moderate	20–30
BYP2	1	AN	Moderate	15–20
BYP3	3	C	Moderate	10–15
BYP4	—	AN	Simple	10–15
BYP5	5, 6	AN	Moderate	15–20
BYP6	2, 4	E	Simple	10–15
BYP7	1	E	Moderate	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain the distinguishing features of managerial accounting.		Q19-1 BE19-1 Q19-2 DI19-1 Q19-3 E19-1				
2. Identify the three broad functions of management.		Q19-4 BE19-2 Q19-5 BE19-3 Q19-6 DI19-1 Q19-7				
3. Define the three classes of manufacturing costs.	Q19-10	Q19-11 DI19-2 BE19-4 E19-2 BE19-5 E19-3 BE19-7	E19-4 P19-1A P19-2B E19-5 P19-2A E19-6 P19-1B			
4. Distinguish between product and period costs.		Q19-12 E19-3 BE19-6 DI19-2	E19-4 E19-13 P19-1B E19-5 P19-1A P19-2B E19-7 P19-2A			
5. Explain the difference between a merchandising and a manufacturing income statement.		Q19-8 Q19-13 E19-15	E19-8 E19-14 P19-4B E19-12 E19-17 E19-13 P19-4A	P19-3A P19-5B P19-5A P19-3B		
6. Indicate how cost of goods manufactured is determined.	Q19-14	E19-15	Q19-15 DI19-3 E19-16 Q19-16 E19-8 E19-11 Q19-17 E19-9 P19-4A P19-3A BE19-8 E19-12 P19-4B P19-5A BE19-10 E19-13 P19-3B BE19-11 E19-14 P19-5B			
7. Explain the difference between a merchandising and a manufacturing balance sheet.	Q19-18	Q19-9 E19-15	BE19-9 E19-17 P19-3A E19-14 P19-4A P19-3B E19-16 P19-4B			
8. Identify trends in managerial accounting.		Q19-19 Q19-22 Q19-20 DI19-4 Q19-21 E19-18				
Broadening Your Perspective		Real-World Focus		Decision Making Across the Organization Managerial Analysis Exploring the Web Communication		Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) Disagree. Managerial accounting is a field of accounting that provides economic and financial information for managers and other internal users.
(b) Mary is incorrect. Managerial accounting applies to all types of businesses—service, merchandising, and manufacturing.
2. (a) Financial accounting is concerned primarily with external users such as stockholders, creditors, and regulators. In contrast, managerial accounting is concerned primarily with internal users such as officers and managers.
(b) Financial statements are the end product of financial accounting. The statements are prepared quarterly and annually. In managerial accounting, internal reports may be prepared daily, weekly, monthly, quarterly, annually, or as needed.
(c) The purpose of financial accounting is to provide general-purpose information for all users. The purpose of managerial accounting is to provide special-purpose information for a specific decision.
3. Differences in the content of the reports are as follows:

Financial	Managerial
• Pertains to business as a whole and is highly aggregated. • Limited to double-entry accounting and cost data. • Generally accepted accounting principles.	• Pertains to subunits of the business and may be very detailed. • May extend beyond double-entry accounting system to any relevant data. • Standard is relevance to decisions.

In financial accounting, financial statements are verified annually through an independent audit by certified public accountants. There are no independent audits of internal reports issued by managerial accountants.

4. Budgets are prepared by companies to provide future direction. Because the budget is also used as an evaluation tool, some managers try to game the budgeting process by underestimating their division's predicted performance so that it will be easier to meet their performance targets. On the other hand, if the budget is set at unattainable levels, managers sometimes take unethical actions to meet targets to receive higher compensation or in some cases to keep their jobs.
5. Karen should know that the management of an organization performs three broad functions:
 - (1) **Planning** requires managers to look ahead and to establish objectives.
 - (2) **Directing** involves coordinating the diverse activities and human resources of a company to produce a smooth-running operation.
 - (3) **Controlling** is the process of keeping the company's activities on track.
6. Disagree. Decision making is not a separate management function. Rather, decision making involves the exercise of good judgment in performing the three management functions explained in the answer to question five above.
7. CEOs and CFOs must now certify that financial statements give a fair presentation of the company's operating results and its financial condition and that the company maintains an adequate system of internal controls. In addition, the composition of the board of directors and audit committees receives more scrutiny, and penalties for misconduct have increased.

8. The differences between income statements are in the computation of the cost of goods sold as follows:
- | | |
|------------------------|--|
| Manufacturing company: | Beginning finished goods inventory plus cost of goods manufactured minus ending finished goods inventory = cost of goods sold. |
| Merchandising company: | Beginning merchandise inventory plus cost of goods purchased minus ending merchandise inventory = cost of goods sold. |
9. The difference in balance sheets pertains to the presentation of inventories in the current asset section. In a merchandising company, only merchandise inventory is shown. In a manufacturing company, three inventory accounts are shown: finished goods, work in process, and raw materials.
10. Manufacturing costs are classified as either direct materials, direct labor, or manufacturing overhead.
11. No, Matt is not correct. The distinction between direct and indirect materials is based on two criteria: (1) physical association and (2) the convenience of making the physical association. Materials which can not be easily associated with the finished product are considered indirect materials.
12. Product costs, or inventoriable costs, are costs that are a necessary and integral part of producing the finished product. Period costs are costs that are identified with a specific time period rather than with a salable product. These costs relate to nonmanufacturing costs and therefore are not inventoriable costs.
13. A merchandising company has beginning merchandise inventory, cost of goods purchased, and ending merchandise inventory. A manufacturing company has beginning finished goods inventory, cost of goods manufactured, and ending finished goods inventory.
14. (a) x = total cost of work in process.
(b) x = cost of goods manufactured.
15. Raw materials inventory, beginning \$ 12,000
Raw materials purchases 170,000
Total raw materials available for use 182,000
Raw materials inventory, ending..... 15,000
Direct materials used \$167,000
16. Direct materials used..... \$240,000
Direct labor used..... 200,000
Total manufacturing overhead..... 180,000
Total manufacturing costs \$620,000
17. (a) Total cost of work in process (\$26,000 + \$620,000) \$646,000
(b) Cost of goods manufactured (\$646,000 – \$32,000) \$614,000
18. The order of listing is finished goods inventory, work in process inventory, and raw materials inventory.
19. The value chain refers to all activities associated with providing a product or service. For a manufacturer, these includes research and development, product design, acquisition of raw materials, production, sales and marketing, delivery, customer relations, and subsequent service.

Questions Chapter 19 (Continued)

20. In a just-in-time inventory system the company has no extra inventory stored. Consequently, if some units that are produced are defective, the company will not have enough units to deliver to customers.
21. The balanced scorecard is called “balanced” because it strives to not over emphasize any one performance measure, but rather uses both financial and non-financial measures to evaluate all aspects of a company’s operations in an integrated fashion.
22. Activity-based costing is an approach used to allocate overhead based on each product’s use of activities in making the product. Activity-based costing is beneficial because it results in more accurate product costing and in more careful scrutiny of all activities in the value chain.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 19-1

	<u>Financial Accounting</u>	<u>Managerial Accounting</u>
Primary users	External users	Internal users
Types of reports	Financial statements	Internal reports
Frequency of reports	Quarterly and annually	As frequently as needed
Purpose of reports	General-purpose	Special-purpose for a specific decisions
Content of reports	Generally accepted accounting principles	Relevant to decisions
Verification	Annual audit by certified public accountant	No independent audits

BRIEF EXERCISE 19-2

One implication of SOX was to clarify top management's responsibility for the company's financial statements. CEOs and CFOs must now certify that financial statements give a fair presentation of the company's operating results and its financial condition. In addition, top managers must certify that the company maintains an adequate system of internal controls to safeguard the company's assets and ensure accurate financial reports. Also, more attention is now paid to the composition of the company's board of directors. In particular, the audit committee of the board of directors must be comprised entirely of independent members (that is, non-employees) and must contain at least one financial expert. Finally, to increase the likelihood of compliance with these and other new rules, the penalties for misconduct were substantially increased.

BRIEF EXERCISE 19-3

- (a) (1) Planning.**
- (b) (2) Directing.**
- (c) (3) Controlling.**

BRIEF EXERCISE 19-4

- (a) DM Frames and tires used in manufacturing bicycles.**
- (b) DL Wages paid to production workers.**
- (c) MO Insurance on factory equipment and machinery.**
- (d) MO Depreciation on factory equipment.**

BRIEF EXERCISE 19-5

- (a) Direct materials.**
- (b) Direct materials.**
- (c) Direct labor.**
- (d) Manufacturing overhead.**
- (e) Manufacturing overhead.**
- (f) Direct materials.**
- (g) Direct materials.**
- (h) Manufacturing overhead.**

BRIEF EXERCISE 19-6

- (a) Product.**
- (b) Period.**
- (c) Period.**
- (d) Period.**
- (e) Product.**
- (f) Product.**

BRIEF EXERCISE 19-7

Product Costs		
	<u>Direct Materials</u>	<u>Direct Labor</u>
(a)		
(b)	X	
(c)		
(d)		X

BRIEF EXERCISE 19-8

(a)	Direct materials used	\$180,000
	Direct labor	229,000
	Total manufacturing overhead	<u>208,000</u>
	Total manufacturing costs.....	<u>\$617,000</u>
(b)	Beginning work in process	\$ 25,000
	Total manufacturing costs	<u>617,000</u>
	Total cost of work in process	<u>\$642,000</u>

BRIEF EXERCISE 19-9

DIEKER COMPANY
Balance Sheet
December 31, 2010

Current assets		
Cash		\$ 62,000
Accounts receivable		200,000
Inventories		
Finished goods.....	\$71,000	
Work in process	87,000	
Raw materials.....	<u>73,000</u>	231,000
Prepaid expenses		<u>38,000</u>
Total current assets		<u>\$531,000</u>

BRIEF EXERCISE 19-10

	<u>Direct Materials Used</u>	<u>Direct Labor Used</u>	<u>Factory Overhead</u>	<u>Total Manufacturing Costs</u>
(1)				\$136,000
(2)	\$81,000			
(3)		\$144,000		

BRIEF EXERCISE 19-11

	<u>Total Manufacturing Costs</u>	<u>Work in Process (January 1)</u>	<u>Work in Process (December 31)</u>	<u>Cost of Goods Manufactured</u>
(1)	\$136,000			\$174,000
(2)		\$123,000		
(3)			\$58,000	

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 19-1

1. False
2. False
3. False
4. True
5. True
6. True

DO IT! 19-2

Period costs:

Advertising

Salaries of sales representatives

DO IT! 19-2 (Continued)

Product costs:

Blank CDs (DM)

Depreciation of CD image burner (MO)

Salary of factory manager (MO)

Factory supplies used (MO)

Paper inserts for CD cases (DM)

CD plastic cases (DM)

Salaries of factory maintenance employees (MO)

Salaries of employees who burn music onto CDs (DL)

DO IT! 19-3

KOPPS MANUFACTURING COMPANY Cost of Goods Manufactured Schedule For the Month Ended April 30

Work in process, April 1		\$ 5,000
Direct materials		
Raw materials, April 1	\$ 10,000	
Raw materials purchases	98,000	
Total raw materials available for use	108,000	
Less: Raw materials, April 30	14,000	
Direct materials used		\$ 94,000
Direct labor		60,000
Manufacturing overhead		180,000
Total manufacturing costs		<u>334,000</u>
Total cost of work in process		\$339,000
Less: Work in process, April 31		<u>3,500</u>
Cost of goods manufactured		<u>\$335,500</u>

DO IT! 19-4

1. f
2. a
3. c
4. d
5. e
6. b

SOLUTIONS TO EXERCISES

EXERCISE 19-1

1. False. Financial accounting focuses on providing information to *external* users.
2. True.
3. False. Preparation of budgets is part of *managerial* accounting.
4. False. Managerial accounting applies to *service*, merchandising and manufacturing companies.
5. True.
6. False. Managerial accounting reports are prepared as *frequently as needed*.
7. True.
8. True.
9. False. *Financial* accounting reports must comply with generally accepted accounting principles.
10. False. Managerial accountants are expected to behave ethically, *and* there is a code of ethical standards for managerial accountants.

EXERCISE 19-2

1. (b) Direct labor.*
2. (c) Manufacturing overhead.
3. (c) Manufacturing overhead.
4. (c) Manufacturing overhead.
5. (a) Direct materials.
6. (b) Direct labor.
7. (c) Manufacturing overhead.
8. (c) Manufacturing overhead.
9. (c) Manufacturing overhead.
10. (a) Direct materials.

*or sometimes (c), depending on the circumstances

EXERCISE 19-3

(a) Materials used in product	DM	Advertising expense	Period
Depreciation on plant	MOH	Property taxes on plant.....	MOH
Property taxes on store	Period	Delivery expense.....	Period
Labor costs of assembly-		Sales commissions	Period
line workers	DL	Salaries paid to sales clerks.....	Period
Factory supplies used.....	MOH		
- (b) Product costs are recorded as a part of the cost of inventory, because they are an integral part of the cost of producing the product. Product costs are not expensed until the goods are sold. Period costs are recognized as an expense when incurred.

EXERCISE 19-4

(a) Factory utilities	\$ 11,500
Depreciation on factory equipment.....	12,650
Indirect factory labor	48,900
Indirect materials	80,800
Factory manager's salary	8,000
Property taxes on factory building	2,500
Factory repairs	2,000
Manufacturing overhead	<u>\$166,350</u>
(b) Direct materials	\$137,600
Direct labor	69,100
Manufacturing overhead	166,350
Product costs.....	<u>\$373,050</u>
(c) Depreciation on delivery trucks.....	\$ 3,800
Sales salaries	46,400
Repairs to office equipment.....	1,300
Advertising	18,000
Office supplies used	2,640
Period costs.....	<u>\$ 72,140</u>

EXERCISE 19-5

1. (c)	3. (a)	5. (b)*	7. (a)	9. (c)
2. (c)	4. (c)	6. (d)	8. (b)	10. (c)

*or sometimes (c), depending on the circumstances.

EXERCISE 19-6

1. (b)
2. (c)
3. (a)
4. (c)
5. (c)
6. (c)
7. (c)
8. (c)
9. (c)
10. (c)

EXERCISE 19-7

(a) Delivery service (product) costs:

Indirect materials.....	\$ 5,400
Depreciation on delivery equipment.....	11,200
Dispatcher's salary	5,000
Gas and oil for delivery trucks.....	2,200
Drivers' salaries	11,000
Delivery equipment repairs.....	300
Total	<u>\$35,100</u>

(b) Period costs:

Property taxes on office building.....	\$ 870
CEO's salary	12,000
Advertising	1,600
Office supplies	650
Office utilities.....	990
Repairs on office equipment	180
Total.....	<u>\$16,290</u>

EXERCISE 19-8

(a) Work-in-process, 1/1		\$ 12,000
Direct materials used	\$100,000	
Direct labor	110,000	
Manufacturing overhead		
Depreciation on plant	\$60,000	
Factory supplies used	23,000	
Property taxes on plant.....	<u>14,000</u>	
Total manufacturing overhead	<u>97,000</u>	
Total manufacturing costs		<u>307,000</u>
Total cost of work-in-process.....		319,000
Less: ending work-in-process		<u>15,500</u>
Cost of goods manufactured.....		<u>\$303,500</u>
(b) Finished goods, 1/1.....		\$ 60,000
Cost of goods manufactured.....		<u>303,500</u>
Cost of goods available for sale.....		363,500
Finished goods, 12/31		<u>55,600</u>
Cost of goods sold		<u>\$307,900</u>

EXERCISE 19-9

Total raw materials available for use:

Direct materials used	\$190,000
Add: Raw materials inventory (12/31)	<u>12,500</u>
Total raw materials available for use	<u>\$202,500</u>

Raw materials inventory (1/1):

Direct materials used	\$190,000
Add: Raw materials inventory (12/31).....	12,500
Less: Raw materials purchases.....	<u>(158,000)</u>
Raw materials inventory (1/1)	<u>\$ 44,500</u>

Total cost of work in process:

Cost of goods manufactured	\$510,000
Add: Work in process (12/31).....	<u>81,000</u>
Total cost of work in process	<u>\$591,000</u>

EXERCISE 19-9 (Continued)

Total manufacturing costs:

Total cost of work in process	\$591,000
Less: Work in process (1/1)	<u>(210,000)</u>
Total manufacturing costs	<u>\$381,000</u>

Direct labor:

Total manufacturing costs	\$381,000
Less: Total overhead	<u>(122,000)</u>
Direct materials used	<u>(190,000)</u>
Direct labor	<u>\$ 69,000</u>

EXERCISE 19-10

$$A + \$57,000 + \$46,500 = \$185,650$$

$$A = \$82,150$$

$$\$242,500 - \$11,000 = F$$

$$F = \$231,500$$

$$\$185,650 + B = \$221,500$$

$$B = \$35,850$$

$$\$130,000 + G + \$102,000 = \$253,700$$

$$G = \$21,700$$

$$\$221,500 - C = \$185,275$$

$$C = \$36,225$$

$$\$253,700 + H = \$337,000$$

$$H = \$83,300$$

$$\$58,400 + \$86,000 + \$81,600 = D$$

$$D = \$226,000$$

$$\$337,000 - \$70,000 = I$$

$$I = \$267,000$$

$$\$226,000 + \$16,500 = E$$

$$E = \$242,500$$

Additional explanation to EXERCISE 19-10 solution:

Case A

(a) Total manufacturing costs	\$185,650
Less: Manufacturing overhead	<u>(46,500)</u>
Direct labor	<u>(57,000)</u>
Direct materials used	<u>\$ 82,150</u>

EXERCISE 19-10 (Continued)

(b)	Total cost of work in process	\$221,500
	Less: Total manufacturing costs.....	185,650
	Work in process (1/1/10).....	<u>\$ 35,850</u>
(c)	Total cost of work in process	\$221,500
	Less: Cost of goods manufactured	185,275
	Work in process (12/31/10).....	<u>\$ 36,225</u>

Case B

(d)	Direct materials used	\$ 58,400
	Direct labor	86,000
	Manufacturing overhead	81,600
	Total manufacturing costs	<u>\$226,000</u>
(e)	Total manufacturing costs	\$226,000
	Work in process (1/1/10)	16,500
	Total cost of work in process	<u>\$242,500</u>
(f)	Total cost of work in process	\$242,500
	Less: Work in process (12/31/10).....	11,000
	Cost of goods manufactured	<u>\$231,500</u>

Case C

(g)	Total manufacturing costs	\$253,700
	Less: Manufacturing overhead	(102,000)
	Direct materials used	(130,000)
	Direct labor	<u>\$ 21,700</u>
(h)	Total cost of work in process	\$337,000
	Less: Total manufacturing costs.....	253,700
	Work in process (1/1/10).....	<u>\$ 83,300</u>
(i)	Total cost of work in process	\$337,000
	Less: Work in process (12/31/10).....	70,000
	Cost of goods manufactured	<u>\$267,000</u>

EXERCISE 19-11

(a) (a) $\$127,000 + \$140,000 + \$77,000 = \$344,000$

(b) $\$344,000 + \$33,000 - \$360,000 = \$17,000$

(c) $\$450,000 - (\$200,000 + \$132,000) = \$118,000$

(d) $\$40,000 + \$470,000 - \$450,000 = \$60,000$

(e) $\$245,000 - (\$80,000 + \$100,000) = \$65,000$

(f) $\$245,000 + \$60,000 - \$80,000 = \$225,000$

(g) $\$288,000 - (\$70,000 + \$75,000) = \$143,000$

(h) $\$288,000 + \$45,000 - \$270,000 = \$63,000$

(b)

IKERD COMPANY
Cost of Goods Manufactured Schedule
For the Year Ended December 31, 2010

Work in process, January 1		\$ 33,000
Direct materials.....	\$127,000	
Direct labor.....	140,000	
Manufacturing overhead.....	<u>77,000</u>	
Total manufacturing costs		<u>344,000</u>
Total cost of work in process		377,000
Less: Work in process inventory,		
December 31		<u>17,000</u>
Cost of goods manufactured		<u>\$360,000</u>

EXERCISE 19-12**(a)**

AIKMAN CORPORATION
Cost of Goods Manufactured Schedule
For the Month Ended June 30, 2010

Work in process, June 1		\$ 3,000
Direct materials used	\$20,000	
Direct labor	30,000	
Manufacturing overhead		
Indirect labor	\$4,500	
Factory manager's salary	3,000	
Indirect materials	2,200	
Maintenance, factory equipment	1,800	
Depreciation, factory equipment	1,400	
Factory utilities	400	
Total manufacturing overhead	<u>13,300</u>	
Total manufacturing costs		<u>63,300</u>
Total cost of work in process		66,300
Less: Work in process, June 30		<u>3,800</u>
Cost of goods manufactured		<u>\$62,500</u>

(b)

AIKMAN CORPORATION
Income Statement (Partial)
For the Month Ended June 30, 2010

Net sales		\$87,100
Cost of goods sold		
Finished goods inventory, June 1	\$ 5,000	
Cost of goods manufactured [from (a)]	<u>62,500</u>	
Cost of goods available for sale	67,500	
Finished goods inventory, June 30	<u>7,500</u>	
Cost of goods sold		<u>60,000</u>
Gross profit		<u>\$27,100</u>

EXERCISE 19-13**(a)**

DANNER, CHENEY, AND HOWE
Schedule of Cost of Contract Services Provided
For the Month Ended August 31, 2010

Supplies used (direct materials)	\$ 1,200
Salaries of professionals (direct labor).....	12,600
Service overhead:	
Utilities for contract operations.....	\$1,400
Contract equipment depreciation	900
Insurance on contract operations	800
Janitorial services for professional offices	400
Total overhead.....	<u>3,500</u>
Cost of contract services provided	<u>\$17,300</u>

(b) The costs not included in the cost of contract services provided would all be classified as period costs. As such, they would be reported on the income statement under administrative expenses.

EXERCISE 19-14

(a) Work-in-process, 1/1 \$ 13,500

Direct materials

Materials inventory, 1/1.....	\$ 21,000	
Materials purchased	<u>150,000</u>	
Materials available for use	171,000	
Less: Materials inventory, 12/31.....	<u>30,000</u>	
Direct materials used.....		\$141,000
Direct labor.....		200,000
Manufacturing overhead		<u>180,000</u>
Total manufacturing costs.....		521,000
Total cost of work-in-process.....		534,500
Less: Work-in-process, 12/31		<u>17,200</u>
Cost of goods manufactured		<u>\$517,300</u>

(b) Sales..... \$900,000

Cost of goods sold

Finished goods, 1/1	\$ 27,000	
Cost of goods manufactured	<u>517,300</u>	
Cost of goods available for sale	544,300	
Finished goods, 12/31	<u>21,000</u>	
Cost of goods sold		523,300
Gross profit.....		<u>\$376,700</u>

EXERCISE 19-14 (Continued)

(c) Current assets

Inventories

Finished goods	\$21,000	
Work in process	17,200	
Raw materials.....	<u>30,000</u>	\$68,200

- (d) In a merchandising company's income statement, the only difference would be in the computation of cost of goods sold. Beginning and ending finished goods would be replaced by beginning and ending merchandise inventory, and cost of goods manufactured would be replaced by purchases. In a merchandising company's balance sheet, there would be one inventory account (merchandise inventory) instead of three.

EXERCISE 19-15

1. (a)	9. (a)
2. (a)	10. (a), (b)
3. (a), (c)	11. (b)
4. (b)	12. (b)
5. (a)	13. (a)
6. (a)	14. (a)
7. (a)	15. (a)
8. (b), (c)	16. (a)

EXERCISE 19-16

(a)

CHAMBERLIN MANUFACTURING
Cost of Goods Manufactured Schedule
For the Month Ended June 30, 2010

Work in process inventory, June 1		\$ 5,000
Direct materials		
Raw materials inventory, June 1	\$ 9,000	
Raw materials purchases	<u>54,000</u>	
Total raw materials available for use	63,000	
Less: Raw materials inventory, June 30	<u>13,100</u>	
Direct materials used	49,900	
Direct labor	57,000	
Manufacturing overhead		
Indirect labor	\$5,500	
Factory insurance	4,000	
Machinery depreciation	4,000	
Factory utilities	3,100	
Machinery repairs	1,800	
Miscellaneous factory costs	<u>1,500</u>	
Total manufacturing overhead	<u>19,900</u>	
Total manufacturing costs		<u>126,800</u>
Total cost of work in process		131,800
Less: Work in process inventory, June 30		<u>7,000</u>
Cost of goods manufactured		<u>\$124,800</u>

(b)

CHAMBERLIN MANUFACTURING
(Partial) Balance Sheet
June 30, 2010

Current assets		
Inventories		
Finished goods	\$ 6,000	
Work in process	7,000	
Raw materials	<u>13,100</u>	\$26,100

EXERCISE 19-17

- (a) Raw Materials account: $(5,000 - 4,650) \times \$9 = \$3,150$
Work in Process account: $(4,600 \times 10\%) \times \$9 = \$4,140$
Finished Goods account: $(4,600 \times 90\% \times 25\%) \times \$9 = \$9,315$
Cost of Goods Sold account: $(4,600 \times 90\% \times 75\%) \times \$9 = \$27,945$
Selling Expenses account: $50 \times \$9 = \$450$
Proof of cost of head lamps allocated $(5,000 \times \$9 = \$45,000)$

Raw materials	\$ 3,150
Work in process	4,140
Finished goods	9,315
Cost of goods sold	27,945
Selling expenses	450
Total	<u>\$45,000</u>

- (b) To: Chief Accountant
From: Student
Subject: Statement Presentation of Accounts

Two accounts will appear in the income statement. Cost of Goods Sold will be deducted from net sales in determining gross profit. Selling expenses will be shown under operating expenses and will be deducted from gross profit in determining net income. Sometimes, the calculation for Cost of Good Sold is shown on the income statement. In these cases, the balance in Finished Goods inventory would also be shown on the income statement.

The other accounts associated with the head lamps are inventory accounts which contain end-of-period balances. Thus, they will be reported under inventories in the current assets section of the balance sheet in the following order: finished goods, work in process, and raw materials.

EXERCISE 19-18

- (a) 3 Balanced scorecard
(b) 4 Value chain
(c) 2 Just-in-time inventory
(d) 1 Activity-based costing

SOLUTIONS TO PROBLEMS

PROBLEM 19-1A

(a)	Cost Item	Product Costs			Period Costs
		Direct Materials	Direct Labor	Manufacturing Overhead	
	Rent on factory equipment			\$ 7,000	
	Insurance on factory building			1,500	
	Raw materials	\$75,000			
	Utility costs for factory			900	
	Supplies for general office				\$ 300
	Wages for assembly line workers		\$43,000		
	Depreciation on office equipment				800
	Miscellaneous materials			1,100	
	Factory manager's salary			5,700	
	Property taxes on factory building			400	
	Advertising for helmets				14,000
	Sales commissions				7,000
	Depreciation on factory building	<u>\$75,000</u>	<u>\$43,000</u>	<u>1,500</u>	<u>\$22,100</u>

(b)	Total production costs	
	Direct materials	\$ 75,000
	Direct labor	43,000
	Manufacturing overhead	18,100
	Total production cost	<u>\$136,100</u>

Production cost per helmet = $\$136,100/10,000 = \$13.61$.

PROBLEM 19-2A

(a)	Cost Item	Product Costs			Period Costs
		Direct Materials	Direct Labor	Manufacturing Overhead	
	Raw materials (1)	\$96,200			
	Wages for workers (2)		\$78,000		
	Rent on equipment			\$ 4,900	
	Indirect materials (3)			6,500	
	Factory supervisor's salary			3,000	
	Janitorial costs			1,300	
	Advertising				
	Depreciation on factory building (4)			600	
	Property taxes on factory building (5)			750	
		<u>\$96,200</u>	<u>\$78,000</u>	<u>\$17,050</u>	<u>\$8,500</u>

- (1) $\$74 \times 1,300 = \$96,200.$
- (2) $\$12 \times 5 \times 1,300 = \$78,000.$
- (3) $\$5 \times 1,300 = \$6,500.$
- (4) $\$7,200/12 = \$600.$
- (5) $\$9,000/12 = \$750.$

(b)	Total production costs	
	Direct materials	\$ 96,200
	Direct labor	78,000
	Manufacturing overhead	17,050
	Total production cost	<u>\$191,250</u>

Production cost per system = $\$191,250/1,300 = \$147.12.$ (rounded)

PROBLEM 19-3A

(a) Case 1

$$A = \$7,600 + \$5,000 + \$8,000 = \$20,600$$

$$\$20,600 + \$1,000 - B = \$17,000$$

$$B = \$20,600 + \$1,000 - \$17,000 = \$4,600$$

$$\$17,000 + C = \$18,000$$

$$C = \$18,000 - \$17,000 = \$1,000$$

$$D = \$18,000 - \$3,400 = \$14,600$$

$$E = (\$24,500 - \$2,500) - \$14,600 = \$7,400$$

$$F = \$7,400 - \$2,500 = \$4,900$$

Case 2

$$G + \$8,000 + \$4,000 = \$18,000$$

$$G = \$18,000 - \$8,000 - \$4,000 = \$6,000$$

$$\$18,000 + H - \$3,000 = \$22,000$$

$$H = \$22,000 + \$3,000 - \$18,000 = \$7,000$$

$$(I - \$1,400) - K = \$7,000$$

$$(I - \$1,400) - \$22,800 = \$7,000$$

$$I = \$1,400 + \$22,800 + \$7,000 = \$31,200$$

(Note: Item I can only be solved after item K is solved.)

$$J = \$22,000 + \$3,300 = \$25,300$$

$$K = \$25,300 - \$2,500 = \$22,800$$

$$\$7,000 - L = \$5,000$$

$$L = \$2,000$$

PROBLEM 19-3A (Continued)**(b)**

CASE 1
Cost of Goods Manufactured Schedule

Work in process, beginning		\$ 1,000
Direct materials	\$7,600	
Direct labor	5,000	
Manufacturing overhead	<u>8,000</u>	
Total manufacturing costs.....		<u>20,600</u>
Total cost of work in process		21,600
Less: Work in process, ending		<u>4,600</u>
Cost of goods manufactured		<u>\$17,000</u>

(c)

CASE 1
Income Statement

Sales.....	\$24,500	
Less: Sales discounts.....	<u>2,500</u>	
Net sales		\$22,000
Cost of goods sold		
Finished goods inventory, beginning	1,000	
Cost of goods manufactured	<u>17,000</u>	
Cost of goods available for sale	18,000	
Less: Finished goods inventory, ending	<u>3,400</u>	
Cost of goods sold		<u>14,600</u>
Gross profit		7,400
Operating expenses.....		<u>2,500</u>
Net income		<u>\$ 4,900</u>

CASE 1
(Partial) Balance Sheet

Current assets		
Cash		\$ 4,000
Receivables (net)		15,000
Inventories		
Finished goods	\$3,400	
Work in process	4,600	
Raw materials	<u>600</u>	8,600
Prepaid expenses		<u>400</u>
Total current assets		<u>\$28,000</u>

PROBLEM 19-4A

(a)

STELLAR MANUFACTURING COMPANY
Cost of Goods Manufactured Schedule
For the Year Ended June 30, 2010

Work in process, July 1, 2009		\$ 19,800
Direct materials		
Raw materials inventory,		
July 1, 2009	\$ 48,000	
Raw materials purchases	<u>96,400</u>	
Total raw materials available		
for use.....	144,400	
Less: Raw materials inventory,		
June 30, 2010	<u>39,600</u>	
Direct materials used		\$104,800
Direct labor		149,250
Manufacturing overhead		
Plant manager's salary	29,000	
Factory utilities	27,600	
Indirect labor.....	24,460	
Factory machinery depreciation	16,000	
Factory property taxes	9,600	
Factory insurance	4,600	
Factory repairs	<u>1,400</u>	
Total manufacturing		
overhead	<u>112,660</u>	
Total manufacturing costs		<u>366,710</u>
Total cost of work in process		386,510
Less: Work in process, June 30.....		<u>18,600</u>
Cost of goods manufactured		<u>\$367,910</u>

PROBLEM 19-4A (Continued)

(b) STELLAR MANUFACTURING COMPANY
(Partial) Income Statement
For the Year Ended June 30, 2010

Sales revenues		
Sales.....	\$554,000	
Less: Sales discounts.....	4,200	
Net sales		\$549,800
Cost of goods sold		
Finished goods inventory, July 1, 2009.....	96,000	
Cost of goods manufactured	367,910	
Cost of goods available for sale	463,910	
Less: Finished goods inventory, June 30, 2010.....	95,900	
Cost of goods sold		368,010
Gross profit.....		<u>\$181,790</u>

(c) STELLAR MANUFACTURING COMPANY
(Partial) Balance Sheet
June 30, 2010

	Assets	
Current assets		
Cash		\$ 32,000
Accounts receivable		27,000
Inventories		
Finished goods	\$95,900	
Work in process	18,600	
Raw materials	39,600	154,100
Total current assets		<u>\$213,100</u>

PROBLEM 19-5A

(a)

TOMBERT COMPANY
Cost of Goods Manufactured Schedule
For the Month Ended October 31, 2010

Work in process, October 1		\$ 16,000
Direct materials		
Raw materials inventory,		
October 1	\$ 18,000	
Raw materials		
purchases.....	<u>264,000</u>	
Total raw materials available		
for use.....	282,000	
Less: Raw materials inventory,		
October 31	<u>34,000</u>	
Direct materials used		\$248,000
Direct labor		190,000
Manufacturing overhead		
Factory facility rent	60,000	
Depreciation on factory		
equipment	31,000	
Indirect labor	28,000	
Factory utilities*	8,400	
Factory insurance**	<u>4,800</u>	
Total manufacturing		
overhead	<u>132,200</u>	
Total manufacturing costs		<u>570,200</u>
Total cost of work in process		586,200
Less: Work in process, October 31		<u>14,000</u>
Cost of goods manufactured		<u>\$572,200</u>

*\$12,000 X 70% = \$8,400

**\$8,000 X 60% = \$4,800

PROBLEM 19-5A (Continued)**(b)**

TOMBERT COMPANY
Income Statement
For the Month Ended October 31, 2010

Sales (net)		\$780,000
Cost of goods sold		
Finished goods inventory, October 1	\$ 30,000	
Cost of goods manufactured	572,200	
Cost of goods available for sale	602,200	
Less: Finished goods inventory,		
October 31	48,000	
Cost of goods sold		554,200
Gross profit		225,800
Operating expenses		
Advertising expense	90,000	
Selling and administrative salaries.....	75,000	
Depreciation expense—sales		
equipment	45,000	
Utilities expense*	3,600	
Insurance expense**	3,200	
Total operating expenses		216,800
Net income		\$ 9,000

*\$12,000 X 30%

**\$8,000 X 40%

PROBLEM 19-1B

(a)	Cost Item	Product Costs			Period Costs
		Direct Materials	Direct Labor	Manufacturing Overhead	
	Maintenance costs on factory building			\$ 1,500	
	Factory manager's salary			4,000	8,000
	Advertising for helmets				5,000
	Sales commissions				
	Depreciation on factory building			700	
	Rent on factory equipment			6,000	
	Insurance on factory building			3,000	
	Raw materials	\$20,000			
	Utility costs for factory			800	
	Supplies for general office				
	Wages for assembly line workers		\$54,000		200
	Depreciation on office equipment				500
	Miscellaneous materials				
		<u>\$20,000</u>	<u>\$54,000</u>	<u>2,000</u>	
				<u>\$18,000</u>	<u>\$13,700</u>

(b) Total production costs

Direct materials	\$20,000
Direct labor	54,000
Manufacturing overhead	18,000
Total production cost	<u>\$92,000</u>

Production cost per motorcycle helmet = $\$92,000/1,000 = \$92$.

PROBLEM 19-2B

(a)	Cost Item	Product Costs			Period Costs
		Direct Materials	Direct Labor	Manufacturing Overhead	
	Raw materials (1)	\$57,500			
	Wages for workers (2)		\$65,000		
	Rent on equipment			\$ 1,300	
	Indirect materials (3)			7,500	
	Factory supervisor's salary			3,500	
	Janitorial costs			1,400	
	Advertising				\$6,000
	Depreciation on factory building (4)			700	
	Property taxes on factory building (5)			600	
		<u>\$57,500</u>	<u>\$65,000</u>	<u>\$15,000</u>	<u>\$6,000</u>

- (1) $\$23 \times 2,500 = 57,500.$
- (2) $\$13 \times 2 \times 2,500 = \$65,000.$
- (3) $\$3 \times 2,500 = \$7,500.$
- (4) $\$8,400/12 = \$700.$
- (5) $\$7,200/12 = \$600.$

(b)	Total production costs	
	Direct materials	\$ 57,500
	Direct labor	65,000
	Manufacturing overhead	15,000
	Total production cost	<u>\$137,500</u>

Production cost per racket = $\$137,500/2,500 = \$55.$

PROBLEM 19-3B

(a) Case A

$$A = \$6,300 + \$3,000 + \$6,000 = \$15,300$$

$$\$15,300 + \$1,000 - B = \$15,800$$

$$B = \$15,300 + \$1,000 - \$15,800 = \$500$$

$$\$15,800 + C = \$18,300$$

$$C = \$18,300 - \$15,800 = \$2,500$$

$$D = \$18,300 - \$1,200 = \$17,100$$

$$E = (\$22,500 - \$1,500) - \$17,100 = \$3,900$$

$$F = \$3,900 - \$2,700 = \$1,200$$

Case B

$$G + \$4,000 + \$5,000 = \$16,000$$

$$G = \$16,000 - \$4,000 - \$5,000 = \$7,000$$

$$\$16,000 + H - \$2,000 = \$20,000$$

$$H = \$20,000 + \$2,000 - \$16,000 = \$6,000$$

$$(I - \$1,200) - K = \$6,000$$

$$(I - \$1,200) - \$22,500 = \$6,000$$

$$I = \$1,200 + \$22,500 + \$6,000 = \$29,700$$

(Note: Item I can only be solved after item K is solved.)

$$J = \$20,000 + \$5,000 = \$25,000$$

$$K = \$25,000 - \$2,500 = \$22,500$$

$$\$6,000 - L = \$2,200$$

$$L = \$3,800$$

PROBLEM 19-3B (Continued)**(b)**

CASE A
Cost of Goods Manufactured Schedule

Work in process, beginning		\$ 1,000
Direct materials	\$6,300	
Direct labor	3,000	
Manufacturing overhead	<u>6,000</u>	
Total manufacturing costs		<u>15,300</u>
Total cost of work in process		16,300
Less: Work in process, ending		<u>500</u>
Cost of goods manufactured		<u>\$15,800</u>

(c)

CASE A
Income Statement

Sales.....	\$22,500	
Less: Sales discounts	<u>1,500</u>	
Net sales		\$21,000
Cost of goods sold		
Finished goods inventory, beginning	\$ 2,500	
Cost of goods manufactured	<u>15,800</u>	
Cost of goods available for sale	18,300	
Finished goods inventory, ending	<u>1,200</u>	
Cost of goods sold		<u>17,100</u>
Gross profit		3,900
Operating expenses.....		<u>2,700</u>
Net income		<u>\$ 1,200</u>

CASE A
(Partial) Balance Sheet

Current assets		
Cash		\$ 3,000
Receivables (net)		10,000
Inventories		
Finished goods	\$1,200	
Work in process	500	
Raw materials	<u>700</u>	2,400
Prepaid expenses		<u>200</u>
Total current assets		<u>\$15,600</u>

PROBLEM 19-4B

(a) **DOSEY MANUFACTURING COMPANY**
Cost of Goods Manufactured Schedule
For the Year Ended December 31, 2010

Work in process inventory,		
January 1		\$ 9,500
Direct materials		
Raw materials inventory,		
January 1	\$ 47,000	
Raw materials purchases	<u>62,500</u>	
Total raw materials available for use	109,500	
Less: Raw materials inventory,		
December 31	<u>44,200</u>	
Direct materials used		\$ 65,300
Direct labor		145,100
Manufacturing overhead		
Plant manager's salary	40,000	
Indirect labor	18,100	
Factory utilities	12,900	
Factory machinery depreciation	7,700	
Factory insurance	7,400	
Factory property taxes	6,100	
Factory repairs	<u>800</u>	
Total manufacturing overhead		<u>93,000</u>
Total manufacturing costs		<u>303,400</u>
Total cost of work in process		312,900
Less: Work in process,		
December 31		<u>8,000</u>
Cost of goods manufactured		<u>\$304,900</u>

PROBLEM 19-4B (Continued)

(b) **DOSEY MANUFACTURING COMPANY**
(Partial) Income Statement
For the Year Ended December 31, 2010

Sales revenues		
Sales.....	\$465,000	
Less: Sales discounts.....	<u>2,500</u>	
Net sales		\$462,500
Cost of goods sold		
Finished goods inventory,		
January 1.....	85,000	
Cost of goods manufactured (see		
schedule).....	<u>304,900</u>	
Cost of goods available for sale	389,900	
Finished goods inventory,		
December 31	<u>67,800</u>	
Cost of goods sold		<u>322,100</u>
Gross profit.....		<u>\$140,400</u>

(c) **DOSEY MANUFACTURING COMPANY**
(Partial) Balance Sheet
December 31, 2010

	Assets	
Current assets		
Cash		\$ 28,000
Accounts receivable		27,000
Inventories		
Finished goods	\$67,800	
Work in process	8,000	
Raw materials	<u>44,200</u>	<u>120,000</u>
Total current assets		<u>\$175,000</u>

PROBLEM 19-5B

(a)

CINTA COMPANY
Cost of Goods Manufactured Schedule
For the Month Ended August 31, 2010

Work in process, August 1		\$ 25,000
Direct materials		
Raw materials inventory,		
August 1	\$ 19,500	
Raw materials purchases	<u>220,000</u>	
Total raw materials		
available for use	239,500	
Less: Raw materials inventory,		
August 31	<u>30,000</u>	
Direct materials used		\$209,500
Direct labor		160,000
Manufacturing overhead		
Factory facility rent	\$ 60,000	
Depreciation on factory		
equipment	35,000	
Indirect labor	20,000	
Factory utilities*	5,000	
Factory insurance**	<u>3,500</u>	
Total manufacturing		
overhead	<u>123,500</u>	
Total manufacturing costs		<u>493,000</u>
Total cost of work in process		518,000
Less: Work in process,		
August 31		<u>21,000</u>
Cost of goods manufactured		<u>\$497,000</u>

*\$10,000 X 50%

**\$5,000 X 70%

PROBLEM 19-5B (Continued)**(b)**

CINTA COMPANY
Income Statement
For the Month Ended August 31, 2010

Sales (net)		\$675,000
Cost of goods sold		
Finished goods inventory, August 1	\$ 40,000	
Cost of goods manufactured	497,000	
Cost of goods available for sale	537,000	
Less: Finished goods inventory,		
August 31	59,000	
Cost of goods sold		478,000
Gross profit		197,000
Operating expenses		
Advertising expense	75,000	
Selling and administrative salaries.....	70,000	
Depreciation expense—sales		
equipment	50,000	
Utilities expense*	5,000	
Insurance expense**	1,500	
Total operating expenses.....		201,500
Net loss		\$ (4,500)

*\$10,000 X 50%

**\$5,000 X 30%

Ending Raw Materials Inventory

Beginning raw materials + Raw materials purchased

= Raw materials available for use

= \$19,000 + \$345,000 = \$364,000

Raw materials available for use – Ending raw materials inventory

= Direct materials used

\$364,000 – Ending raw materials inventory = \$350,000

Ending raw materials inventory = \$364,000 – \$350,000 = \$14,000

Ending Work in Process Inventory

Direct materials + Direct labor + Manufacturing overhead

= Total manufacturing costs

= \$350,000 + \$240,000 + (\$240,000 X 60%) = \$734,000

Beginning work in process inventory + Total manufacturing costs

= Total cost of work in process

= \$25,000 + \$734,000 = \$759,000

Cost of goods manufactured + Beginning finished goods inventory

= Cost of goods available for sale

Cost of goods manufactured + \$38,000 = \$770,000

Cost of goods manufactured = \$770,000 – \$38,000 = \$732,000

Total cost of work in process – Ending work in process inventory

= Cost of goods manufactured

\$759,000 – Ending work in process inventory = \$732,000

Ending work in process inventory = \$759,000 – \$732,000 = \$27,000

Ending Finished Goods Inventory

Sales – Cost of goods sold = Gross profit

\$1,260,000 – Cost of goods sold = \$1,260,000 X 40%

Cost of goods sold = \$1,260,000 – \$504,000 = \$756,000

Cost of goods available for sale – Ending finished goods inventory

= Cost of goods sold

\$770,000 – Ending finished goods inventory = \$756,000

Ending finished goods inventory = \$770,000 – \$756,000 = \$14,000

Since the questions were fairly open-ended, the following are only suggested results. The class may be able to think of others, or of more items for each one.

(a)	<i>Andre Agassi</i>	Needs information on sales, perhaps by salesperson and by territory.
	<i>Serena Williams</i>	Needs cost information for her department.
	<i>Pete Sampras</i>	Needs all accounting information.
	<i>Andy Roddick</i>	Needs product cost information.
	<i>Venus Williams</i>	Needs information on component costs and costs for her department.
(b)	<i>Andre Agassi</i>	Income statement.
	<i>Serena Williams</i>	None.
	<i>Pete Sampras</i>	All.
	<i>Andy Roddick</i>	Income statement and cost of goods manufactured schedule.
	<i>Venus Williams</i>	None.
(c)	<i>Andre Agassi</i>	Sales by Territory—Detailed information, possibly by product line, issued daily or weekly.
	<i>Serena Williams</i>	Cost of Computer Programs—Accumulated cost incurred for each major program used including maintenance and updates of program, issued monthly.
	<i>Pete Sampras</i>	Cost of Preparing Reports—Detailed analysis of all reports provided, their frequency, time, and estimated cost to prepare, issued monthly.
	<i>Andy Roddick</i>	Cost of Product—Detailed cost by product line, including a comparison with estimated costs for that product. Issued as each batch of production is completed.
	<i>Venus Williams</i>	Cost of Product Design—Accumulated total costs of each new product, issued at end of each project.

The factors that affect the cost of products are direct materials, direct labor, and manufacturing overhead. The percentage increase of total cost of products sold to net sales of 1.7% during the year appears to be entirely due to net increases in costs.

The current year events and their possible impact on the three manufacturing cost elements are as follows:

Operational problems at a major furnace. The principal effect is on manufacturing overhead due to higher maintenance costs. The problems may also have resulted in higher direct labor costs and higher direct materials because of the malfunctioning of the furnace.

Higher downtime and costs and expenses associated with capital improvement projects. Higher downtime causes higher indirect labor. Costs associated with capital improvement projects impact product costs through depreciation which is part of manufacturing overhead.

Increases in labor and other manufacturing costs. The increases in labor resulted in higher direct labor costs. The increases in indirect labor costs and in other manufacturing costs resulted in higher manufacturing overhead.

Reduced fixed costs. Fixed costs such as insurance and rent are classified as manufacturing overhead. Thus, this factor reduced overhead costs during the year.

Productivity and efficiency gains. This factor could have resulted in reductions of both direct material and direct labor costs.

- (a) The IMA has nearly 65,000 members. These members include business leaders, managers, and decision makers in accounting and finance.
- (b) Student and Associate members receive many of the benefits of Regular membership at a significant savings.
- The Certified Management Accountant (CMA) designation
 - Specialized learning opportunities
 - Educational assistance, grants, educational competitions
 - Around-the-Clock Networking
 - Career management resources
 - Student leadership conference
- (c) The answer to this question will vary by school.

Ms. Sue Tombert
President
Tombert Company

Dear Sue:

As you requested, I corrected the income statement for October from the information you gave me. The corrected statement is enclosed and it shows that you actually earned net income of \$9,000 for October. I also noticed that you did not have a cost of goods manufactured schedule, so I prepared one for you.

The income statement your assistant accountant prepared was not correct for two primary reasons. First, product costs were not separated from selling and administrative expenses. Second, and more importantly, the reported net loss did not reflect changes in inventories. This had the effect of treating these costs as expenses rather than assets. A reconciliation of the reported net loss of \$23,000 to net income of \$9,000 is as follows:

Net loss as reported.....		\$(23,000)
Increase (decrease) in inventories		
Raw materials (\$34,000 – \$18,000).....	\$16,000	
Work in process (\$14,000 – \$16,000)	(2,000)	
Finished goods (\$48,000 – \$30,000).....	<u>18,000</u>	
Total increase		<u>32,000</u>
Net income as corrected.....		<u>\$ 9,000</u>

The changes in raw materials and work in process inventories are reported in the cost of goods manufactured schedule. You will see, for example, that the cost of direct materials used was \$248,000, not \$264,000 as reported by your accountant in the income statement. The difference is the change in raw materials inventories. Similarly, you will see that the \$2,000 decrease in work in process inventories increases total manufacturing costs of \$570,200 to produce cost of goods manufactured of \$572,200.

The change in finished goods inventories is reported in the income statement. Notice that the change of \$18,000 is subtracted from cost of goods manufactured of \$572,200 to produce cost of goods sold of \$554,200.

BYP 19-5 (Continued)

I have also modified the form of the income statement to recognize the distinction between product costs (cost of goods sold) and period costs (operating expenses) as required by generally accepted accounting principles.

Thanks for letting me help. If I can be of further assistance, don't hesitate to call. I hope you find a replacement for your controller soon.

Sincerely,

- (a) The stakeholders in this situation are:
- The users of Robbin Industries' financial statements.
 - Wayne Terrago, controller.
 - The vice-president of finance.
 - The president of Robbin Industries.
- (b) The ethical issues in this situation pertain to the adherence to sound and acceptable accounting principles. Intentional violation of generally accepted accounting principles in order to satisfy a practical short-term personal or company need and thus create misleading financial statements would be unethical. Selecting one acceptable method of accounting and reporting among other acceptable methods is not necessarily unethical.
- (c) Ethically, the management of Robbin Industries should be trying to report the financial condition and results of operations as fairly as possible; that is, in accordance with GAAP. Wayne should inform management what is acceptable accounting and what is not. The basic concept to be supported in this advertising cost transaction is matching costs and revenues. Normally, advertising costs are expensed in the period in which they are incurred because it is very difficult to associate them with specific revenues.

Student responses will vary. We have provided some basic examples that may represent common responses.

- (a) Individuals must often make purchase decisions which involve choosing between an item that has a more expensive initial purchase price, but is expected to either last longer, or provides some form of cost savings. The question that the individual faces is whether the cost savings or additional benefit justifies the additional initial cost. For example, more expensive dishwashers and refrigerators also tend to be more energy efficient. The labels on these appliances provide information regarding the energy savings which can be used to make a break-even evaluation.**
- (b) In order to increase control over their financial situation and reduce the probability of financial hardship all people should prepare personal budgets. Preparation of a personal budget requires the individual to plan for the future and to prioritize expenditures.**
- (c) Companies employ the balanced scorecard as a mechanism to ensure that their financial goals are consistent with their efforts. Use of the balanced scorecard requires clear articulation of goals, priorities and strategies. By employing these same techniques in their everyday life individuals can be better assured that they will expend effort on those things that really matter to them, rather than wasting efforts on less important distractions.**
- (d) Capital budgeting involves financial evaluation of long-term assets. Companies routinely make capital budgeting decisions, but so do individuals. The purchase of a home or car is a decision that has implications for your finances for many subsequent years. Buying a house or car is a very personal decision, influenced by many personal, nonfinancial, preferences. However, these decisions should also be subjected to a financial evaluation using capital budgeting techniques to ensure that the choice makes good economic sense.**

CHAPTER 20

Job Order Costing

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain the characteristics and purposes of cost accounting.	1, 2, 3, 4		2			
2. Describe the flow of costs in a job order costing system.	5, 7, 8, 12	1, 2	3, 4	1, 6, 7, 8, 9, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
3. Explain the nature and importance of a job cost sheet.	6, 9, 10, 11, 12	3, 4, 5	5	1, 2, 3, 6, 7, 8, 10, 11, 12	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
4. Indicate how the predetermined overhead rate is determined and used.	11, 13, 14, 15	6, 7	6	2, 3, 5, 6, 7, 8, 11, 12, 13	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
5. Prepare entries for jobs completed and sold.	6, 16	8		2, 3, 4, 6, 7, 8, 9, 10, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
6. Distinguish between under- and overapplied manufacturing overhead.	17, 18	9		5, 12, 13	1A, 2A, 4A, 5A	1B, 2B, 4B, 5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare entries in a job cost system and job cost sheets.	Simple	30–40
2A	Prepare entries in a job cost system and partial income statement.	Moderate	30–40
3A	Prepare entries in a job cost system and cost of goods manufactured schedule.	Simple	30–40
4A	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20–30
5A	Analyze manufacturing accounts and determine missing amounts.	Complex	30–40
1B	Prepare entries in a job cost system and job cost sheets.	Simple	30–40
2B	Prepare entries in a job cost system and partial income statement.	Moderate	30–40
3B	Prepare entries in a job cost system and cost of goods manufactured schedule.	Simple	30–40
4B	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20–30
5B	Analyze manufacturing accounts and determine missing amounts.	Complex	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E**CHAPTER 20****JOB ORDER COSTING**

Number	SO	BT	Difficulty	Time (min.)
BE1	2	C	Simple	6–8
BE2	2	AP	Simple	6–8
BE3	3	AP	Simple	2–4
BE4	3	AP	Simple	2–4
BE5	3	AP	Simple	4–6
BE6	4	AP	Simple	3–5
BE7	4	AP	Simple	3–5
BE8	5	AP	Simple	4–6
BE9	6	C	Simple	3–5
DI1	2	AP	Simple	6–8
DI2	3, 4	AP	Simple	6–8
DI3	5	AP	Simple	4–6
DI4	6	AN	Simple	3–5
EX1	2, 3	AP	Simple	4–6
EX2	3–5	AP	Simple	10–12
EX3	3–5	AP	Simple	8–10
EX4	5	AN	Moderate	10–12
EX5	4, 6	AN	Simple	6–8
EX6	2–5	AP	Simple	8–10
EX7	2–5	AP	Simple	8–10
EX8	2–5	AP	Simple	10–12
EX9	2, 5	AP	Moderate	12–15
EX10	3, 5	AP	Moderate	10–12
EX11	2, 4, 5	AP	Simple	6–8
EX12	3, 4, 6	AP	Moderate	8–10
EX13	4, 6	AP	Simple	6–8
P1A	2–6	AP	Simple	30–40
P2A	2–6	AN	Moderate	30–40
P3A	2–5	AP	Simple	30–40

JOB ORDER COSTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
P4A	4, 6	AP	Simple	20–30
P5A	2–6	AN	Complex	30–40
P1B	2–6	AP	Simple	30–40
P2B	2–6	AN	Moderate	30–40
P3B	2–5	AP	Simple	30–40
P4B	4, 6	AP	Simple	20–30
P5B	2–6	AN	Complex	30–40
BYP1	4	E	Moderate	20–30
BYP2	2, 3	AN	Moderate	15–20
BYP3	1	C	Simple	10–15
BYP4	—	C	Simple	5–10
BYP5	4	C	Moderate	10–15
BYP6	2, 3	E	Simple	10–15
BYP7	—	E	Simple	10–15

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain the characteristics and purposes of cost accounting.		Q20-1 Q20-2 Q20-3 Q20-4				
2. Describe the flow of costs in a job order costing system.	Q20-5 Q20-7 Q20-8 Q20-12	Q20-6 BE20-1	BE20-2 E20-6 P20-1A BE20-3 E20-7 P20-3A BE20-4 E20-8 P20-1B DI20-1 E20-9 P20-3B E20-1 E20-11	P20-2A P20-5A P20-2B P20-5B		
3. Explain the nature and importance of a job cost sheet.	Q20-11 Q20-12	Q20-9 Q20-10	BE20-5 E20-6 E20-1A DI20-2 E20-7 E20-3A E20-1 E20-8 P20-1B E20-2 E20-10 P20-3B E20-3 E20-12	P20-2A P20-5A P20-2B P20-5B		
4. Indicate how the predetermined overhead rate is determined and used.	Q20-15	Q20-13 Q20-14	BE20-6 E20-7 P20-3A BE20-7 E20-8 P20-4A DI20-2 E20-11 P20-1B E20-2 E20-12 P20-3B E20-3 E20-13 P20-4B E20-6 P20-1A	E20-5 E20-2A P20-5A P20-2B P20-5B		
5. Prepare entries for jobs completed and sold.		Q20-16	BE20-8 E20-7 P20-1A DI20-3 E20-8 P20-3A E20-2 E20-9 P20-1B E20-3 E20-10 P20-3B E20-6 E20-11	E20-4 P20-5B P20-2A P20-5A P20-2B		
6. Distinguish between under- and overapplied manufacturing overhead.		Q20-17 Q20-18 BE20-9	E20-12 E20-13 P20-1A	DI20-4 P20-5A E20-5 P20-2B P20-2A P20-5B		
Broadening Your Perspective		Communication Real-World Focus Exploring the Web		Managerial Analysis		All About You Decision Making Across the Organization Ethics Case

ANSWERS TO QUESTIONS

1. (a) Cost accounting involves the measuring, recording, and reporting of product costs. A cost accounting system consists of manufacturing cost accounts that are fully integrated into the general ledger of a company.
(b) An important feature of a cost accounting system is the use of a perpetual inventory system that provides immediate, up-to-date information on the cost of a product.
2. (a) The two principal types of cost accounting systems are: (1) job order costing and (2) process costing. Under a job order cost system, costs are assigned to each job or batch of goods; at all times each job or batch of goods can be separately identified. A job order cost system measures costs for each completed job, rather than for set time periods. Under a process cost system, product-related costs are accumulated by or assigned to departments or processes for a set period of time. Job order costing lends itself to specific, special-order manufacturing or servicing while process costing is better suited to similar, large-volume products and continuous process manufacturing.
(b) A company may use both types of systems. For example, General Motors uses process costing for standard model cars and job order costing for custom-made vehicles.
3. A job order cost system is most likely to be used by a company that receives special orders, or custom builds, or produces heterogeneous, nontransferable items or products; that is, the product manufactured or the service rendered is tailored to the customer or client's requests, needs, or situation. Examples of industries that use job order systems are custom home builders, commercial printing companies, motion picture companies, construction contractors, repair shops, accounting and law firms, hospitals, shipbuilders, and architects.
4. A process cost system is most likely to be used by manufacturing firms with continuous production flows usually found in mass production, assembly line, large-volume, uniform, or relatively similar product industries. Companies producing appliances, chemicals, pharmaceuticals, rubber and tires, plastics, cement, petroleum, and automobiles utilize process cost systems.
5. The major steps in the flow of costs in a job order cost accounting system are: (1) accumulating the manufacturing costs incurred and (2) assigning the accumulated costs to work done.
6. The two inventory control accounts and their subsidiary ledgers are:
Work in process inventory—job cost sheets.
Finished goods inventory—finished goods records.
7. The source documents used in accumulating direct labor costs are time tickets and time cards.
8. Disagree. Entries to Manufacturing Overhead are also made at the end of an accounting period. For example, there will be adjusting entries for factory depreciation, property taxes, and insurance.
9. The source document for materials is the materials requisition slip and the source document for labor is the time ticket. The entries are:

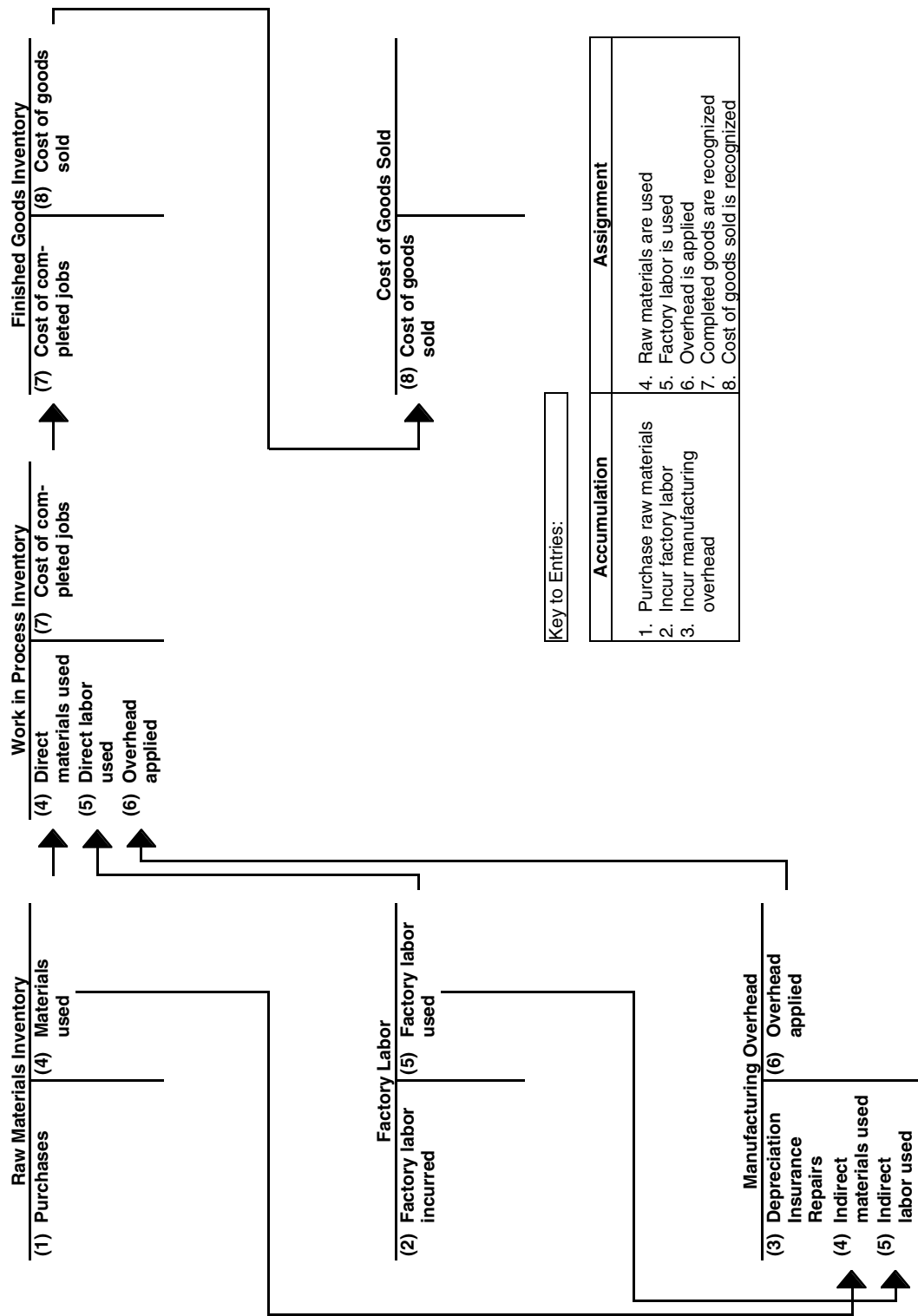
Materials			Labor	
Work in Process Inventory	XX		Work in Process Inventory	XX
Manufacturing Overhead	XX		Manufacturing Overhead	XX
Raw Materials Inventory		XX	Factory Labor	XX

Questions Chapter 20 (Continued)

10. The purpose of a job cost sheet is to record the costs chargeable to a specific job and to determine the total and unit costs of the completed job.
11. The source documents for charging costs to specific jobs are materials requisition slips for direct materials, time tickets for direct labor, and the predetermined overhead rate for manufacturing overhead.
12. A requisition slip is a business document used as an authorization to issue materials from inventory to production. It is approved and signed by authorized personnel so that materials may be removed from inventory and charged to production, to specific jobs, departments, or processes. The materials requisition slip is the basis for posting to the materials inventory records and to the job cost sheet.
13. Disagree. Actual manufacturing overhead cannot be determined until the end of a period of time. Consequently, there could be a significant delay in assigning overhead and in determining the total cost of the completed job.
14. The relationships for computing the predetermined overhead rate are the estimated annual overhead costs and an expected activity base such as direct labor hours. The rate is computed by dividing the estimated annual overhead costs by the expected annual operating activity.
15. At any point in time, the balance in Work in Process Inventory should equal the sum of the costs shown on the job cost sheets of unfinished jobs. Alternatively, posting to Work in Process Inventory may be compared with the sum of the postings to the job cost sheets for each of the manufacturing cost elements.
16. Tina is incorrect. There is a difference in computing total manufacturing costs. In job order costing, manufacturing overhead applied is used, whereas in Chapter 19, actual manufacturing overhead is used.
17. Underapplied overhead means that the overhead assigned to work in process is less than the overhead incurred. Overapplied overhead means that the overhead assigned to work in process is greater than the overhead incurred. Manufacturing Overhead will have a debit balance when overhead is underapplied and a credit balance when overhead is overapplied.
18. Under- or overapplied overhead is not closed to Income Summary. The balance in Manufacturing Overhead is eliminated through an adjusting entry. Under- or overapplied overhead generally is considered to be an adjustment of Cost of Goods Sold.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 20-1



Key to Entries:

Accumulation	Assignment
1. Purchase raw materials 2. Incur factory labor 3. Incur manufacturing overhead	4. Raw materials are used 5. Factory labor is used 6. Overhead is applied 7. Completed goods are recognized 8. Cost of goods sold is recognized

BRIEF EXERCISE 20-2

Jan. 31	Raw Materials Inventory	4,000	
	Accounts Payable.....		4,000
31	Factory Labor	5,000	
	Factory Wages Payable		4,200
	Employer Payroll Taxes Payable.....		800
31	Manufacturing Overhead	2,000	
	Utilities Payable		2,000

BRIEF EXERCISE 20-3

Jan. 31	Work in Process Inventory	2,800	
	Manufacturing Overhead	600	
	Raw Materials Inventory.....		3,400

BRIEF EXERCISE 20-4

Jan. 31	Work in Process Inventory	4,200	
	Manufacturing Overhead	800	
	Factory Labor.....		5,000

BRIEF EXERCISE 20-5

Job 1		
Date	Direct Materials	Direct Labor
1/31	900	
1/31		1,200

Job 2		
Date	Direct Materials	Direct Labor
1/31	1,200	
1/31		1,600

Job 3		
Date	Direct Materials	Direct Labor
1/31	700	
1/31		1,400

BRIEF EXERCISE 20-6

Overhead rate per direct labor cost is 160%, or $(\$800,000 \div \$500,000)$.

Overhead rate per direct labor hour is \$16, or $(\$800,000 \div 50,000)$.

Overhead rate per machine hour is \$8, or $(\$800,000 \div 100,000)$.

BRIEF EXERCISE 20-7

Jan. 31	Work in Process Inventory	36,000	
	Manufacturing Overhead		
	(\$40,000 X 90%)		36,000
Feb. 28	Work in Process Inventory	27,000	
	Manufacturing Overhead		
	(\$30,000 X 90%)		27,000
Mar. 31	Work in Process Inventory	45,000	
	Manufacturing Overhead		
	(\$50,000 X 90%)		45,000

BRIEF EXERCISE 20-8

Mar. 31	Finished Goods Inventory	55,000	
	Work in Process Inventory		55,000
31	Cash	35,000	
	Sales		35,000
31	Cost of Goods Sold	25,000	
	Finished Goods Inventory		25,000

BRIEF EXERCISE 20-9

Lott Company			
Dec. 31	Cost of Goods Sold	1,500	
	Manufacturing Overhead		1,500
Perez Company			
Dec. 31	Manufacturing Overhead	900	
	Cost of Goods Sold		900

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 20-1

(a) Raw Materials Inventory	13,000	
Accounts Payable		13,000
(Purchases of raw materials on account)		
(b) Factory Labor	40,000	
Factory Wages Payable		31,000
Employer Payroll Taxes Payable		9,000
(To record factory labor costs)		
(c) Manufacturing Overhead	15,000	
Accumulated Depreciation		9,500
Utilities Payable		3,100
Prepaid Property Taxes		2,400
(To record overhead costs)		

DO IT! 20-2

The three summary entries are:

Work in Process Inventory (\$7,200 + \$9,000)	16,200	
Raw Materials Inventory		16,200
(To assign materials to jobs)		
Work Process Inventory (\$4,000 + \$6,000)	10,000	
Factory Labor		10,000
(To assign labor to jobs)		
Work in Process Inventory (\$5,200 + \$7,800)	13,000	
Manufacturing Overhead		13,000
(To assign overhead to jobs)		

DO IT! 20-3

Finished Goods Inventory.....	100,000	
Work in Process Inventory.....		100,000
(To record completion of Job 310, costing \$60,000 and Job 312, costing \$40,000)		
Accounts Receivable	90,000	
Sales		90,000
(To record sale of Job 312)		
Cost of Goods Sold	40,000	
Finished Goods Inventory.....		40,000
(To record cost of goods sold for Job 312)		

DO IT! 20-4

Manufacturing overhead applied = 150% X \$85,000 = \$127,500
Overapplied manufacturing overhead = \$120,000 – \$127,500 = \$7,500

SOLUTIONS TO EXERCISES

EXERCISE 20-1

(a)	Factory Labor	72,000	
	Factory Wages Payable		60,000
	Employer Payroll Taxes Payable		8,000
	Employer Fringe Benefits Payable.....		4,000
(b)	Work in Process Inventory (\$72,000 X 85%)	61,200	
	Manufacturing Overhead	10,800	
	Factory Labor		72,000

EXERCISE 20-2

(a)	May 31	Work in Process Inventory	10,400	
		Manufacturing Overhead.....	800	
		Raw Materials Inventory		11,200
	31	Work in Process Inventory	12,500	
		Manufacturing Overhead.....	1,200	
		Factory Labor		13,700
	31	Work in Process Inventory (\$12,500 X 80%)	10,000	
		Manufacturing Overhead		10,000
	31	Finished Goods Inventory.....	7,920	
		Work in Process Inventory (\$2,000 + \$2,500 + \$1,900 + \$1,520)*		7,920

*\$1,900 X 80%

(b) Work in Process Inventory			
May	1	Balance	3,200
	31		10,400
	31		12,500
	31		10,000
May 31	Balance		28,180

EXERCISE 20-2 (Continued)

Job Cost Sheets

Job No.	Beginning Work in Process	Direct Material	Direct Labor	Manufacturing* Overhead	Total
430	\$1,200	\$3,500	\$ 3,000	\$2,400	\$10,100
431	<u>0</u>	<u>4,400</u>	<u>7,600</u>	<u>6,080</u>	<u>18,080</u>
	<u>\$1,200</u>	<u>\$7,900</u>	<u>\$10,600</u>	<u>\$8,480</u>	<u>\$28,180</u>

*Direct labor X .80

EXERCISE 20-3

(a) 1. \$15,500, or (\$5,000 + \$6,000 + \$4,500).

2. Last year 75%, or (\$4,500 ÷ \$6,000); this year 80% (either \$6,400 ÷ \$8,000 or \$3,200 ÷ \$4,000).

(b)	Jan. 31	Work in Process Inventory	8,000	
		Raw Materials Inventory		8,000
	31	Work in Process Inventory	12,000	
		Factory Labor		12,000
	31	Work in Process Inventory	9,600	
		Manufacturing Overhead		9,600
	31	Finished Goods Inventory	45,100	
		Work in Process Inventory		45,100

EXERCISE 20-4

(a) + \$50,000 + \$42,500 = \$155,650

(a) = \$63,150

\$155,650 + (b) = \$201,500

(b) = \$45,850

\$201,500 – (c) = \$192,300

(c) = \$9,200

EXERCISE 20-4 (Continued)

[Note: The instructions indicate that manufacturing overhead is applied on the basis of direct labor cost, and the rate is the same in all cases. From Case A, a student should note the overhead rate to be 85%, or $(\$42,500 \div \$50,000)$.]

$$(d) = .85 \times \$120,000$$

$$(d) = \$102,000$$

$$\$83,000 + \$120,000 + \$102,000 = (e)$$

$$(e) = \$305,000$$

$$\$305,000 + \$15,500 = (f)$$

$$(f) = \$320,500$$

$$\$320,500 - \$11,800 = (g)$$

$$(g) = \$308,700$$

[Note: (h) and (i) are solved together.]

$$(i) = .85(h)$$

$$\$63,150 + (h) + .85(h) = \$213,000$$

$$1.85(h) = \$149,850$$

$$(h) = \$81,000$$

$$(i) = \$68,850$$

$$(j) = \$213,000 + \$18,000$$

$$(j) = \$231,000$$

$$\$231,000 - (k) = \$222,000$$

$$(k) = \$9,000$$

EXERCISE 20-5

(a) $\$2.44$ per machine hour $(\$305,000 \div 125,000)$.

(b) $\$322,000 - (\$2.44 \times 130,000 \text{ Machine Hours})$
 $\$322,000 - \$317,200 = \$4,800$ underapplied

(c) Cost of Goods Sold	4,800	
Manufacturing Overhead		4,800

EXERCISE 20-6

(a) (1) The source documents are:

Direct materials—Materials requisition slips.

Direct labor—Time tickets.

Manufacturing overhead—Predetermined overhead rate.

(2) The predetermined overhead rate is 125% of direct labor cost. For example, on July 15, the computation is $\$550 \div \$440 = 125\%$. The same result is obtained on July 22 and 31.

(3) The total cost is:

Direct materials.....	\$4,825
Direct labor.....	1,360
Manufacturing overhead	<u>1,700</u>
	<u>\$7,885</u>

The unit cost is \$3.94 ($\$7,885 \div 2,000$).

(b) July 31	Finished Goods Inventory	7,885	
	Work in Process Inventory		7,885

EXERCISE 20-7

1.	Raw Materials Inventory	46,300	
	Accounts Payable		46,300
2.	Work in Process Inventory	29,200	
	Manufacturing Overhead	6,800	
	Raw Materials Inventory		36,000
3.	Factory Labor	53,900	
	Factory Wages Payable		49,000
	Employer Payroll Taxes Payable		4,900
4.	Work in Process Inventory	48,000	
	Manufacturing Overhead	5,900	
	Factory Labor		53,900

EXERCISE 20-7 (Continued)

5.	Manufacturing Overhead	80,500	
	Accounts Payable		80,500
6.	Work in Process Inventory (\$48,000 X 150%)	72,000	
	Manufacturing Overhead		72,000
7.	Finished Goods Inventory	88,000	
	Work in Process Inventory		88,000
8.	Accounts Receivable	103,000	
	Sales		103,000
	Cost of Goods Sold	75,000	
	Finished Goods Inventory		75,000

EXERCISE 20-8

1.	Raw Materials Inventory	192,000	
	Accounts Payable		192,000
	Factory Labor	87,300	
	Factory Wages Payable		87,300
2.	Work in Process Inventory	153,530	
	Manufacturing Overhead	4,470	
	Raw Materials Inventory		158,000
	Work in Process Inventory	80,000	
	Manufacturing Overhead	7,300	
	Factory Labor		87,300
3.	Manufacturing Overhead	39,500	
	Accounts Payable		39,500
4.	Manufacturing Overhead	14,550	
	Accumulated Depreciation—Machinery and Equipment		14,550

EXERCISE 20-8 (Continued)

5.	Work in Process Inventory.....	64,000	
	Manufacturing Overhead		
	(80% X \$80,000)		64,000
6.	Finished Goods Inventory.....	234,430	
	Work in Process Inventory.....		234,430

Computation of cost of jobs finished:

<u>Job</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>	<u>Total</u>
A20	\$35,240	\$18,000	\$14,400	\$ 67,640
A21	42,920	22,000	17,600	82,520
A23	39,270	25,000	20,000	84,270
				<u>\$234,430</u>

EXERCISE 20-9

(a) **HANNIFAN MANUFACTURING COMPANY**
Cost of Goods Manufactured Schedule
For the Month Ended May 31, 2010

Work in process, May 1		\$ 14,700
Direct materials used.....	\$62,400	
Direct labor.....	32,000	
Manufacturing overhead applied	<u>40,000</u>	
Total manufacturing costs		<u>134,400</u>
Total cost of work in process		149,100
Less: Work in process, May 31		<u>17,900</u>
Cost of goods manufactured		<u>\$131,200</u>

EXERCISE 20-9 (Continued)

(b) **HANNIFAN MANUFACTURING COMPANY**
(Partial) Income Statement
For the Month Ended May 31, 2010

Sales		\$200,000
Cost of goods sold		
Finished goods inventory, May 1	\$ 12,600	
Cost of goods manufactured	131,200	
Cost of goods available for sale	143,800	
Less: Finished goods inventory, May 31	9,500	
Cost of goods sold		134,300
Gross profit		\$ 65,700

- (c) In the May 31 balance sheet, the manufacturing inventories will be reported in current assets as follows: Finished goods \$9,500, Work in Process \$17,900, and Raw Materials \$7,100.

EXERCISE 20-10**(a) Work in Process Inventory**

April 30	\$9,300	(#10, \$5,200 + #11, \$4,100)
May 31	\$17,600	(#11, \$8,000 + #13, \$4,700 + #14, \$4,900)
June 30	\$8,500	(#14, \$4,900 + \$3,600)

(b) Finished Goods Inventory

April 30	\$1,200	(#12)
May 31	\$9,600	(#10)
June 30	\$20,200	(#11, \$11,000 + #13, \$9,200)

(c) Gross Profit

Month	Job Number	Sales	Cost of Goods Sold	Gross Profit
May	12	\$ 1,500	\$ 1,200	\$ 300
June	10	12,000	9,600	2,400
July	11/13	25,250	20,200	5,050

EXERCISE 20-11

(a)

1.	Supplies.....	1,500	
	Accounts Payable		1,500
2.	Work in Process	720	
	Operating Overhead	480	
	Supplies		1,200
3.	Work in Process	40,000	
	Operating Overhead	10,000	
	Salaries Payable		50,000
4.	Operating Overhead	40,000	
	Cash.....		40,000
5.	Work in Process (\$40,000 X 90%)	36,000	
	Operating Overhead.....		36,000
6.	Cost of Completed Work	70,000	
	Work in Process		70,000

(b)

Work in Process			
2.	720	70,000	6.
3.	40,000		
5.	36,000		
	6,720		

EXERCISE 20-12

(a)	<u>Gonzalez</u>	<u>Navarro</u>	<u>Rojas</u>
Direct materials	\$ 600	\$ 400	\$ 200
Auditor labor costs	5,400	6,600	3,375
Applied overhead	<u>3,960</u>	<u>4,840</u>	<u>2,475</u>
Total cost	<u>\$9,960</u>	<u>\$11,840</u>	<u>\$6,050</u>

(b) The Gonzalez job is the only incomplete job, therefore, \$9,960.

(c) Actual overhead	\$12,000 (DR)
Applied overhead	<u>11,275 (CR)</u>
Balance	<u>\$ 725 (DR)</u>

EXERCISE 20-13

(a) Predetermined overhead rate = Budgeted overhead ÷ Budgeted decorator hours
= \$960,000 ÷ 40,000 decorator hours
= \$24 per decorator hour

(b) <u>Applied overhead</u>		
Work in Process (40,500 hrs X \$24)	972,000	
Operating Overhead		972,000

(c) Actual overhead	\$982,800
Applied overhead	<u>972,000</u>
Balance	<u>\$ 10,800</u> underapplied

SOLUTIONS TO PROBLEMS

PROBLEM 20-1A

(a) $\$1,050,000 \div \$700,000$ direct labor costs = 150% of direct labor costs

(b) See solution to part (e) for job cost sheets

(c)	Raw Materials Inventory	90,000	
	Accounts Payable		90,000
	Factory Labor	65,000	
	Factory Wages Payable		49,000
	Employer Payroll Taxes Payable		16,000
	Manufacturing Overhead	71,000	
	Accounts Payable		20,000
	Accumulated Depreciation.....		19,000
	Raw Materials Inventory		17,000
	Factory Labor		15,000
(d)	Work in Process Inventory	79,000	
	Raw Materials Inventory		
	(\$10,000 + \$39,000 + \$30,000)		79,000
	Work in Process Inventory	50,000	
	Factory Labor (\$5,000 + \$25,000 + \$20,000).....		50,000
	Work in Process Inventory.....	75,000	
	Manufacturing Overhead		
	(\$50,000 X 150% of direct labor costs)		75,000

See solution to part (e) for postings to job cost sheets.

PROBLEM 20-1A (Continued)

(e)

Job Cost Sheets

Job No. 50			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Beg.	\$20,000	\$12,000	\$16,000
Jan.	<u>10,000</u>	<u>5,000</u>	<u>7,500*</u>
	<u>\$30,000</u>	<u>\$17,000</u>	<u>\$23,500</u>
Cost of completed job			
Direct materials			\$30,000
Direct labor			17,000
Manufacturing overhead			<u>23,500</u>
Total cost			<u>\$70,500</u>

*\$5,000 X 150%

Job No. 51			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	<u>\$39,000</u>	<u>\$25,000</u>	<u>\$37,500**</u>
	<u>\$39,000</u>	<u>\$25,000</u>	<u>\$37,500</u>
Cost of completed job			
Direct materials			\$ 39,000
Direct labor			25,000
Manufacturing overhead			<u>37,500</u>
Total cost			<u>\$101,500</u>

**\$25,000 X 150%

Job No. 52			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	<u>\$30,000</u>	<u>\$20,000</u>	<u>\$30,000***</u>

***\$20,000 X 150%

PROBLEM 20-1A (Continued)

Finished Goods Inventory.....	172,000	
Work in Process Inventory.....		172,000
(\$70,500 + \$101,500)		

(f) Accounts Receivable	280,000	
Sales (\$122,000 + \$158,000).....		280,000

Cost of Goods Sold	160,500	
Finished Goods Inventory		
(\$90,000 + \$70,500).....		160,500

(g)			
		Finished Goods Inventory	
Beginning balance	90,000	160,500	Cost of jobs 49 and 50 sold
Cost of completed jobs 50 and 51	172,000		
Ending balance	101,500		

The balance in this account consists of the cost of completed Job No. 51 which has not yet been sold.

(h) Manufacturing Overhead	
<u>Actual</u>	<u>Applied</u>
71,000	75,000
	4,000

The balance in the Manufacturing Overhead account is overapplied.

PROBLEM 20-2A

(a)

Work in Process Inventory				
1/1	Balance (1)	128,400	Completed work (5) (c)	386,200
	Direct materials (2)	121,000		
	Direct labor (3)	139,000		
	Manufacturing overhead (4)	166,800		
12/31	Balance	169,000		

(1)	Job 7640	\$ 77,800	(3)	Job 7640	\$ 36,000
	Job 7641	50,600		Job 7641	48,000
		<u>\$128,400</u>		Job 7642	55,000
					<u>\$139,000</u>

(2)	Job 7640	\$ 30,000	(4)	Job 7640	\$ 43,200
	Job 7641	43,000		Job 7641	57,600
	Job 7642	48,000		Job 7642	66,000
		<u>\$121,000</u>			<u>\$166,800</u>

(5) (a)	Job 7640				
	Beginning balance			\$ 77,800	
	Direct materials			30,000	
	Direct labor.....			36,000	
	Manufacturing overhead			43,200	
				<u>\$187,000</u>	

(b)	Job 7641				
	Beginning balance			\$ 50,600	
	Direct materials			43,000	
	Direct labor.....			48,000	
	Manufacturing overhead			57,600	
				<u>\$199,200</u>	

(c)	Total cost of completed work				
	Job 7640.....			\$187,000	
	Job 7641			199,200	
				<u>\$386,200</u>	

PROBLEM 20-2A (Continued)

Work in process balance	<u>\$169,000</u>
Unfinished job No. 7642	<u>\$169,000 (a)</u>

(a) Current year's cost

Direct materials	\$ 48,000
Direct labor	55,000
Manufacturing overhead	<u>66,000</u>
	<u>\$169,000</u>

(b) Actual overhead costs

Incurred on account	\$120,000
Indirect materials	14,000
Indirect labor	20,000
Depreciation	<u>8,000</u>
	<u>\$162,000</u>

Applied overhead costs

Job 7640	\$ 43,200
Job 7641	57,600
Job 7642	<u>66,000</u>
	<u>\$166,800</u>

Actual overhead	\$162,000
Applied overhead	<u>166,800</u>
Overapplied overhead	<u>\$ 4,800</u>

Manufacturing Overhead	4,800
Cost of Goods Sold	4,800

(c) Sales (given)	\$530,000
Cost of goods sold	
Add: Job 7638	\$ 87,000
Job 7639	92,000
Job 7641	<u>199,200</u>
	<u>378,200</u>
Less: Overapplied overhead	<u>4,800</u>
Gross profit	<u>373,400</u>
	<u>\$156,600</u>

PROBLEM 20-3A

(a)				
(i)	Raw Materials Inventory	3,900		
	 Accounts Payable			3,900
	Factory Labor	4,800		
	 Cash			4,800
	Manufacturing Overhead	1,100		
	 Accumulated Depreciation—Equipment			700
	 Accounts Payable			400
(ii)	Work in Process Inventory	4,900		
	Manufacturing Overhead	1,500		
	 Raw Materials Inventory			6,400
	Work in Process Inventory	3,600		
	Manufacturing Overhead	1,200		
	 Factory Labor			4,800
	Work in Process Inventory (\$3,600 X 1.25)	4,500		
	 Manufacturing Overhead			4,500
(iii)	Finished Goods Inventory	14,740		
	 Work in Process Inventory			14,740

<u>Job</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead*</u>	<u>Total Costs</u>
Fowler	\$1,700	\$1,160	\$1,450	\$ 4,310
Haines	1,300	900	1,125	3,325
Krantz	2,200	2,180	2,725	7,105
				<u>\$14,740</u>

***125% X direct labor amount**

Cash	18,900	
 Sales		18,900
Cost of Goods Sold	14,740	
 Finished Goods Inventory		14,740

PROBLEM 20-3A (Continued)

(b) Work in Process Inventory

6/1	Balance	5,540	June	Completed work	14,740
	Direct materials	4,900			
	Direct labor	3,600			
	Overhead applied	4,500			
6/30	Balance	3,800			

(c) Work in Process Inventory..... \$3,800

**Job: Elgin (Direct materials \$2,000 + Direct labor \$800 +
Manufacturing overhead \$1,000)..... \$3,800**

(d) ENOS INC. Cost of Goods Manufactured Schedule For the Month Ended June 30, 2010

Work in process, June 1		\$ 5,540
Direct materials used	\$4,900	
Direct labor	3,600	
Manufacturing overhead applied	<u>4,500</u>	
Total manufacturing costs		<u>13,000</u>
Total cost of work in process		18,540
Less: Work in process, June 30		<u>3,800</u>
Cost of goods manufactured		<u>\$14,740</u>

PROBLEM 20-4A

- (a) Department D: $\$1,050,000 \div \$1,500,000 = 70\%$ of direct labor cost.
 Department E: $\$1,500,000 \div 125,000 = \$12.00$ per direct labor hour.
 Department K: $\$840,000 \div 120,000 = \$7.00$ per machine hour.

(b)

	Department		
<u>Manufacturing Costs</u>	<u>D</u>	<u>E</u>	<u>K</u>
Direct materials	\$140,000	\$126,000	\$ 78,000
Direct labor	120,000	110,000	37,500
Overhead applied	84,000*	132,000**	72,800***
Total	<u>\$344,000</u>	<u>\$368,000</u>	<u>\$188,300</u>

*\$120,000 X 70%

**11,000 X \$12.00

***10,400 X \$7.00

(c)

	Department		
<u>Manufacturing Overhead</u>	<u>D</u>	<u>E</u>	<u>K</u>
Incurred	\$89,000	\$124,000	\$74,000
Applied	84,000	132,000	72,800
Under (over) applied	<u>\$ 5,000</u>	<u>\$ (8,000)</u>	<u>\$ 1,200</u>

PROBLEM 20-5A

- (a) \$7,600 $(\$18,850 + \$7,975 - \$19,225)$.
- (b) \$36,750 $[\$9,750 + \$15,000 + (80\% \times \$15,000)]$. (Given in Other data).
- (c) \$16,950 $(\$18,850 - \$1,900)$.
- (d) \$7,040 $(\$8,800 \times 80\%)$.
- (e) \$12,440 [Given in Other data— $\$3,800 + \$4,800 + (80\% \times \$4,800)$].
- (f) \$57,100 $(\$36,750 + \$16,950 + \$8,800 + \$7,040 - \$12,440)$.
- (g) \$5,000 (Given in Other data).
- (h) \$57,100 (Same as (f) above).
- (i) \$58,100 $(\$5,000 + \$57,100 - \$4,000)$.
- (j) \$4,000 (Given in Other data).
- (k) \$12,465 (Equal to factory wages incurred).
- (l) \$3,665 $(\$12,465 - \$8,800)$.
- (m) \$7,040 $(\$6,810^* + \$230)$ or (Same as (d)).

$$^*\$1,900 + \$3,665 + \$1,245$$

PROBLEM 20-1B

(a) $\$480,000 \div 20,000$ direct labor hours = \$24 per direct labor hour

(b) See solution to part (e) for job cost sheets

(c)	Raw Materials Inventory	40,000	
	Accounts Payable		40,000
	Factory Labor	31,500	
	Employer Payroll Taxes Payable		7,500
	Factory Wages Payable		24,000
	Manufacturing Overhead	40,500	
	Accumulated Depreciation		12,000
	Accounts Payable		11,000
	Raw Materials Inventory		10,000
	Factory Labor		7,500
(d)	Work in Process Inventory	35,000	
	Raw Materials Inventory		
	(\$5,000 + \$17,000 + \$13,000)		35,000
	Work in Process Inventory	24,000	
	Factory Labor (\$3,000 + \$12,000 + \$9,000)		24,000
	Work in Process Inventory	38,400	
	Manufacturing Overhead		
	(200 + 800 + 600) X \$24 per hour		38,400

See solution to part (e) for postings to job cost sheets.

PROBLEM 20-1B (Continued)

(e) Job Cost Sheets

Job No. 25			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Beg.	\$10,000	\$6,000	\$ 9,000
Jan.	<u>5,000</u>	<u>3,000</u>	<u>4,800*</u>
	<u>\$15,000</u>	<u>\$9,000</u>	<u>\$13,800</u>
Cost of completed job			
Direct materials			\$15,000
Direct labor			9,000
Manufacturing overhead			<u>13,800</u>
Total cost			<u>\$37,800</u>

*\$24 X 200 direct labor hours

Job No. 26			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	<u>\$17,000</u>	<u>\$12,000</u>	<u>\$19,200**</u>
	<u>\$17,000</u>	<u>\$12,000</u>	<u>\$19,200</u>
Cost of completed job			
Direct materials			\$17,000
Direct labor			12,000
Manufacturing overhead			<u>19,200</u>
Total cost			<u>\$48,200</u>

**\$24 X 800 direct labor hours

Job No. 27			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	<u>\$13,000</u>	<u>\$9,000</u>	<u>\$14,400***</u>

***\$24 X 600 direct labor hours

PROBLEM 20-1B (Continued)

Finished Goods Inventory	86,000	
Work in Process Inventory		86,000
(\$37,800 + \$48,200)		
(f) Accounts Receivable	137,000	
Sales (\$63,000 + \$74,000)		137,000
Cost of Goods Sold	79,800	
Finished Goods Inventory		
(\$42,000 + \$37,800)		79,800

(g)	Work in Process		
Beginning balance	25,000	86,000	Cost of completed jobs 25 and 26
Direct materials	35,000		
Direct labor	24,000		
Manufacturing overhead	38,400		
Ending balance	36,400		

The balance in this account consists of the current costs assigned to Job No. 27:

Direct Materials	\$13,000
Direct Labor	9,000
Manufacturing Overhead.....	<u>14,400</u>
Total costs assigned.....	<u>\$36,400</u>

(h)	Manufacturing Overhead	
	<u>Actual</u>	<u>Applied</u>
	40,500	38,400
	2,100	

The balance in the Manufacturing Overhead account is underapplied.

PROBLEM 20-2B

(a) **Work in Process Inventory**

1/1	Balance (1)	111,000	Completed work (5) (c)	344,000
	Direct materials (2)	107,000		
	Direct labor (3)	144,000		
	Manufacturing overhead (4)	180,000		
12/31	Balance	198,000		

(1)	Job 7650	\$ 63,000	(3)	Job 7650	\$ 36,000
	Job 7651	48,000		Job 7651	40,000
		<u>\$111,000</u>		Job 7652	68,000
					<u>\$144,000</u>

(2)	Job 7650	\$ 32,000	(4)	Job 7650	\$ 45,000
	Job 7651	30,000		Job 7651	50,000
	Job 7652	45,000		Job 7652	85,000
		<u>\$107,000</u>			<u>\$180,000</u>

(5)	(a)	Job 7650	
		Beginning balance	\$ 63,000
		Direct materials	32,000
		Direct labor	36,000
		Manufacturing overhead	45,000
			<u>\$176,000</u>

(b)	Job 7651	
	Beginning balance	\$ 48,000
	Direct materials	30,000
	Direct labor	40,000
	Manufacturing overhead	50,000
		<u>\$168,000</u>

(c)	Total cost of completed work	
	Job 7650	\$176,000
	Job 7651	168,000
		<u>\$344,000</u>

PROBLEM 20-2B (Continued)

Work in process balance		<u>\$198,000</u>
Unfinished job No. 7652		<u>\$198,000 (a)</u>
(a) Current year's cost		
Direct materials	\$ 45,000	
Direct labor.....	68,000	
Manufacturing overhead	<u>85,000</u>	
		<u>\$198,000</u>
(b) Actual overhead costs		
Incurred on account		\$135,000
Indirect materials		12,000
Indirect labor		18,000
Depreciation		<u>19,500</u>
		<u>\$184,500</u>
Applied overhead costs		
Job 7650.....	\$ 45,000	
Job 7651.....	50,000	
Job 7652.....	<u>85,000</u>	
		<u>\$180,000</u>
Actual overhead		\$184,500
Applied overhead		<u>180,000</u>
Underapplied overhead		<u>\$ 4,500</u>
Cost of Goods Sold	4,500	
Manufacturing Overhead		4,500
(c) Sales (given).....		\$490,000
Cost of goods sold		
Add: Job 7648.....	\$ 93,000	
Job 7649.....	62,000	
Job 7650.....	<u>176,000</u>	
	331,000	
Add: Underapplied overhead	<u>4,500</u>	<u>335,500</u>
Gross profit.....		<u>\$154,500</u>

PROBLEM 20-3B

(a)			
(i)	Raw Materials Inventory	4,000	
	 Accounts Payable		4,000
	Factory Labor	7,600	
	 Cash		7,600
	Manufacturing Overhead	1,400	
	 Cash		1,400
(ii)	Work in Process Inventory	5,300	
	Manufacturing Overhead	1,500	
	 Raw Materials Inventory		6,800
	Work in Process Inventory	5,600	
	Manufacturing Overhead	2,000	
	 Factory Labor		7,600
	Work in Process Inventory	3,920	
	 (\$5,600 X .70)		
	 Manufacturing Overhead		3,920
(iii)	Finished Goods Inventory	20,190	
	 Work in Process Inventory		20,190

<u>Job</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead*</u>	<u>Total Costs</u>
Taylor	\$3,000	\$2,400	\$1,680	\$ 7,080
Baker	2,600	2,200	1,540	6,340
Joiner	3,200	2,100	1,470	6,770
				<u>\$20,190</u>

***70% of direct labor amount**

Cash	36,000	
 Sales (3 X \$12,000)		36,000
Cost of Goods Sold	20,190	
 Finished Goods Inventory		20,190

PROBLEM 20-3B (Continued)

Work in Process Inventory					
5/1	Balance	12,200	5/31	Completed work	20,190
	Direct materials	5,300			
	Direct labor	5,600			
	Overhead applied	3,920			
5/31	Balance	6,830			

(c) Work in Process Inventory \$6,830

Job: Smith (Direct materials \$1,900 + Direct labor \$2,900 +
Manufacturing overhead \$2,030) \$6,830

(d) **MICHAEL ORTIZ COMPANY**
Cost of Goods Manufactured Schedule
For the Month Ended May 31, 2010

Work in process, May 1		\$12,200
Direct materials used	\$5,300	
Direct labor	5,600	
Manufacturing overhead applied.....	<u>3,920</u>	
Total manufacturing costs		<u>14,820</u>
Total cost of work in process		27,020
Less: Work in process, May 31		<u>6,830</u>
Cost of goods manufactured		<u>\$20,190</u>

PROBLEM 20-4B

- (a) Department A: $\$780,000 \div \$600,000 = 130\%$ of direct labor cost.
 Department B: $\$640,000 \div 40,000 = \$16.00$ per direct labor hour.
 Department C: $\$750,000 \div 150,000 = \$5.00$ per machine hour.

(b)

	Department		
<u>Manufacturing Costs</u>	<u>A</u>	<u>B</u>	<u>C</u>
Direct materials	\$ 92,000	\$ 86,000	\$ 64,000
Direct labor	48,000	35,000	50,400
Overhead applied	62,400 *	56,000 **	63,000 ***
Total	<u>\$202,400</u>	<u>\$177,000</u>	<u>\$177,400</u>

*\$48,000 X 130%

**3,500 X \$16

***12,600 X \$5.00

(c)

	Department		
<u>Manufacturing Overhead</u>	<u>A</u>	<u>B</u>	<u>C</u>
Incurred	\$66,000	\$60,000	\$62,100
Applied	62,400	56,000	63,000
Under (over) applied	<u>\$ 3,600</u>	<u>\$ 4,000</u>	<u>\$ (900)</u>

PROBLEM 20-5B

- (a) \$83,900** **$(\$75,000 + \$8,900)$.**
- (b) \$25,500** **$[(\$19,000 + \$90,400) - \$83,900 \text{ (See (a))}]$.**
- (c) \$32,200** **(Given in Other data— $\$19,000 + \$13,200$).**
- (d) \$95,000** **$(\$114,000 \text{ manufacturing overhead applied} \div 120\%)$.**
- (e) \$114,000** **(Manufacturing overhead applied).**
- (f) \$310,900** **$[\$32,200 + \$75,000 + \$95,000 + \$114,000 - \$5,300 \text{ (See (g))}]$.**
- (g) \$5,300** **$[\$2,000 + \$1,500 + (\$1,500 \times 120\%)]$.**
- (h) \$145,000** **(Given in Other data).**
- (i) \$310,900** **(Same as (f)).**
- (j) \$317,900** **$[\$145,000 + \$310,900 - \$138,000 \text{ (Given in Other data)}]$.**
- (k) \$138,000** **(Given in Other data).**
- (l) \$111,000** **$[\$95,000 \text{ (See (d))} + \$16,000]$.**
- (m) \$111,000** **(Same as (l)).**
- (n) \$92,100** **$[\$114,000 + \$3,000 \text{ (Given in Other data)} - \$8,900 - \$16,000]$.**

- (a) The manufacturing cost element that is responsible for the fluctuating unit costs is manufacturing overhead. Manufacturing overhead is being included as incurred rather than being applied on a predetermined basis. Direct materials and direct labor are not the cause as they have the same unit cost per batch in each quarter.
- (b) The solution is to apply overhead using a predetermined overhead rate based on a relevant basis of production activity. Based on actual overhead incurred and using batches of product TC-1 as the activity base, the overhead rate is \$15,000 per batch $[(\$105,000 + \$123,000 + \$97,000 + \$125,000) \div 30]$. Another approach would be to use direct labor cost as the relevant basis to apply overhead on a predetermined basis. For example, a rate of 125% of direct labor cost $(\$450,000 \div \$360,000)$ could be used. Either approach will provide the same result.
- (c) The quarterly results using a predetermined overhead rate based on batches produced are as follows:

Costs	Quarter			
	1	2	3	4
Direct materials	\$100,000	\$220,000	\$ 80,000	\$200,000
Direct labor	60,000	132,000	48,000	120,000
Manufacturing overhead Applied (\$15,000 X batches)	<u>75,000</u>	<u>165,000</u>	<u>60,000</u>	<u>150,000</u>
Total	<u>\$235,000</u>	<u>\$517,000</u>	<u>\$188,000</u>	<u>\$470,000</u>
Production in batches	<u>5</u>	<u>11</u>	<u>4</u>	<u>10</u>
Unit cost (per batch)	<u>\$ 47,000</u>	<u>\$ 47,000</u>	<u>\$ 47,000</u>	<u>\$ 47,000</u>

(Note: The unit cost of a batch remains the same in each quarter. Both sales and production should be pleased with this solution to fluctuating unit costs.)

1. (a) Work in Process Inventory 25,000
 Raw Materials Inventory 25,000
- (b) If not corrected, the balance sheet is affected. Cash is understated and Raw Materials Inventory is overstated.

2. (a) Sales Bonus Expense 12,000
 Cash 12,000
- (b) Both the income statement and the balance sheet are affected. In the income statement, Sales Bonus Expense is understated, Income Tax Expense is overstated, and net income is overstated. The error causes the underapplied overhead to be overstated or the overapplied overhead to be understated. This affects Cost of Goods Sold, since the over- or underapplied balance is closed out to Cost of Goods Sold. The error in Cost of Goods Sold also has an effect on Retained Earnings. Also, Retained Earnings is overstated because of the overstatement of net income, and Income Taxes Payable is overstated.

3. (a) Factory Labor 120,000
 Factory Wages Payable 105,000
 Employer Payroll Taxes Payable 15,000
- (b) If not corrected, both the income statement and the balance sheet are affected. On the income statement, Cost of Goods Sold is understated and Wages Expense is overstated. On the balance sheet, Cash, Factory Wages Payable, and Employer Payroll Taxes Payable are understated.

4. (a)	Manufacturing Overhead	3,000	
	Raw Materials Inventory		3,000

- (b) Both the income statement and balance sheet are affected. If units that were in process during the month have been sold, then in the income statement Cost of Goods Sold is overstated, Income Tax Expense is understated, and net income is understated. This causes the Retained Earnings and Income Taxes Payable in the balance sheet to be understated. Also the error causes underapplied overhead to be understated or overapplied overhead to be overstated. This affects Cost of Goods Sold, since the over- or underapplied balance is closed out to Cost of Goods Sold. The error in Cost of Good Sold also has an affect on Retained Earnings.

- (a) The advantages of job order costing include the following:
1. Accurate costing results because actual costs of direct materials and direct labor are assigned to each job.
 2. A comparison of actual costs with costs estimated in the company's bid provides a basis for controlling job costs and improving operating efficiency.
 3. Cost data on specific jobs may be useful to management in bidding on similar jobs in the future.
 4. Accurate costs are assigned to work in process and finished goods inventories.
 5. Job costing enables management to assess the relationship of the cost of goods sold for each job to the sales price of each job. The reciprocal of this relationship is the gross profit on each job. Improving these relationships is an important factor in increasing net income.
- (b) Products in job order costing are usually custom-made to customer specifications so that a sale is assured prior to the start of the manufacturing process. Specific products include cruise ships, presidential limousines, buildings, homes, wedding invitations, and graduation and birth announcements.

Products in process costing are relatively homogeneous such as boxes of cereal, bottles and cans of soda, jars of peanut butter, quarts of motor oil, and automobiles. The manufacture of the product is continuous to ensure that adequate inventories of finished products are available at all times.

- (a) Candidates for the CMA Certificate must complete two continuous years of professional experience in management accounting or financial management. This requirement may be completed prior to or within seven years of passing the examination.**
- (b) CMAs must maintain their professional competence through a regular program of continuing professional education. To remain in good standing with the Institute of Certified Management Accountants, 30 hours of continuing education must be completed each year subsequent to passing the exam. These 30 hours must include a minimum of 2 hours on the subject of ethics. Reporting of continuing education is done in conjunction with renewal of IMA membership.**

Credit will be given for subjects relevant to the CMA's career development and related to employer needs. Such qualifying subjects include: management accounting, financial management, corporate taxation, computer science, systems analysis, statistics, management skills, insurance, marketing, and business law. Hours of study can be earned through college courses, seminars, self-study courses, service as an instructor or presenter, examinations and submission of technical materials for publication.

Newberry Manufacturing
Date

Donna Werly
123 Cedar Lane
Altoona, Kansas 66651

Dear Ms. Werly:

Thank you for your prompt payment! I am very glad that you found the cost information helpful.

Thank you also for your questions about our overhead costs. We do try to provide our customers with as much information as possible, but we cannot give detailed information on overhead costs. The cost of providing such information is prohibitive.

You asked why we do not use actual overhead costs when we bill our customers. We estimate overhead costs, rather than use actual costs, for several reasons. One of the most important for you is that we could not prepare bills in a timely manner if we had to use actual overhead. We would have to wait until we were billed for such things as electricity and telephone service. A second reason is that some costs we include in overhead are only payable once or twice a year, such as insurance and taxes. When we use an estimated rate, we are able to allow for those costs. A third reason is that some costs are fixed, which means that they stay the same in dollar amount from month to month. This category includes items such as rent. If we billed you based on our actual costs, you would be billed a higher amount if your work was done during a slow time (because we would have fewer jobs to spread the costs over). An estimated overhead rate allows us to level out these costs.

BYP 20-5 (Continued)

I hope this answers some of your questions. I'm glad you are interested in our company and that you took the time to write. I am sending a copy of our annual report under separate cover. It contains some details on the information you asked about.

Thanks again for your letter and for having Newberry make your new cabinets!

Sincerely,

Student

- (a) The stakeholders in this situation are:
- ▶ Betty Keiser, controller for SEK Printing.
 - ▶ The president of SEK Printing.
 - ▶ The customers of SEK Printing.
 - ▶ The competitors of SEK Printing.
- (b) Padding cost-plus contracts is both unethical and illegal. Betty is faced with an ethical dilemma. She will be in trouble with the president if she doesn't follow his directive, and she will be committing an unethical act if she does follow his instructions.
- (c) Betty should continue to accurately account for cost-plus contracts and, if challenged by the president, she should say that she is doing her very best to charge each and every legitimate cost to the cost-plus contracts. Let the president perform the unethical act if he continues to persist in padding costs.

- (a) Your chances of success in small business are increased if you have the following characteristics: You are a self-starter, you get along with many different kinds of people, you are good at making decisions, you have physical and emotional stamina, you are well organized, you have a strong desire to succeed and you will receive family support during the start up phase.
- (b) The top ten reason why businesses fail as sited in article from the books Small Business Management by Michael Ames, and The Do it Yourself Business Book by Gustav Berle are:
1. Lack of experience
 2. Insufficient capital (money)
 3. Poor location
 4. Poor inventory management
 5. Over-investment in fixed assets
 6. Poor credit arrangements
 7. Personal use of business funds
 8. Unexpected growth
 9. Competition
 10. Low sales

CHAPTER 21

Process Costing

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Understand who uses process cost systems.	1, 2		4	1		
2. Explain the similarities and differences between job order cost and process cost systems.	2, 3, 4, 5		5	1		
3. Explain the flow of costs in a process cost system.	6		6, 7	3	3A	3B
4. Make the journal entries to assign manufacturing costs in a process cost system.	6, 7	1, 2, 3	8, 9	2, 4	3A	3B
5. Compute equivalent units.	10, 11, 12, 13	5, 10		3, 5, 6, 7, 8, 9, 10, 11, 13	1A, 2A, 4A, 5A, 6A	1B, 2B, 4B, 5B, 6B
6. Explain the four steps necessary to prepare a production cost report.	8, 9, 14, 15, 18	4, 6, 7, 8, 9		3, 5, 6, 7, 8, 9, 10, 11, 13	1A, 2A, 4A, 5A	1B, 2B, 4B, 5B
7. Prepare a production cost report.	16, 17, 19, 20			7, 12, 13	1A, 2A, 4A, 5A, 6A	1B, 2B, 4B, 5B, 6B
8. Explain just-in-time (JIT) processing.	21	11				
9. Explain activity-based costing (ABC).	22, 23	11				
*10. Apply activity-based costing to specific company data.	24	12		14, 15	7A	

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Complete four steps necessary to prepare a production cost report.	Simple	30–40
2A	Complete four steps necessary to prepare a production cost report.	Simple	30–40
3A	Journalize transactions.	Moderate	20–30
4A	Assign costs and prepare production cost report.	Moderate	20–30
5A	Determine equivalent units and unit costs and assign costs.	Moderate	20–30
6A	Compute equivalent units and complete production cost report.	Moderate	15–25
*7A	Assign overhead to products using ABC.	Moderate	40–50
1B	Complete four steps necessary to prepare a production cost report.	Simple	30–40
2B	Complete four steps necessary to prepare a production cost report.	Simple	30–40
3B	Journalize transactions.	Moderate	20–30
4B	Assign costs and prepare production cost report.	Moderate	20–30
5B	Determine equivalent units and unit costs and assign costs.	Moderate	20–30
6B	Compute equivalent units and complete production cost report.	Moderate	15–25

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 21
PROCESS COSTING

Number	SO	BT	Difficulty	Time (min.)
BE1	4	AP	Simple	2–4
BE2	4	AP	Simple	3–5
BE3	4	AP	Simple	2–4
BE4	6	AP	Simple	4–6
BE5	5	AP	Simple	6–8
BE6	6	AP	Simple	4–6
BE7	6	AP	Simple	6–8
BE8	6	AP	Simple	4–6
BE9	6	AP	Simple	4–6
BE10	5	AP	Simple	4–6
BE11	8, 9	C	Simple	4–6
BE12	10	AP	Simple	3–5
DI1	4	AP	Simple	8–10
DI2	5	AP	Simple	4–6
DI3	6, 7	AP	Simple	8–10
DI4	8, 9	C	Simple	2–4
EX1	1, 2	C	Simple	6–8
EX2	4	AP	Simple	6–8
EX3	3, 5, 6	AP	Moderate	10–12
EX4	4	AP	Simple	12–15
EX5	5, 6	AP	Simple	8–10
EX6	5, 6	AP	Simple	8–10
EX7	5–7	AP	Moderate	15–18
EX8	5, 6	AP	Simple	10–12
EX9	5, 6	AP	Simple	8–10
EX10	5, 6	AP	Simple	8–10
EX11	5, 6	AP	Moderate	15–18
EX12	7	S	Simple	6–8
EX13	5–7	AP	Moderate	15–18

PROCESS COSTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX14	10	AP	Moderate	12–15
EX15	10	AP	Simple	8–10
P1A	5–7	AP	Simple	30–40
P2A	5–7	AP	Simple	30–40
P3A	3, 4	AP	Moderate	20–30
P4A	5–7	AP	Moderate	20–30
P5A	5–7	AP	Moderate	20–30
P6A	5, 7	AP	Moderate	15–25
P7A	10	AP, E	Moderate	40–50
P1B	5–7	AP	Simple	30–40
P2B	5–7	AP	Simple	30–40
P3B	3, 4	AP	Moderate	20–30
P4B	5–7	AP	Moderate	20–30
P5B	5–7	AP	Moderate	20–30
P6B	5, 7	AP	Moderate	15–25
BYP1	5, 7	AN, S	Moderate	20–25
BYP2	6	AN	Simple	10–15
BYP3	1	C	Simple	10–15
BYP4	5, 6	S	Moderate	15–20
BYP5	—	S	Simple	8–10
BYP6	9	E	Simple	10–12

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Understand who uses process cost systems.	Q21-2	E21-1	Q21-1			
2. Explain the similarities and differences between job order cost and process cost systems.	Q21-2 Q21-3	Q21-4 Q21-5 E21-1				
3. Explain the flow of costs in a process cost system.	Q21-6		E21-3 P21-3A P21-3B	P21-3A P21-3B		
4. Make the journal entries to assign manufacturing costs in a process cost system.	Q21-6		Q21-7 BE21-1 BE21-2 Q21-12 Q21-13 BE21-5 BE21-10 DI21-2 DI21-3 E21-3 E21-5 E21-6	E21-3 DI21-1 E21-2 P21-4A P21-5A P21-6A P21-1B P21-1B P21-2B P21-4B P21-5B P21-6B		
5. Compute equivalent units.	Q21-10 Q21-11					
6. Explain the four steps necessary to prepare a production cost report.	Q21-8	Q21-9	Q21-14 Q21-15 Q21-18 BE21-4 BE21-6 BE21-7 BE21-8 BE21-9 DI21-2 DI21-3	P21-2A P21-4A P21-5A P21-1B P21-2B		
7. Prepare a production cost report.	Q21-16 Q21-17 Q21-19	Q21-16 Q21-20	E21-7 E21-12 E21-13 P21-1A P21-2A	P21-4B P21-5B P21-6B		
8. Explain just-in-time (JIT) processing.		Q21-21 BE21-11	DI21-4			
9. Explain activity-based costing (ABC).		Q21-22 BE21-11	Q21-23			
*10. Apply activity-based costing to specific company data.	Q21-24		BE21-12 E21-14	E21-15 P21-7A		
Broadening Your Perspective		Exploring the Web		Managerial Analysis Decision Making Across the Organization	Decision Making Across the Organization Communication	Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) Process costing.
(b) Process costing.
(c) Job order.
(d) Job order.
2. The primary focus of job order costing is on the individual job. In process cost accounting, the primary focus is on the processes involved in mass-producing products that are identical or very similar in nature.
3. The similarities are: (1) all three manufacturing cost elements—direct materials, direct labor, and overhead—are the same; (2) the accumulation of the costs of materials, labor, and overhead is the same; and (3) the flow of costs is the same.
4. The features of process costing are: (1) separate work in process accounts for each process, (2) production cost reports, (3) product costs computed for each accounting period, and (4) unit costs computed based on total manufacturing costs.
5. Mel is correct. The flow of costs is the same in process costing as in job order costing. The method of assigning costs, however, is significantly different.
6. (a) (1) Materials are charged to production on the basis of materials requisition slips.
(2) Labor is usually charged to production on the basis of the payroll register or departmental payroll summaries.

(b) The criterion used in assigning overhead to processes is to identify the activity that “drives” or causes the cost. In many companies this activity is machine time, not direct labor.
7. The entry to assign overhead to production is:

July 31	Work in Process—Machining	15,000	
	Work in Process—Assembly	12,000	
	Manufacturing Overhead.....		27,000
8. To prepare a production cost report, four steps are followed: (a) compute the physical unit flow, (b) compute equivalent units of production, (c) compute unit costs of production, and (d) prepare a cost reconciliation schedule.
9. Physical units to be accounted for consist of units in process at the beginning of the period plus units started (or transferred) into production during the period. Units accounted for consist of units completed and transferred out during the period plus units in process at the end of the period.
10. Equivalent units of production measure the work done during the period, expressed in fully completed units.
11. Equivalent units are the sum of: (1) units completed and transferred out and (2) equivalent units of ending work in process.
12. Units started into production were 9,600, or (9,000 + 600).

13.

	Equivalent Units	
	Materials	Conversion Cost
Units transferred out	12,000	12,000
Work in process		
800 X 100%	800	
800 X 20%		160
Total equivalent units	<u>12,800</u>	<u>12,160</u>

14. Units transferred out were 3,300

Units to be accounted for

 Work in process (beginning) 500

 Started into production 3,000

 Total units 3,500

Units accounted for

 Completed and transferred out 3,300

 Work in process (ending) 200

 Total units 3,500

15. (a) The cost of the units transferred out is \$126,000, or (14,000 X \$9).

(b) The cost of the units in ending inventory is \$9,000, or [(2,000 X \$3) + (500 X \$6)].

16. (a) Eve is incorrect. The report is an internal report for management.

(b) There are four sections in a production cost report:

- (1) number of physical units,
- (2) equivalent units determination,
- (3) unit costs, and
- (4) cost reconciliation schedule.

17. The production cost report provides the basis for evaluating: (1) the productivity of a department, (2) whether unit and total costs are reasonable, and (3) whether current performance is meeting planned objectives.

18. The per unit conversion cost is \$8.75. [Conversion costs = \$6,000 – \$3,200 = \$2,800. Equivalent units for conversion costs are 320 (800 X 40%); \$2,800 ÷ 320 = \$8.75.]

19. Operations costing is similar to process costing in that standardized methods are used to manufacture the product. At the same time, the product may have some customized, individual features that require the use of a job order cost system.

20. In deciding which system to use, a cost-benefit tradeoff occurs. In a job order system, detailed information related to the cost of the product is involved. The cost of implementing this system is often expensive. In a process cost system, an average cost of the product will suffice and therefore the cost to implement is less. In summary, the cost of implementing the system must be balanced against the benefits provided from the additional information.

Questions Chapter 21 (Continued)

21. (a) Just-in-time processing has a “just-in-time” philosophy and a “pull” approach.
(b) There are three important elements in JIT processing:
(1) A company must have dependable suppliers who are willing to deliver on short notice exact quantities of raw materials according to precise quality specifications.
(2) A multiskilled workforce must be developed.
(3) A total quality control system must be established.

22. (a) The principal differences are:

	Activity-Based Costing	Traditional Costing
(1) Primary focus	Activities performed in making products	Units of production
(2) Bases of allocation	Multiple cost drivers	Single unit-level bases
(3) Total product costs	Sum of costs of activities performed in making product	Direct materials plus direct labor plus manufacturing overhead

- (b) There are two assumptions that must be met in using ABC:
(1) All overhead costs related to the activity must be driven by the cost driver used to assign costs to products.
(2) All overhead costs related to the activity should respond proportionally to changes in the activity level of the cost driver.

23. An appropriate cost driver for each activity is:

Activity	Cost Driver
Materials handling	Number of requisitions
Machine setups	Number of setups
Factory machine maintenance	Machine hours used
Factory supervision	Number of employees
Quality control	Number of inspections

- *24. (a) ABC involves the following steps:
(1) Identify the major activities that pertain to the manufacture of specific products.
(2) Accumulate manufacturing overhead costs by activities.
(3) Identify the cost driver(s) that accurately measure(s) each activity’s contribution to the finished product.
(4) Assign manufacturing overhead costs for each activity to products using the cost driver(s).
(b) The principal advantages of ABC are:
(1) More accurate product costing is achieved.
(2) Control over overhead costs is enhanced.
(3) Better management decisions can be made in: (a) setting selling prices, (b) deciding whether to discontinue or expand a product line, and (c) deciding whether to make or buy a product component.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 21-1

Mar. 31	Raw Materials Inventory	45,000	
	Accounts Payable.....		45,000
31	Factory Labor	50,000	
	Wages Payable		50,000

BRIEF EXERCISE 21-2

Mar. 31	Work in Process—Assembly Department.....	24,000	
	Work in Process—Finishing Department.....	21,000	
	Raw Materials Inventory		45,000
31	Work in Process—Assembly Department.....	30,000	
	Work in Process—Finishing Department.....	20,000	
	Factory Labor.....		50,000

BRIEF EXERCISE 21-3

Mar. 31	Work in Process—Assembly Department (\$30,000 X 200%)	60,000	
	Work in Process—Finishing Department (\$20,000 X 200%)	40,000	
	Manufacturing Overhead		100,000

BRIEF EXERCISE 21-4

	<u>January</u>	<u>March</u>	<u>July</u>
Beginning work in process	0	0	0
Started into production	<u>40,000</u>	<u>48,000</u>	<u>56,000</u>
Total units	<u>40,000</u>	<u>48,000</u>	<u>56,000</u>
Transferred out	30,000	40,000	40,000
Ending work in process	<u>10,000</u>	<u>8,000</u>	<u>16,000</u>
Total units	<u>40,000</u>	<u>48,000</u>	<u>56,000</u>

BRIEF EXERCISE 21-5

	<u>Materials</u>	<u>Conversion Costs</u>
January	40,000 (30,000 + 10,000)	34,000 (30,000 + 4,000)
March	48,000 (40,000 + 8,000)	46,000 (40,000 + 6,000)
July	56,000 (40,000 + 16,000)	44,000 (40,000 + 4,000)

BRIEF EXERCISE 21-6

Total materials costs \$32,000	÷	Equivalent units of materials 10,000	=	Unit materials cost \$3.20
Total conversion costs \$54,000	÷	Equivalent units of conversion costs 12,000	=	Unit conversion cost \$4.50
Unit materials cost \$3.20	+	Unit conversion cost \$4.50	=	Total manufacturing cost per unit \$7.70

BRIEF EXERCISE 21-7

<u>Assignment of Costs</u>	<u>Equivalent Units</u>	<u>Unit Cost</u>		
<u>Transferred out</u>				
Transferred out	40,000	\$13.00		\$520,000
<u>Work in process, 4/30</u>				
Materials	5,000	\$ 4.00	\$20,000	
Conversion costs	2,000	\$ 9.00	<u>18,000</u>	<u>38,000</u>
Total costs				<u>\$558,000</u>

BRIEF EXERCISE 21-8

Total materials costs \$15,000	÷	Equivalent units of materials 20,000	=	Unit materials cost \$0.75

BRIEF EXERCISE 21-8 (Continued)

Total conversion costs*	÷	Equivalent units of conversion costs	=	Unit conversion cost
\$47,500		19,000		\$2.50

*\$29,500 + \$18,000

BRIEF EXERCISE 21-9

Costs accounted for				
Transferred out	(18,000 X \$3.25)			\$58,500
Work in process				
Materials	(2,000 X \$.75)	\$1,500		
Conversion costs	(1,000 X \$2.50)	<u>2,500</u>		<u>4,000</u>
Total costs				<u>\$62,500</u>

BRIEF EXERCISE 21-10

	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	8,000	8,000
Work in process, November 30		
Materials (5,000 X 100%)	5,000	
Conversion costs (5,000 X 40%)		<u>2,000</u>
Total equivalent units	<u>13,000</u>	<u>10,000</u>

BRIEF EXERCISE 21-11

1. False. Just-in-time processing results in a “pull” approach.
2. True
3. False. A major advantage of JIT processing is enhanced product quality.
4. True
5. False. A major disadvantage of conventional costing is that it uses a single unit-level basis, such as direct labor to allocate overhead.

*BRIEF EXERCISE 21-12

Machine setups	$\$120,000 \div 1,000 = \$120$ per setup
Machining	$\$300,000 \div 25,000 = \$12$ per machine hour
Inspections	$\$70,000 \div 2,000 = \$35$ per inspection

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 21-1

Work in Process—Mixing	10,000	
Work in Process—Packaging	24,000	
Raw Materials Inventory		34,000
(To record materials used)		
Work in Process—Mixing	8,000	
Work in Process—Packaging	36,000	
Factory Labor		44,000
(To assign factory labor to production)		
Work in Process—Mixing	12,000	
Work in Process—Packaging	54,000	
Manufacturing Overhead		66,000
(To assign overhead to production)		
Work in Process—Packaging	21,000	
Work in Process—Mixing		21,000
(To record transfer of units to the Packaging Department)		
Finished Goods Inventory	102,000	
Work in Process—Packaging		102,000
(To record transfer of units to finished goods)		

DO IT! 21-2

- (a) Since materials are entered at the beginning of the process, the equivalent units of ending work in process are 16,000.

20,000 units + 16,000 units = 36,000 equivalent units of production for materials.

DO IT! 21-2 (Continued)

- (b) Since ending work in process is only 70% complete as to conversion costs, the equivalent units of ending work in process for conversion costs are 11,200 (70% X 16,000 units).

20,000 units + 11,200 units = 31,200 equivalent units of production for conversion costs.

DO IT! 21-3

- (a) 0 (Work in process, March 1) + 24,000 (Started into production) = 24,000

- (b) Equivalent units of production:

	<u>Materials</u>	<u>Conversion</u>
Units transferred out	22,000	22,000
Work in process, March 31	<u>2,000</u>	<u>800</u> (2,000 X 40%)
Total	<u>24,000</u>	<u>22,800</u>

- (c) Cost reconciliation schedule

Costs accounted for

Transferred out (22,000 X \$18)		\$396,000
Work in process, March 31		
Materials (2,000 X \$10).....	\$20,000	
Conversion costs (800 X \$8).....	<u>6,400</u>	<u>26,400</u>
Total costs		<u>\$422,400</u>

DO IT! 21-4

1. False
2. True
3. True
4. True
5. False
6. True

SOLUTIONS TO EXERCISES

EXERCISE 21-1

1. True.
2. True.
3. False. Companies that produce soft drinks, *oil*, and computer chips would all use process cost accounting.
4. False. In a *job order* cost system, costs are tracked by individual jobs.
5. False. Job order costing and process costing track *the same three* manufacturing cost elements.
6. True.
7. True.
8. False. In a process cost system, *multiple* work in process accounts *are* used.
9. False. In a process cost system, costs are summarized in *a production cost report for each department*.
10. True.

EXERCISE 21-2

(a)	April 30	Work in Process—Cooking	21,000	
		Work in Process—Canning	6,000	
		Raw Materials Inventory		27,000
	30	Work in Process—Cooking	8,500	
		Work in Process—Canning	7,000	
		Factory Labor		15,500
	30	Work in Process—Cooking.....	29,500	
		Work in Process—Canning.....	25,800	
		Manufacturing Overhead		55,300
	30	Work in Process—Canning.....	53,000	
		Work in Process—Cooking.....		53,000

EXERCISE 21-3

(a) Work in process, May 1	400
Started into production	<u>1,100</u>
Total units to be accounted for	1,500
Less: Transferred out	<u>1,200</u>
Work in process, May 31	<u>300</u>

	Equivalent Units	
	Materials	Conversion Costs
Units transferred out	1,200	1,200
Work in process, May 31		
300 X 100%	300	
300 X 40%		<u>120</u>
	<u>1,500</u>	<u>1,320</u>

	Direct Materials	Conversion Costs
Work in process, May 1	\$2,040	\$1,550
Costs added	<u>5,160</u>	<u>4,390</u>
Total materials cost	<u>\$7,200</u>	<u>\$5,940</u>

$$\$7,200 \div 1,500 = \$4.80$$

(c) $\$5,940 \div 1,320 = \$4.50$

(d) Transferred out (1,200 X \$9.30) \$11,160

(e) Work in process	
Materials (300 X \$4.80)	\$1,440
Conversion costs (120 X \$4.50)	<u>540</u>
	<u>\$1,980</u>

EXERCISE 21-4

1.	Raw Materials Inventory	62,500	
	Accounts Payable		62,500
2.	Factory Labor	56,000	
	Wages Payable		56,000
3.	Manufacturing Overhead	70,000	
	Cash		40,000
	Accounts Payable		30,000
4.	Work in Process—Cutting	15,700	
	Work in Process—Assembly	8,900	
	Raw Materials Inventory		24,600
5.	Work in Process—Cutting	29,000	
	Work in Process—Assembly	27,000	
	Factory Labor		56,000
6.	Work in Process—Cutting (1,680 X \$15)	25,200	
	Work in Process—Assembly (1,720 X \$15)	25,800	
	Manufacturing Overhead		51,000
7.	Work in Process—Assembly	67,600	
	Work in Process—Cutting		67,600
8.	Finished Goods Inventory	134,900	
	Work in Process—Assembly		134,900
9.	Accounts Receivable	200,000	
	Sales		200,000
	Cost of Goods Sold	150,000	
	Finished Goods Inventory		150,000

EXERCISE 21-5

(a)	<u>January</u>	<u>May</u>
Units to be accounted for		
Beginning work in process	0	0
Started into production	<u>9,000</u>	<u>21,000</u>
Total units	<u>9,000</u>	<u>21,000</u>
Units accounted for		
Transferred out	7,000	16,000
Ending work in process	<u>2,000</u>	<u>5,000</u>
Total units	<u>9,000</u>	<u>21,000</u>

(b)	(1) <u>Materials</u>	(2) <u>Conversion Costs</u>
January	9,000 (7,000 + 2,000)	8,200 (7,000 + 1,200)
March	15,000 (12,000 + 3,000)	12,900 (12,000 + 900)
May	21,000 (16,000 + 5,000)	20,000 (16,000 + 4,000)
July	11,500 (10,000 + 1,500)	10,600 (10,000 + 600)

EXERCISE 21-6

(a)	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	9,000	9,000
Work in process, July 31		
3,000 X 100%	3,000	
3,000 X 60%		<u>1,800</u>
Total equivalent units	<u>12,000</u>	<u>10,800</u>

- (b) Materials: $\$45,000 \div 12,000 = \$3.75$
 Conversion costs: $(\$16,200 + \$18,900) \div 10,800 = \$3.25$

Costs accounted for		
Transferred out (9,000 X \$7.00)		\$63,000
Work in process, July 31		
Materials (3,000 X \$3.75)	\$11,250	
Conversion costs (1,800 X \$3.25)	<u>5,850</u>	<u>17,100</u>
Total costs		<u>\$80,100</u>

EXERCISE 21-7

ORTIZ FURNITURE COMPANY
Sanding Department
Production Cost Report
For the Month Ended March 31, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
Units to be accounted for				
Work in process, March 1	0			
Started into production	<u>15,000</u>			
Total units	<u>15,000</u>			
Units accounted for				
Transferred out	12,000	12,000	12,000	
Work in process, March 31	<u>3,000</u>	<u>3,000</u>	<u>600</u>	(3,000 X 20%)
Total units	<u>15,000</u>	<u>15,000</u>	<u>12,600</u>	
		Materials	Conversion Costs	Total
Unit costs				
Costs in March		<u>\$33,000</u>	<u>\$63,000</u>	<u>\$96,000</u>
Equivalent units		<u>15,000</u>	<u>12,600</u>	
Unit costs (a) ÷ (b)		<u>\$2.20</u>	<u>\$5.00</u>	<u>\$7.20</u>
Costs to be accounted for				
Work in process, March 1				\$ 0
Started into production				<u>96,000</u>
Total costs				<u>\$96,000</u>
Cost Reconciliation Schedule				
Costs accounted for				
Transferred out (12,000 X \$7.20)				\$86,400
Work in process, March 31				
Materials (3,000 X \$2.20)			\$6,600	
Conversion costs (600 X \$5.00)			<u>3,000</u>	<u>9,600</u>
Total costs				<u>\$96,000</u>

EXERCISE 21-8

(a)		<u>Materials</u>	<u>Conversion Costs</u>	
	Units transferred out	14,000	14,000	
	Work in process, April 30			
	1,000 X 100%	1,000		
	1,000 X 40%		400	
		<u>15,000</u>	<u>14,400</u>	
(b)		<u>Materials</u>	<u>Conversion Costs</u>	<u>Total</u>
	Costs in April	<u>\$900,000⁽¹⁾</u>	<u>\$432,000⁽²⁾</u>	<u>\$1,332,000</u>
	Equivalent units	<u>15,000</u>	<u>14,400</u>	
	Unit costs	<u>\$60.00</u>	<u>\$30.00</u>	<u>\$90.00</u>
	⁽¹⁾ \$100,000 + \$800,000			
	⁽²⁾ \$ 70,000 + \$362,000			
(c)	Transferred out (14,000 X \$90.00)			\$1,260,000
	Work in process			
	Materials (1,000 X \$60)		\$60,000	
	Conversion costs (400 X \$30)		<u>12,000</u>	<u>72,000</u>
	Total costs			<u>\$1,332,000</u>

EXERCISE 21-9

- (a) Materials: $30,000 + 6,000 = \underline{36,000}$
Conversion costs: $30,000 + (6,000 \times 40\%) = \underline{32,400}$
- (b) Materials: $\$72,000 / 36,000 = \underline{\$2.00}$
Conversion costs: $(\$81,000 + \$97,200) / 32,400 = \underline{\$5.50}$
- (c) Units transferred out: $30,000 \times \$7.50 = \underline{\$225,000}$
Units in ending work in process:
- | | | |
|----------------|---|-----------------|
| 6,000 X \$2.00 | = | \$12,000 |
| 2,400 X \$5.50 | = | <u>13,200</u> |
| | | <u>\$25,200</u> |

EXERCISE 21-10

(a) Materials: $68,000^{(1)} + 24,000 = \underline{92,000}$

Conversion costs: $68,000 + (24,000 \times 60\%) = \underline{82,400}$

⁽¹⁾ $20,000 + 72,000 - 24,000$

(b) Materials: $\$101,200 / 92,000 = \underline{\$1.10}$

Conversion costs: $(\$164,800 + \$123,600) / 82,400 = \underline{\$3.50}$

(c) Units transferred out: $68,000 \times \$4.60 = \underline{\$312,800}$

Units in ending work in process:

24,000 X \$1.10	=	\$26,400
14,400 X \$3.50	=	<u>50,400</u>
		<u>\$76,800</u>

EXERCISE 21-11

	Physical Units
Work in process, September 1	1,600
Units started into production	<u>18,400</u>
	<u>20,000</u>
Units transferred out	15,000
Work in process, September 30	<u>5,000</u>
	<u>20,000</u>

	Equivalent Units	
	Materials	Conversion Costs
Units transferred out	15,000	15,000
Work in process		
5,000 X 100%	5,000	
5,000 X 10%		<u>500</u>
	<u>20,000</u>	<u>15,500</u>

EXERCISE 21-11 (Continued)

(b)

Materials

Work in process, September 1	
Direct materials	\$ 20,000
Costs added to production	
during September	<u>177,200</u>
Total materials cost	<u>\$197,200</u>

$\$197,200 \div 20,000 = \$9.86$ (Materials cost per unit)

Conversion Costs

Work in process, September 1	
Conversion costs	\$ 43,180
Costs added to production	
during September	
Conversion costs	<u>359,820</u>
Total conversion costs	<u>\$403,000</u>

$\$403,000 \div 15,500 = \$26.00$

(c) Costs accounted for

Transferred out (15,000 X \$35.86)		\$537,900
Work in process, September 30		
Materials (5,000 X \$9.86)	\$49,300	
Conversion costs (500 X \$26.00)	<u>13,000</u>	<u>62,300</u>
Total costs		<u>\$600,200</u>

EXERCISE 21-12

To: Stan Maley

From: Student

Re: Ending inventory

The reason for any confusion related to your department's ending inventory quantity stems from the fact that the quantity can be measured in two different ways, depending on what the information is used for.

The ending inventory quantity can be measured in physical units or equivalent units. Physical units are actual units present without regard to the stage of completion. Your department's ending inventory in physical units is at least double the amount reported as equivalent units.

Equivalent units measure the work done on the physical units, expressed in terms of fully completed units. Therefore, if your ending inventory contains 4,000 units which are 50% complete, that is equivalent to having 2,000 completed units at month end. Therefore, the ending inventory could be expressed as containing 4,000 physical units or 2,000 equivalent units.

I hope this clears up any misunderstandings. Please contact me if you have any further questions.

EXERCISE 21-13

BATISTA MANUFACTURING COMPANY Welding Department Production Cost Report For the Month Ended February 28, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
		(Step 1)	(Step 2)	
Units to be accounted for				
Work in process, February 1	15,000			
Started into production	<u>60,000</u>			
Total units	<u>75,000</u>			
Units accounted for				
Transferred out	49,000	49,000	49,000	
Work in process, February 28	<u>26,000</u>	<u>26,000</u>	<u>5,200</u>	
Total units	<u>75,000</u>	<u>75,000</u>	<u>54,200</u>	
Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in February	(a)	<u>\$198,000⁽¹⁾</u>	<u>\$108,400⁽²⁾</u>	<u>\$306,400</u>
Equivalent units	(b)	<u>75,000</u>	<u>54,200</u>	
Unit costs (a) ÷ (b)		<u>\$2.64</u>	<u>\$2.00</u>	<u>\$4.64</u>
Costs to be accounted for				
Work in process, February 1				\$ 32,175
Started into production				<u>274,225</u>
Total costs				<u>\$306,400</u>
Cost Reconciliation Schedule (Step 4)				
Costs accounted for				
Transferred out (49,000 X \$4.64)				\$227,360
Work in process, February 28				
Materials (26,000 X \$2.64)			\$68,640	
Conversion costs (5,200 X \$2.00)			<u>10,400</u>	<u>79,040</u>
Total costs				<u>\$306,400</u>

⁽¹⁾\$18,000 + \$180,000

⁽²⁾\$14,175 + \$32,780 + \$61,445

***EXERCISE 21-14**

(a) The overhead rates are:

<u>Activity</u>	<u>Total Cost</u>	<u>Total Driver Volume</u>	<u>Overhead Rate</u>
Materials handling	\$30,000	1,000	\$30
Machine setups	27,000	450	60
Quality inspections	24,000	600	40

(b) The assignment of the overhead costs to products is as follows:

<u>Cost</u>	<u>Instruments</u>		<u>Gauges</u>		<u>Total Cost</u>
	<u>Number</u>	<u>Cost</u>	<u>Number</u>	<u>Cost</u>	
Requisitions (\$30)	400	\$12,000	600	\$18,000	\$30,000
Setups (\$60)	150	9,000	300	18,000	27,000
Inspections (\$40)	200	8,000	400	16,000	24,000
Total costs (a)		<u>\$29,000</u>		<u>\$52,000</u>	<u>\$81,000</u>
Total units (b)		<u>50</u>		<u>300</u>	
Cost per unit (a) ÷ (b)		<u>\$580</u>		<u>\$173.33</u>	

(c) **MEMO**

To: President, Carmeli Instrument

From: Student

Re: Benefits of activity-based costing (ABC)

ABC focuses on the activities performed in producing a product. Overhead costs are assigned to products based on cost drivers that measure the activities performed on the product.

The primary benefit of ABC is more accurate and meaningful product costing. This improved cost data can lead to reduced costs as managers become more aware of the underlying causes of cost incurrence. Thus, control over costs is enhanced.

The improved cost data should also lead to better management decisions. More accurate product costing should contribute to setting selling prices which will achieve desired profitability levels. In addition, it should be helpful in deciding whether to discontinue or expand a product line or in deciding whether to make or buy a product component.

*EXERCISE 21-15

(a)	Direct materials (1,000 X \$35).....	\$35,000
	Direct labor (1,000 X \$15).....	15,000
	Overhead (\$15,000 X 225%*).....	<u>33,750</u>
	Total	<u>\$83,750</u>

*($\$450,000/\$200,000$)

(b)	Direct materials (1,000 X \$35).....		\$35,000
	Direct labor (1,000 X \$15).....		15,000
	Overhead		
	Materials handling (2,500 X \$2*)	\$ 5,000	
	Machining (500 X \$10**).....	5,000	
	Factory supervision (1,000 X \$12.50***).....	<u>12,500</u>	<u>22,500</u>
	Total.....		<u>\$72,500</u>

*\$100,000 ÷ 50,000

**\$200,000 ÷ 20,000

***\$150,000 ÷ 12,000

SOLUTIONS TO PROBLEMS

PROBLEM 21-1A

(a) Physical units

Units to be accounted for

Work in process, June 1	0
Started into production	<u>20,000</u>
Total units	<u>20,000</u>

Units accounted for

Transferred out	18,000
Work in process, June 30	<u>2,000</u>
Total units	<u>20,000</u>

(b) Equivalent units

	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	18,000	18,000
Work in process, June 30		
2,000 X 100%	2,000	
2,000 X 60%		<u>1,200</u>
Total equivalent units	<u>20,000</u>	<u>19,200</u>

(c)

	<u>Unit Costs</u>
Materials	\$9.90 (\$198,000 ÷ 20,000)
Conversion costs	\$8.50 (\$163,200 ÷ 19,200)
Total unit cost	\$18.40 (\$9.90 + \$8.50)

(d) Costs accounted for

Transferred out (18,000 X \$18.40)	\$331,200
Work in process, June 30	
Materials (2,000 X \$9.90)	\$19,800
Conversion costs (1,200 X \$8.50)	<u>10,200</u>
Total costs	<u>30,000</u>
	<u>\$361,200</u>

PROBLEM 21-1A (Continued)
(e)

KASTEN COMPANY
Molding Department
Production Cost Report
For the Month Ended June 30, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
		(Step 1)	(Step 2)	
Units to be accounted for				
Work in process, June 1	0			
Started into production	<u>20,000</u>			
Total units	<u>20,000</u>			
Units accounted for				
Transferred out	18,000	18,000	18,000	
Work in process, June 30	<u>2,000</u>	<u>2,000</u>	<u>1,200</u>	(2,000 X 60%)
Total units	<u>20,000</u>	<u>20,000</u>	<u>19,200</u>	
Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in June	(a)	<u>\$198,000</u>	<u>\$163,200</u>	<u>\$361,200</u>
Equivalent units	(b)	<u>20,000</u>	<u>19,200</u>	
Unit costs (a) ÷ (b)		<u>\$9.90</u>	<u>\$8.50</u>	<u>\$18.40</u>
Costs to be accounted for				
Work in process, June 1				\$ 0
Started into production				<u>361,200</u>
Total costs				<u>\$361,200</u>
Cost Reconciliation Schedule (Step 4)				
Costs accounted for				
Transferred out (18,000 X \$18.40)				\$331,200
Work in process, June 30				
Materials (2,000 X \$9.90)			\$19,800	
Conversion costs (1,200 X \$8.50)			<u>10,200</u>	<u>30,000</u>
Total costs				<u>\$361,200</u>

PROBLEM 21-2A

(a) (1) Physical units

	<u>T12 Tables</u>	<u>C10 Chairs</u>
Units to be accounted for		
Work in process, July 1	0	0
Started into production	<u>20,000</u>	<u>16,000</u>
Total units	<u><u>20,000</u></u>	<u><u>16,000</u></u>
Units accounted for		
Transferred out	17,000	15,500
Work in process, July 31	<u>3,000</u>	<u>500</u>
Total units	<u><u>20,000</u></u>	<u><u>16,000</u></u>

(2) Equivalent units

	<u>T12 Tables</u>	
	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	17,000	17,000
Work in process, July 31		
(3,000 X 100%)	3,000	
(3,000 X 60%)		<u>1,800</u>
Total equivalent units	<u><u>20,000</u></u>	<u><u>18,800</u></u>

	<u>C10 Chairs</u>	
	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	15,500	15,500
Work in process, July 31		
(500 X 100%)	500	
(500 X 80%)		<u>400</u>
Total equivalent units	<u><u>16,000</u></u>	<u><u>15,900</u></u>

PROBLEM 21-2A (Continued)**(3) Unit costs**

	<u>T12 Tables</u>	<u>C10 Chairs</u>
Materials ($\$380,000 \div 20,000$)	\$19	
($\$288,000 \div 16,000$)		\$18
Conversion costs ($\$338,400 \div 18,800$)	18	
($\$222,600 \div 15,900$)		14
Total	<u>\$37</u>	<u>\$32</u>

(4)**T12 Tables****Costs accounted for**

Transferred out ($17,000 \times \$37$)		\$629,000
Work in process		
Materials ($3,000 \times \$19$)	\$57,000	
Conversion costs ($1,800 \times \$18$)	<u>32,400</u>	<u>89,400</u>
Total costs		<u>\$718,400</u>

C10 Chairs**Costs accounted for**

Transferred out ($15,500 \times \$32$)		\$496,000
Work in process		
Materials ($500 \times \$18$)	\$9,000	
Conversion costs ($400 \times \$14$)	<u>5,600</u>	<u>14,600</u>
Total costs		<u>\$510,600</u>

PROBLEM 21-2A (Continued)

(b)

ORTEGA INDUSTRIES INC.
Cutting Department—Plant 1
Production Cost Report
For the Month Ended July 31, 2010

Quantities	Physical Units	Equivalent Units	
		Materials	Conversion Costs
	(Step 1)	(Step 2)	
Units to be accounted for			
Work in process, July 1	0		
Started into production	<u>20,000</u>		
Total units	<u>20,000</u>		
Units accounted for			
Transferred out	17,000	17,000	17,000
Work in process, July 31	<u>3,000</u>	<u>3,000</u>	<u>1,800</u> (3,000 X 60%)
Total units	<u>20,000</u>	<u>20,000</u>	<u>18,800</u>

Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in July	(a)	<u>\$380,000</u>	<u>\$338,400</u>	<u>\$718,400</u>
Equivalent units	(b)	<u>20,000</u>	<u>18,800</u>	
Unit costs (a) ÷ (b)		<u>\$19</u>	<u>\$18</u>	<u>\$37</u>

Costs to be accounted for	
Work in process, July 1	\$ 0
Started into production	<u>718,400</u>
Total costs	<u>\$718,400</u>

Cost Reconciliation Schedule (Step 4)

Costs accounted for	
Transferred out (17,000 X \$37)	\$629,000
Work in process, July 31	
Materials (3,000 X \$19)	\$57,000
Conversion costs (1,800 X \$18)	<u>32,400</u>
Total costs	<u>\$718,400</u>

PROBLEM 21-3A

1.	Raw Materials Inventory	300,000	
	Accounts Payable		300,000
2.	Work in Process—Mixing	210,000	
	Work in Process—Packaging	45,000	
	Raw Materials Inventory		255,000
3.	Factory Labor	248,900	
	Wages Payable		248,900
4.	Work in Process—Mixing	182,500	
	Work in Process—Packaging	66,400	
	Factory Labor		248,900
5.	Manufacturing Overhead	790,000	
	Accounts Payable		790,000
6.	Work in Process—Mixing (28,000 X \$22)	616,000	
	Work in Process—Packaging		
	(6,000 X \$22)	132,000	
	Manufacturing Overhead		748,000
7.	Work in Process—Packaging	979,000	
	Work in Process—Mixing		979,000
8.	Finished Goods Inventory	1,315,000	
	Work in Process—Packaging		1,315,000
9.	Accounts Receivable	2,500,000	
	Sales		2,500,000
	Cost of Goods Sold	1,640,000	
	Finished Goods Inventory		1,640,000

PROBLEM 21-4A

(a)

		<u>Equivalent Units</u>	
	<u>Physical Units</u>	<u>Materials</u>	<u>Conversion Costs</u>
Units to be accounted for			
Work in process, November 1	35,000		
Started into production	<u>700,000</u>		
Total units	<u>735,000</u>		
Units accounted for			
Transferred out	710,000	710,000	710,000
Work in process, November 30	<u>25,000</u>	<u>25,000</u>	<u>10,000</u>
Total units	<u>735,000</u>	<u>735,000</u>	<u>720,000</u>

	<u>Materials cost</u>	<u>Conversion costs</u>	
Beginning work in process	\$ 69,000	\$ 48,150	
Added during month	<u>1,548,000</u>	<u>563,850</u>	(\$225,920 + \$337,930)
Total	<u>\$1,617,000</u>	<u>\$612,000</u>	
Equivalent units	<u>735,000</u>	<u>720,000</u>	
Cost per unit	<u>\$2.20</u>	<u>\$.85</u>	

(b)

Costs accounted for		
Transferred out (710,000 X \$3.05)		\$2,165,500
Work in process, November 30		
Materials (25,000 X \$2.20)	\$55,000	
Conversion costs (10,000 X \$.85)	<u>8,500</u>	<u>63,500</u>
Total costs		<u>\$2,229,000</u>

PROBLEM 21-4A (Continued)**(c)**

CAVALIER COMPANY
Assembly Department
Production Cost Report
For the Month Ended November 30, 2010

<u>Quantities</u>	<u>Physical Units</u> (Step 1)	<u>Equivalent Units</u>	
		<u>Materials</u> (Step 2)	<u>Conversion Costs</u> (25,000 X 40%)
Units to be accounted for			
Work in process, November 1	35,000		
Started into production	<u>700,000</u>		
Total units	<u>735,000</u>		
Units accounted for			
Transferred out	710,000	710,000	710,000
Work in process, November 30	<u>25,000</u>	<u>25,000</u>	<u>10,000</u>
Total units	<u>735,000</u>	<u>735,000</u>	<u>720,000</u>
<u>Costs</u>		<u>Materials</u>	<u>Conversion Costs</u> <u>Total</u>
Unit costs (Step 3)			
Costs in November	(a)	<u>\$1,617,000</u>	<u>\$612,000</u>
Equivalent units	(b)	<u>735,000</u>	<u>720,000</u>
Unit costs (a) ÷ (b)		<u>\$2.20</u>	<u>\$0.85</u>
Costs to be accounted for			
Work in process, November 1			\$ 117,150
Started into production			<u>2,111,850</u>
Total costs			<u>\$2,229,000</u>
<u>Cost Reconciliation Schedule (Step 4)</u>			
Costs accounted for			
Transferred out (710,000 X \$3.05)			\$2,165,500
Work in process, November 30			
Materials (25,000 X \$2.20)		\$55,000	
Conversion costs (10,000 X \$0.85)		<u>8,500</u>	<u>63,500</u>
Total costs			<u>\$2,229,000</u>

PROBLEM 21-5A

(a) (1)

		<u>Equivalent Units</u>	
	<u>Physical Units</u>	<u>Materials</u>	<u>Conversion Costs</u>
Units to be accounted for			
Work in process, July 1	500		
Started into production	<u>1,000</u>		
Total units	<u>1,500</u>		
Units accounted for			
Transferred out	900	900	900
Work in process, July 31	<u>600</u>	<u>600</u>	<u>180</u>
Total units	<u>1,500</u>	<u>1,500</u>	<u>1,080</u>

(2)

	<u>Materials cost</u>	<u>Conversion costs</u>	
Beginning work in process	\$ 750	\$ 600	
Added during month	<u>2,400</u>	<u>2,640</u>	(\$1,580 + \$1,060)
Total	<u>\$3,150</u>	<u>\$3,240</u>	
 Equivalent units	 <u>1,500</u>	 <u>1,080</u>	
 Cost per unit	 <u>\$2.10</u>	 <u>\$3.00</u>	

(3)

Costs accounted for		
Transferred out (900 X \$5.10)		\$4,590
Work in process, July 31		
Materials (600 X \$2.10)	\$1,260	
Conversion costs (180 X \$3.00)	<u>540</u>	<u>1,800</u>
Total costs		<u>\$6,390</u>

PROBLEM 21-5A (Continued)**(b)**

CHEN COMPANY
Basketball Department
Production Cost Report
For the Month Ended July 31, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
	(Step 1)	(Step 2)		
Units to be accounted for				
Work in process, July 1	500			
Started into production	<u>1,000</u>			
Total units	<u>1,500</u>			
Units accounted for				
Transferred out	900	900	900	
Work in process, July 31	<u>600</u>	<u>600</u>	<u>180</u>	
Total units	<u>1,500</u>	<u>1,500</u>	<u>1,080</u>	
Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in July	(a)	<u>\$3,150</u>	<u>\$3,240</u>	<u>\$6,390</u>
Equivalent units	(b)	<u>1,500</u>	<u>1,080</u>	
Unit costs (a) ÷ (b)		<u>\$2.10</u>	<u>\$3.00</u>	
Costs to be accounted for				
Work in process, July 1				\$1,350
Started into production				<u>5,040</u>
Total costs				<u>\$6,390</u>
Cost Reconciliation Schedule (Step 4)				
Costs accounted for				
Transferred out (900 X \$5.10)				\$4,590
Work in process, July 31				
Materials (600 X \$2.10)			\$1,260	
Conversion costs (180 X \$3.00)			<u>540</u>	<u>1,800</u>
Total costs				<u>\$6,390</u>

PROBLEM 21-6A

(a) Computation of equivalent units:

	Physical Units	Equivalent Units	
		Materials	Conversion Costs
Units accounted for			
Transferred out	130,000	130,000	130,000
Work in process, October 31			
(60% materials,			
40% conversion costs)	<u>50,000</u>	<u>30,000</u>	<u>20,000</u>
Total units	<u>180,000</u>	<u>160,000</u>	<u>150,000</u>

Computation of October unit costs

Materials: \$240,000 ÷ 160,000 equivalent units =	\$1.50
Conversion cost: \$105,000 ÷ 150,000 equivalent units =	<u>.70</u>
Total unit cost, October	<u>\$2.20</u>

(b) Cost Reconciliation Schedule

Costs accounted for		
Transferred out (130,000 X \$2.20)		\$286,000
Work in process, October 31		
Materials (30,000 X \$1.50)	\$45,000	
Conversion costs (20,000 X \$0.70)	<u>14,000</u>	<u>59,000</u>
Total costs		<u>\$345,000</u>

***PROBLEM 21-7A**

- (a) The allocation of total manufacturing overhead using activity-based costing is as follows:

Cost	Royale		Majestic		Total Cost
	Number	Cost	Number	Cost	
Purchase orders (\$40)	16,000	\$ 640,000	14,000	\$ 560,000	\$1,200,000
Machine setups (\$60)	5,000	300,000	10,000	600,000	900,000
Machine hours (\$30)	100,000	3,000,000	60,000	1,800,000	4,800,000
Inspections (\$20)	10,000	200,000	25,000	500,000	700,000
Total assigned costs (a)		<u>\$4,140,000</u>		<u>\$3,460,000</u>	<u>\$7,600,000</u>
Units produced (b)		<u>30,000</u>		<u>10,000</u>	
Costs per unit (a) ÷ (b)		<u>\$138</u>		<u>\$346</u>	

- (b) The cost per unit and gross profit of each model under ABC costing were:

	<u>Royale</u>	<u>Majestic</u>
Direct materials	\$ 700	\$ 420
Direct labor	100	80
Manufacturing overhead	138	346
Total cost per unit	<u>\$ 938</u>	<u>\$ 846</u>
 Sales price per unit	 \$1,500	 \$1,200
Cost per unit	<u>938</u>	<u>846</u>
Gross profit	<u>\$ 562</u>	<u>\$ 354</u>

- (c) Management's future plans for the two television models are not sound. Under ABC costing, the Royale model is \$208 per unit more profitable than the Majestic model.

PROBLEM 21-1B

(a) Physical units

Units to be accounted for

Work in process, January 1	0
Started into production	<u>42,500</u>
Total units	<u>42,500</u>

Units accounted for

Transferred out	40,000
Work in process, January 31	<u>2,500</u>
Total units	<u>42,500</u>

(b) Equivalent units

	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	40,000	40,000
Work in process, January 31		
2,500 X 100%	2,500	
2,500 X 40%		<u>1,000</u>
Total equivalent units	<u>42,500</u>	<u>41,000</u>

(c) Unit Costs

Materials	\$12 (\$510,000 ÷ 42,500)
Conversion costs	<u>\$ 6 (\$246,000 ÷ 41,000)</u>
Total manufacturing	<u>\$18 (\$12.00 + \$6.00)</u>

(d) Costs accounted for

Transferred out (40,000 X \$18.00).....		\$720,000
Work in process, January 31		
Materials (2,500 X \$12).....	\$30,000	
Conversion costs (1,000 X \$6)	<u>6,000</u>	<u>36,000</u>
Total costs		<u>\$756,000</u>

PROBLEM 21-1B (Continued)**(e)**

WALTERS CORPORATION
Molding Department
Production Cost Report
For the Month Ended January 31, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
	(Step 1)	(Step 2)		
Units to be accounted for				
Work in process, January 1	0			
Started into production	<u>42,500</u>			
Total units	<u>42,500</u>			
Units accounted for				
Transferred out	40,000	40,000	40,000	
Work in process, January 31	<u>2,500</u>	<u>2,500</u>	<u>1,000</u>	(2,500 X 40%)
Total units	<u>42,500</u>	<u>42,500</u>	<u>41,000</u>	
Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in January	(a)	<u>\$510,000</u>	<u>\$246,000</u>	<u>\$756,000</u>
Equivalent units	(b)	<u>42,500</u>	<u>41,000</u>	
Unit costs (a) ÷ (b)		<u>\$12</u>	<u>\$6</u>	<u>\$18</u>
Costs to be accounted for				
Work in process, January 1				\$ 0
Started into production				<u>756,000</u>
Total costs				<u>\$756,000</u>
<u>Cost Reconciliation Schedule (Step 4)</u>				
Costs accounted for				
Transferred out (40,000 X \$18)				\$720,000
Work in process, January 31				
Materials (2,500 X \$12)			\$30,000	
Conversion costs (1,000 X \$6)			<u>6,000</u>	<u>36,000</u>
Total costs				<u>\$756,000</u>

PROBLEM 21-2B

(a) (1) Physical units

	<u>R12 Refrigerators</u>	<u>F24 Freezers</u>
Units to be accounted for		
Work in process, June 1	0	0
Started into production	<u>21,000</u>	<u>20,000</u>
Total units	<u>21,000</u>	<u>20,000</u>
Units accounted for		
Transferred out	17,000	17,500
Work in process, June 30	<u>4,000</u>	<u>2,500</u>
Total units	<u>21,000</u>	<u>20,000</u>

(2) Equivalent units

	<u>R12 Refrigerators</u>	
	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	17,000	17,000
Work in process, June 30		
(4,000 X 100%)	4,000	
(4,000 X 75%)		<u>3,000</u>
Total equivalent units	<u>21,000</u>	<u>20,000</u>

	<u>F24 Freezers</u>	
	<u>Materials</u>	<u>Conversion Costs</u>
Units transferred out	17,500	17,500
Work in process, June 30		
(2,500 X 100%)	2,500	
(2,500 X 60%)		<u>1,500</u>
Total equivalent units	<u>20,000</u>	<u>19,000</u>

PROBLEM 21-2B (Continued)

(3) Unit costs

	<u>R12 Refrigerators</u>	<u>F24 Freezers</u>
Materials ($\$840,000 \div 21,000$)	\$40	
($\$720,000 \div 20,000$)		\$36
Conversion costs ($\$640,000 \div 20,000$)	32	
($\$513,000 \div 19,000$)		27
Total	<u>\$72</u>	<u>\$63</u>

(4)

R12 Refrigerators

Costs accounted for

Transferred out ($17,000 \times \$72$)		\$1,224,000
Work in process		
Materials ($4,000 \times \$40$)	\$160,000	
Conversion costs		
($3,000 \times \$32$)	<u>96,000</u>	<u>256,000</u>
Total costs		<u>\$1,480,000</u>

F24 Freezers

Costs accounted for

Transferred out ($17,500 \times \$63$)		\$1,102,500
Work in process		
Materials ($2,500 \times \$36$)	\$90,000	
Conversion costs		
($1,500 \times \$27$)	<u>40,500</u>	<u>130,500</u>
Total costs		<u>\$1,233,000</u>

PROBLEM 21-2B (Continued)

(b)

SLOCUM CORPORATION
Stamping Department—Plant A
Production Cost Report
For the Month Ended June 30, 2010

<u>Quantities</u>	<u>Physical Units</u>	<u>Equivalent Units</u>	
		<u>Materials</u>	<u>Conversion Costs</u>
	(Step 1)	(Step 2)	
Units to be accounted for			
Work in process, June 1	0		
Started into production	<u>21,000</u>		
Total units	<u>21,000</u>		
Units accounted for			
Transferred out	17,000	17,000	17,000
Work in process, June 30	<u>4,000</u>	<u>4,000</u>	<u>3,000</u> (4,000 X 75%)
Total units	<u>21,000</u>	<u>21,000</u>	<u>20,000</u>
Costs		<u>Materials</u>	<u>Conversion Costs</u>
Unit costs (Step 3)			
Costs in June	(a)	<u>\$840,000</u>	<u>\$640,000</u>
Equivalent units	(b)	<u>21,000</u>	<u>20,000</u>
Unit costs (a) ÷ (b)		<u>\$40</u>	<u>\$32</u>
Costs to be accounted for			
Work in process, June 1			\$ 0
Started into production			<u>1,480,000</u>
Total costs			<u>\$1,480,000</u>
<u>Cost Reconciliation Schedule (Step 4)</u>			
Costs accounted for			
Transferred out (17,000 X \$72)			\$1,224,000
Work in process, June 30			
Materials (4,000 X \$40)		\$160,000	
Conversion costs (3,000 X \$32)		<u>96,000</u>	<u>256,000</u>
Total costs			<u>\$1,480,000</u>

PROBLEM 21-3B

1.	Raw Materials Inventory	25,000	
	Accounts Payable		25,000
2.	Work in Process—Blending	18,930	
	Work in Process—Packaging	9,140	
	Raw Materials Inventory		28,070
3.	Factory Labor	23,770	
	Wages Payable		23,770
4.	Work in Process—Blending	13,320	
	Work in Process—Packaging	10,450	
	Factory Labor		23,770
5.	Manufacturing Overhead.....	41,500	
	Accounts Payable.....		41,500
6.	Work in Process—Blending (900 X \$25)	22,500	
	Work in Process—Packaging (300 X \$25)	7,500	
	Manufacturing Overhead.....		30,000
7.	Work in Process—Packaging	44,940	
	Work in Process—Blending		44,940
8.	Finished Goods Inventory	67,490	
	Work in Process—Packaging		67,490
9.	Accounts Receivable.....	90,000	
	Sales.....		90,000
	Cost of Goods Sold.....	62,000	
	Finished Goods Inventory		62,000

PROBLEM 21-4B

(a)

		<u>Equivalent Units</u>	
	<u>Physical Units</u>	<u>Materials</u>	<u>Conversion Costs</u>
Units to be accounted for			
Work in process, October 1	25,000		
Started into production	<u>425,000</u>		
Total units	<u>450,000</u>		
Units accounted for			
Transferred out	415,000	415,000	415,000
Work in process, October 31	<u>35,000</u>	<u>35,000</u>	<u>14,000</u>
Total units	<u>450,000</u>	<u>450,000</u>	<u>429,000</u>

	<u>Materials cost</u>	<u>Conversion costs</u>	
Beginning work in process	\$ 29,000	\$ 16,500	
Added during month	<u>1,006,000</u>	<u>198,000</u>	(\$90,000 + \$108,000)
Total	<u>\$1,035,000</u>	<u>\$214,500</u>	
Equivalent units	<u>450,000</u>	<u>429,000</u>	
Cost per unit	<u>\$2.30</u>	<u>\$.50</u>	

(b) Costs accounted for		
Transferred out (415,000 X \$2.80)		\$1,162,000
Work in process, October 31		
Materials (35,000 X \$2.30)	\$80,500	
Conversion costs (14,000 X \$.50)	<u>7,000</u>	<u>87,500</u>
Total costs		<u>\$1,249,500</u>

PROBLEM 21-4B (Continued)**(c)**

MCNAIR COMPANY
Assembly Department
Production Cost Report
For the Month Ended October 31, 2010

<u>Quantities</u>	<u>Physical Units</u> (Step 1)	<u>Equivalent Units</u>	
		<u>Materials</u> (Step 2)	<u>Conversion Costs</u> (Step 2)
Units to be accounted for			
Work in process, October 1	25,000		
Started into production	<u>425,000</u>		
Total units	<u>450,000</u>		
Units accounted for			
Transferred out	415,000	415,000	415,000
Work in process, October 31	<u>35,000</u>	<u>35,000</u>	<u>14,000</u> (35,000 X 40%)
Total units	<u>450,000</u>	<u>450,000</u>	<u>429,000</u>
<u>Costs</u>		<u>Materials</u>	<u>Conversion Costs</u> <u>Total</u>
Unit costs (Step 3)			
Costs in October	(a) \$1,035,000	\$214,500	\$1,249,500
Equivalent units	(b) <u>450,000</u>	<u>429,000</u>	
Unit costs (a) ÷ (b)		<u>\$2.30</u>	<u>\$2.80</u>
Costs to be accounted for			
Work in process, October 1			\$ 45,500
Started into production			<u>1,204,000</u>
Total costs			<u>\$1,249,500</u>
<u>Cost Reconciliation Schedule (Step 4)</u>			
Costs accounted for			
Transferred out (415,000 X \$2.80)			\$1,162,000
Work in process, October 31			
Materials (35,000 X \$2.30)		\$80,500	
Conversion costs (14,000 X \$.50)		<u>7,000</u>	<u>87,500</u>
Total costs			<u>\$1,249,500</u>

PROBLEM 21-5B

(a) (1)

		<u>Equivalent Units</u>	
	<u>Physical Units</u>	<u>Materials</u>	<u>Conversion Costs</u>
Units to be accounted for			
Work in process, May 1	500		
Started into production	<u>1,500</u>		
Total units	<u>2,000</u>		
Units accounted for			
Transferred out	1,200	1,200	1,200
Work in process, May 31	<u>800</u>	<u>800</u>	<u>200</u>
Total units	<u>2,000</u>	<u>2,000</u>	<u>1,400</u>

(2)

	<u>Materials cost</u>	<u>Conversion costs</u>	
Beginning work in process	\$15,000	\$18,000	
Added during month	<u>50,000</u>	<u>52,000</u>	(\$18,320 + \$33,680)
Total	<u>\$65,000</u>	<u>\$70,000</u>	
Equivalent units	<u>2,000</u>	<u>1,400</u>	
Cost per unit	<u>\$32.50</u>	<u>\$50</u>	

(3)

Costs accounted for		
Transferred out (1,200 X \$82.50)		\$ 99,000
Work in process, May 31		
Materials (800 X \$32.50)	\$26,000	
Conversion costs (200 X \$50)	<u>10,000</u>	<u>36,000</u>
Total costs		<u>\$135,000</u>

PROBLEM 21-5B (Continued)**(b)**

MARTE COMPANY
Bicycle Department
Production Cost Report
For the Month Ended May 31, 2010

Quantities	Physical Units	Equivalent Units		
		Materials	Conversion Costs	
	(Step 1)	(Step 2)		
Units to be accounted for				
Work in process, May 1	500			
Started into production	<u>1,500</u>			
Total units	<u>2,000</u>			
Units accounted for				
Transferred out	1,200	1,200	1,200	
Work in process, May 31	<u>800</u>	<u>800</u>	<u>200</u>	(800 X .25)
Total units	<u>2,000</u>	<u>2,000</u>	<u>1,400</u>	
Costs		Materials	Conversion Costs	Total
Unit costs (Step 3)				
Costs in May	(a)	<u>\$65,000</u>	<u>\$70,000</u>	<u>\$135,000</u>
Equivalent units	(b)	<u>2,000</u>	<u>1,400</u>	
Unit costs (a) ÷ (b)		<u>\$32.50</u>	<u>\$50</u>	<u>\$82.50</u>
Costs to be accounted for				
Work in process, May 1				\$ 33,000
Started into production				<u>102,000</u>
Total costs				<u>\$135,000</u>
Cost Reconciliation Schedule (Step 4)				
Costs accounted for				
Transferred out (1,200 X \$82.50)				\$ 99,000
Work in process, May 31				
Materials (800 X \$32.50)			\$26,000	
Conversion costs (200 X \$50)			<u>10,000</u>	<u>36,000</u>
Total costs				<u>\$135,000</u>

PROBLEM 21-6B

(a) Computation of equivalent units:

	Physical Units	Equivalent Units	
		Materials	Conversion Costs
Units accounted for			
Transferred out	95,000	95,000	95,000
Work in process, March 31			
(60% materials,			
20% conversion costs)	15,000	9,000	3,000
Total units	<u>110,000</u>	<u>104,000</u>	<u>98,000</u>

Computation of March unit costs

Materials: \$156,000 ÷ 104,000 equivalent units =	\$1.50
Conversion cost: \$98,000 ÷ 98,000 equivalent units =	<u>1.00</u>
Total unit cost, March	<u>\$2.50</u>

(b) Cost Reconciliation Schedule

Costs accounted for		
Transferred out (95,000 X \$2.50)		\$237,500
Work in process, March 31		
Materials (9,000 X \$1.50)	\$13,500	
Conversion costs (3,000 X \$1.00)	<u>3,000</u>	<u>16,500</u>
Total costs		<u>\$254,000</u>

- (a) The unit cost suggests that Sid took the highest total costs and divided these costs by the units started into production. The highest total costs would be the total costs charged to the Mixing Department (\$88,000 + \$573,000 + \$769,000) divided by the units started during July (91,000 gallons), which results in a per unit cost of \$15.71 ($\$1,430,000 \div 91,000$).
- (b) The principal errors made by Sid were: (1) he did not compute equivalent units of production; (2) he did not use the weighted-average costing method; and (3) he did not assign costs to ending work-in-process.

(c) **SUNSHINE BEACH COMPANY**
Mixing Department
Production Cost Report
For the Month Ended July 31, 2010

<u>Quantities</u>	<u>Physical Units</u> (Step 1)	<u>Equivalent Units</u>	
		<u>Materials</u> (Step 2)	<u>Conversion Costs</u>
Units to be accounted for			
Work in process, July 1	8,000		
Started into production	<u>91,000</u>		
Total units	<u>99,000</u>		
Units accounted for			
Transferred out	94,000	94,000	94,000
Work in process, July 31	<u>5,000</u>	<u>5,000</u>	<u>1,000</u> (5,000 X .20)
Total units	<u>99,000</u>	<u>99,000</u>	<u>95,000</u>
<u>Costs</u>		<u>Materials</u>	<u>Conversion Costs</u> <u>Total</u>
Unit costs (Step 3)			
Costs in July	(a)	<u>\$594,000</u>	<u>\$836,000</u>
Equivalent units	(b)	<u>99,000</u>	<u>95,000</u>
Unit costs (a) ÷ (b)		<u>\$6.00</u>	<u>\$8.80</u>
Costs to be accounted for			
Work in process, July 1			\$ 88,000
Started into production			<u>1,342,000</u>
Total costs			<u>\$1,430,000</u>
<u>Cost Reconciliation Schedule (Step 4)</u>			
Costs accounted for			
Transferred out (94,000 X \$14.80)			\$1,391,200
Work in process, July 31			
Materials (5,000 X \$6.00)		\$30,000	
Conversion costs (1,000 X \$8.80)		<u>8,800</u>	<u>38,800</u>
Total costs			<u>\$1,430,000</u>

- (a) The unit cost of materials is \$140 ($\$420,000 \div 3,000$).
- (b) The materials cost of the goods transferred out is \$350,000 ($2,500 \times \$140$). Conversion costs, therefore, are \$250,000 ($\$600,000 - \$350,000$), and per unit conversion cost is \$100 ($\$250,000 \div 2,500$).
- (c) There are 500 units in ending work-in-process inventory (3,000 started – 2,500 transferred out). The materials cost is \$70,000 ($500 \times \$140$). Thus, the conversion costs in the inventory are \$30,000. \$30,000 divided by \$100 per unit conversion cost equals 300 equivalent units or 60% ($300 \div 500$) complete.

Answers will vary depending on companies chosen by students.

To: Carol Gorden, Regional Sales Manager

From: Student, Accounting Manager

Re: Production Cost Reports

Carol, congratulations again on your promotion! It's going to be great working with you. It kind of reminds me of our days at Dairy-Freeze after school (although this work is more fun, and it certainly pays better!).

I'll try to clear up some of the questions you raised in your fax. Here in the Snack Foods Division we use process costing rather than the job order system that Special Projects uses. The reason for this is that we produce all our products in a more or less continuous process, even when we run occasional special orders. You see, all our workers are assigned a particular part of the process to control. One might be in charge of making sure the mixing machines work properly, while another verifies the weight of the finished products. Whichever job a worker is assigned, he or she stays with it to completion, or at least the completion of that particular process. That's different from what you had in Special Projects, where workers moved from job to job. That's why we don't usually track the orders separately. Our special orders are for various quantities of the foods we produce, so only the Packing Department needs to be concerned with the particular set of products shipped to the particular customer—which is its ordinary concern anyway.

Your next question was about what an equivalent unit is. Well, you know already that Special Projects bids on various jobs, and then costs are recorded when the jobs are complete. The costs accumulated on jobs that aren't complete are reflected in Work in Process inventory. We in Snack Foods can't use that method for a simple reason—we produce our products in huge batches that we keep going fairly continuously. Or, in other words, we don't have a "job" that we can record as "complete." A batch may contain enough of our product to fill thirty or more orders, so we may have thirty or more "jobs" in each batch. One job may happen to be filled from two batches. Since the cost of each batch is about the same, it isn't worth keeping track of separately.

At the end of the month, we need to record what we finished and what still remains undone. Equivalent units are the way we measure the amount of work we have done on our work in process. It's kind of like comparing the contents of 4-ounce cups with the contents of 12-ounce cups. It doesn't make sense to compare by counting the number of cups you have. You need to find out how many ounces you have in one set; then you can get a meaningful comparison with the ounces you have in the other set. We compare by the number of "units" of materials or labor that are required to finish a product completely. If it requires 12 ounces of flour and 15 minutes of labor for a finished bag of pretzels, for example, then the 12 ounces and 15 minutes are "finished equivalents." If we have enough pretzels to fill 30 bags, but we've only spent 5 minutes (or 1/3 of the total required) of labor on them at the end of the month, we could have used the same amount of time and completely finished 10 bags. Thus, we have the "equivalent" of 10 bags worth of labor.

Your last question is the easiest to answer. You get four reports because we use four processes here in Snack Foods Division. Each process has to report its status at the end of every month. It's kind of like we have four miniature factories, each reporting "completion" of a certain number of products. The products from one department are used as raw materials for other departments, so we have a chain of reports. Notice that the units and costs transferred out of Process 1 are the same as the units and costs transferred in to Process 2, and so on.

I hope this helps. Call, write, or email me any time!

(a) The stakeholders in this situation are:

- ▶ Sue Wooten, molding department head.
- ▶ Fred Barando, quality control inspector.
- ▶ Customers of R. B. Patrick Company.
- ▶ The department manager of the assembly department.

(b) Fred is placed in an ethical dilemma. He can offend his department head by disregarding Sue's instructions and lose the support of his supervisor, and maybe lose his job. He can follow Sue's instructions and be in violation of company policy. He can also report Sue's instructions to supervisors (plant superintendent or vice-president of production). The company should make the position of quality control inspector responsible to someone other than the department head. Fred should not report to Sue.

The following activities and cost drivers might be submitted:

(a)	Activities	(b)	Cost drivers
	Laundering		Pounds of linen
	Housekeeping		Square footage: number of beds
	Dietary		Number of meals
	Computing information technology		Minutes of computer usage; or number of work stations
	Nursing care		Number of patients
	Surgery		Number of procedures or operations
	Clinical lab		Number of tests
	Imaging (X-ray, etc.)		Number of images
	Pharmacy		Number of prescriptions
	Emergency room		Number of cases or patients
	Maintenance		Square footage
	Billing and collecting		Number of invoices

CHAPTER 22

Cost-Volume-Profit

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Distinguish between variable and fixed costs.	1, 2, 3, 6	1	1	1, 2, 3	1A	1B
2. Explain the significance of the relevant range.	4, 5	2	5			
3. Explain the concept of mixed costs.	6, 7, 8	1, 3, 4	6, 7	1, 2, 3	1A	1B
4. List the five components of cost-volume-profit analysis.	9		8, 9	4		
5. Indicate what contribution margin is and how it can be expressed.	10, 11	5		5, 7, 8	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
6. Identify the three ways to determine the break-even point.	12, 13, 14	6		5, 6, 7, 8, 9	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
7. Give the formulas for determining sales required to earn target net income.	16	7		9, 10	2A, 5A	2B, 5B
8. Define margin of safety, and give the formulas for computing it.	15	8		5, 6	2A, 4A, 5A	2B, 4B, 5B
9. Describe the essential features of a cost-volume-profit income statement.	17	9		11	2A, 4A	2B, 4B
*10. Explain the difference between absorption costing and variable costing.	18, 19	10		12, 13	6A	6B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Determine variable and fixed costs, compute break-even point, prepare a CVP graph, and determine net income.	Simple	20–30
2A	Prepare a CVP income statement, compute break-even point, contribution margin ratio, margin of safety ratio, and sales for target net income.	Moderate	30–40
3A	Compute break-even point under alternative courses of action.	Simple	20–30
4A	Compute break-even point and margin of safety ratio, and prepare CVP income statement before and after changes in business environment.	Moderate	20–30
5A	Compute break-even point and margin of safety ratio, and prepare a CVP income statement before and after changes in business environment.	Moderate	20–30
*6A	Prepare income statements under absorption and variable costing.	Moderate	30–40
1B	Determine variable and fixed costs, compute break-even point, prepare a CVP graph, and determine net income.	Simple	20–30
2B	Prepare a CVP income statement, compute break-even point, contribution margin ratio, margin of safety ratio, and sales for target net income.	Moderate	30–40
3B	Compute break-even point under alternative courses of action.	Simple	20–30
4B	Compute break-even point and margin of safety ratio, and prepare CVP income statement before and after changes in business environment.	Moderate	20–30
5B	Compute break-even point and margin of safety ratio, and prepare a CVP income statement before and after changes in business environment.	Moderate	20–30
*6B	Prepare income statements under absorption and variable costing.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 22
COST-VOLUME-PROFIT

Number	SO	BT	Difficulty	Time (min.)
BE1	1, 3	C	Simple	2–4
BE2	2	AN	Simple	4–6
BE3	3	AN	Simple	4–6
BE4	3	AP	Simple	4–6
BE5	5	AN	Simple	5–7
BE6	6	AP	Simple	4–6
BE7	7	AP	Simple	4–6
BE8	8	AP	Simple	2–4
BE9	9	AP	Simple	6–8
BE10	10	AN	Moderate	4–6
DI1	1, 3	C	Simple	4–6
DI2	3	AP	Simple	6–8
DI3	6	AP	Simple	4–6
DI4	8, 9	AP	Simple	8–10
EX1	1, 3	C	Simple	6–8
EX2	1, 3	AN	Simple	8–10
EX3	1, 3	C	Simple	6–8
EX4	4	K	Simple	5–7
EX5	5, 6, 8	AP	Simple	8–10
EX6	6, 8	AN	Simple	8–10
EX7	5, 6	AP	Simple	6–8
EX8	5, 6	AP	Simple	8–10
EX9	6, 7	AP	Simple	8–10
EX10	7	AP	Simple	6–8
EX11	9	AP	Simple	8–10
EX12	10	AP	Moderate	10–12
EX13	10	AP	Moderate	8–10
P1A	1, 3, 5, 6	AN	Simple	20–30
P2A	5–9	AN	Moderate	30–40

COST-VOLUME-PROFIT (Continued)

Number	SO	BT	Difficulty	Time (min.)
P3A	5, 6	E	Simple	20–30
P4A	6, 8, 9	E	Moderate	20–30
P5A	5–8	AN	Moderate	20–30
P6A	10	E	Moderate	30–40
P1B	1, 3, 5, 6	AN	Simple	20–30
P2B	5–9	AN	Moderate	30–40
P3B	5, 6	E	Simple	20–30
P4B	6, 8, 9	E	Moderate	20–30
P5B	5–8	AN	Moderate	20–30
P6B	10	E	Moderate	30–40
BYP1	1, 5, 6	AN	Moderate	10–15
BYP2	5, 6	E	Moderate	15–20
BYP3	1, 5	AP	Simple	10–15
BYP4	1	C	Simple	10–15
BYP5	5, 6	C	Simple	10–15
BYP6	—	E	Simple	10–15
BYP7	5, 6	E	Moderate	15–20

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Distinguish between variable and fixed costs.	E22-3	Q22-1 Q22-2 Q22-3 Q22-6 BE22-1 E22-1 E22-3		E22-2 P22-1A P22-1B		
2. Explain the significance of the relevant range.		Q22-4 Q22-5		BE22-2		
3. Explain the concept of mixed costs.		Q22-6 Q22-7 BE22-1 E22-1 E22-3	Q22-8 BE22-4 DI22-2	BE22-3 E22-2 P22-1A P22-1B		
4. List the five components of cost-volume-profit analysis.	E22-4	Q22-9				
5. Indicate what contribution margin is and how it can be expressed.		Q22-10	Q22-11 E22-5 E22-7	BE22-5 P22-1A P22-2A	P22-1B P22-2B	P22-3A P22-3B P22-5A
6. Identify the three ways to determine the break-even point.		Q22-12 Q22-14	Q22-13 BE22-6 DI22-3 E22-5	E22-6 P22-1A P22-2A	P22-1B P22-2B	P22-3A P22-4A P22-5A P22-5B
7. Give the formulas for determining sales required to earn target net income.			Q22-16 BE22-7 E22-9	P22-2A P22-2B		P22-5A P22-5B
8. Define margin of safety, and give the formulas for computing it.			Q22-15 BE22-8 DI22-4	E22-6 P22-2A P22-2B	P22-5A P22-5B	P22-4A P22-4B
9. Describe the essential features of a cost-volume-profit income statement.			Q22-17 BE22-9 DI22-4	P22-2A P22-2B		P22-4A P22-4B
*10. Explain the difference between absorption costing and variable costing.		Q22-18 Q22-19	E22-12 E22-13	BE22-10		P22-6A P22-6B
Broadening Your Perspective		Exploring the Web Communication	Real-World Focus	Decision Making Across the Organization		Managerial Analysis Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) Cost behavior analysis is the study of how specific costs respond to changes in the level of activity within a company.
(b) Cost behavior analysis is important to management in planning business operations and in deciding between alternative courses of action.
2. (a) The activity index identifies the activity that causes changes in the behavior of costs. Once the index is determined, it is possible to classify the behavior of costs in response to changes in activity levels into three categories: variable, fixed, or mixed.
(b) Variable costs may be defined in total or on a per-unit basis. Variable costs in total vary directly and proportionately with changes in the activity level. Variable costs per unit remain the same at every level of activity.
3. Fixed costs remain the same in total regardless of changes in the activity level. In contrast, fixed costs per unit vary inversely with activity. As volume increases, fixed costs per unit decline and vice versa.
4. (a) The relevant range is the range of activity that a company expects to operate during the year.
(b) Disagree. The behavior of both fixed and variable costs are linear only over a certain range of activity.
5. This is true. Most companies operate within the relevant range. Within this range, it is possible to establish a linear (straight-line) relationship for both variable and fixed costs. If a relevant range cannot be established, segregation of costs into fixed and variable becomes extremely difficult.
6. Apartment rent is fixed because the cost per month remains the same regardless of how much Ryan uses the apartment. Rent on a Hertz rental truck is a mixed or semivariable cost because the cost usually includes a per diem charge (a fixed cost) plus an activity charge based on miles driven (a variable cost).
7. For CVP analysis, mixed costs must be classified into their fixed and variable elements. One approach to the classification of mixed costs is the high-low method.
8. Variable cost per unit is \$1.20, or $(\$60,000 \div 50,000)$. At any level of activity, fixed costs are \$52,000 per month $[\$160,000 - (90,000 \times \$1.20)]$.
9. No. Only two of the basic components of cost-volume-profit (CVP) analysis, unit selling prices and variable cost per unit, relate to unit data. The other components, volume and total fixed costs, are not based on per-unit amounts.
10. There is no truth in Jill's statement. Contribution margin is sales less variable costs. It is the revenue that remains to cover fixed costs and to produce income (profit) for the company.
11. Contribution margin per unit is \$12 $(\$40 - \$28)$. The contribution margin ratio is 30% $(\$12 \div \$40)$.
12. Disagree. Knowledge of the break-even point is useful to management in deciding whether to introduce new product lines, change sales prices on established products, and enter new market areas.
13. $\$25,000 \div 25\% = \$100,000$

Questions Chapter 22 (Continued)

14. (a) The breakeven point involves the plotting of three lines over the full range of activity: the total revenue line, the total fixed cost line, and the total cost line. The breakeven point is determined at the intersection of the total revenue and total cost lines.
- (b) The breakeven point in units is obtained by drawing a vertical line from the breakeven point to the horizontal axis. The breakeven point in sales dollars is obtained by drawing a horizontal line from the breakeven point to the vertical axis.
15. Margin of safety is the difference between actual or expected sales and sales at the breakeven point. $1,250 \times \$12 = \$15,000$; $\$15,000 - \$12,000 = \$3,000$; $\$3,000 \div \$15,000 = 20\%$.

16. At breakeven sales, the contribution margin ratio is:

$$\frac{\$180,000}{\$600,000} = 30\%$$

The sales volume to achieve net income of \$60,000 is as follows:

$$\frac{\$180,000 + \$60,000}{.30} = \$800,000$$

17. MALLON COMPANY
CVP Income Statement

Sales	\$900,000
Variable expenses	
Cost of goods sold.....	\$350,000
Operating expenses	<u>140,000</u>
Total variable expenses	<u>490,000</u>
Contribution margin	<u>\$410,000</u>

- *18. Under absorption costing, both variable and fixed manufacturing costs are considered to be product costs. Under variable costing, only variable manufacturing costs are product costs and fixed manufacturing costs are expensed when incurred.
- *19. (a) The rationale for variable costing centers on the purpose of fixed manufacturing costs, which is to have productive facilities available for use. Since these costs are incurred whether a company operates at zero or 100% capacity, it is argued that they should be expensed when they are incurred. Variable costing is useful in product costing internally by management and it is useful in controlling manufacturing costs.
- (b) Variable costing cannot be used in product costing in financial statements prepared in accordance with generally accepted accounting principles because it does not comply with the matching principle and thus understates inventory costs.

SOLUTIONS TO BRIEF EXERCISES

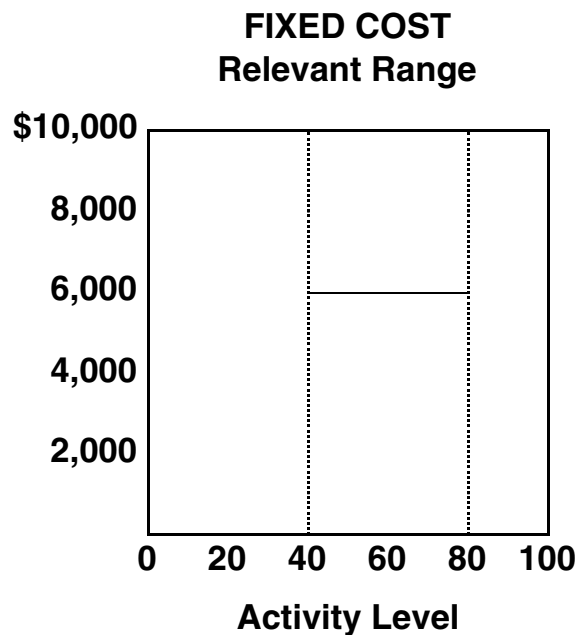
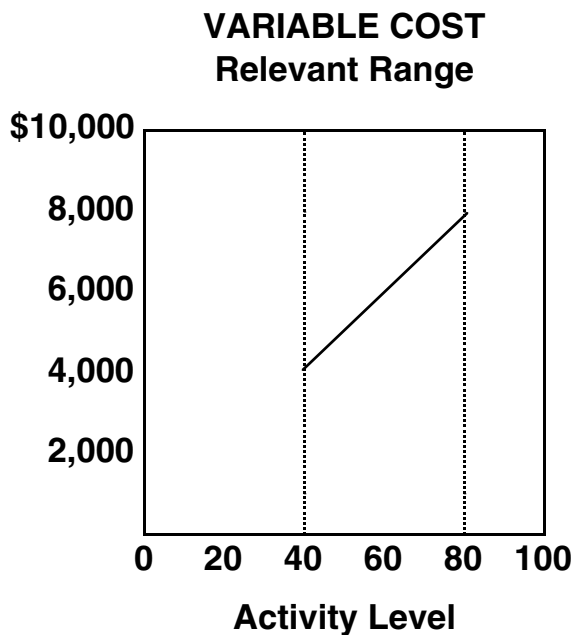
BRIEF EXERCISE 22-1

Indirect labor is a variable cost because it increases in total directly and proportionately with the change in the activity level.

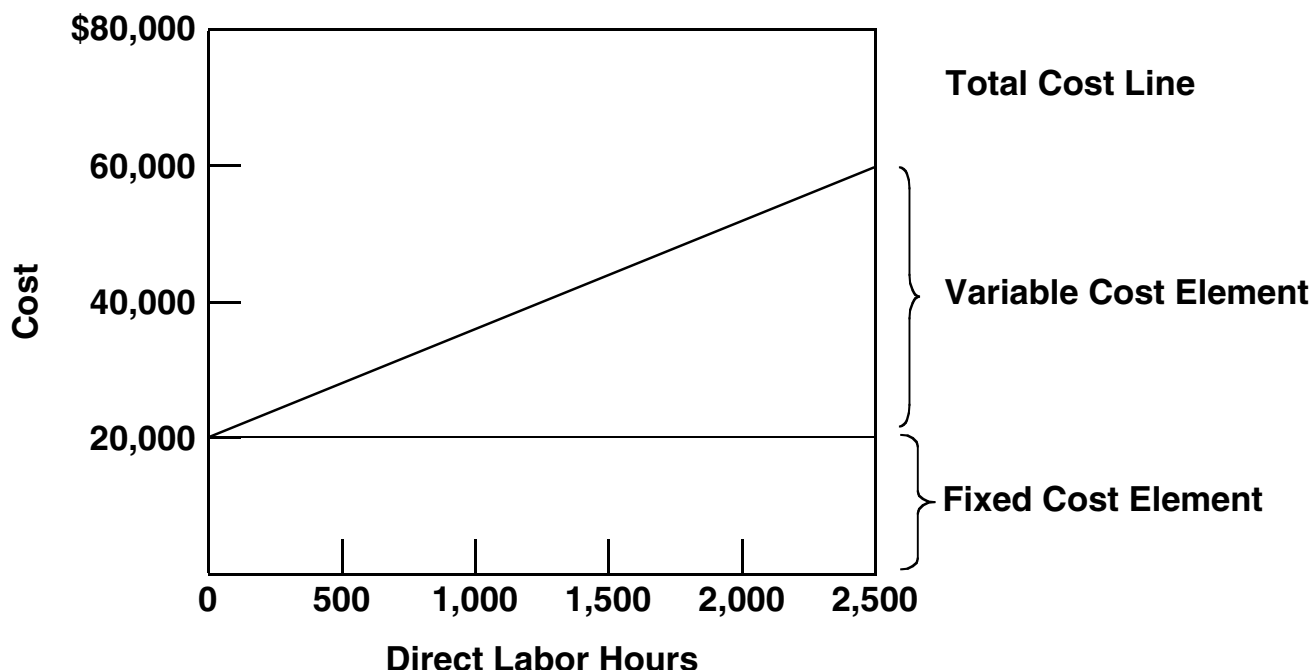
Supervisory salaries is a fixed cost because it remains the same in total regardless of changes in the activity level.

Maintenance is a mixed cost because it increases in total but not proportionately with changes in the activity level.

BRIEF EXERCISE 22-2



BRIEF EXERCISE 22-3



BRIEF EXERCISE 22-4

High	Low	Difference
\$15,000	\$13,600	\$1,400
8,500	7,500	1,000

$\$1,400 \div 1,000 = \$1.40$ —Variable cost per mile.

	High	Low
Total cost	\$15,000	\$13,600
Less: Variable costs		
8,500 X \$1.40	11,900	
7,500 X \$1.40		10,500
Total fixed costs	<u>\$ 3,100</u>	<u>\$ 3,100</u>

The mixed cost is \$3,100 plus \$1.40 per mile.

BRIEF EXERCISE 22-5

- (1) (a) $\$80 = (\$250 - \$170)$
(b) $32\% (\$80 \div \$250)$
- (2) (c) $\$300 = (\$500 - \$200)$
(d) $40\% (\$200 \div \$500)$
- (3) (e) $\$1,000 = (\$300 \div 30\%)$
(f) $\$700 (\$1,000 - \$300)$

BRIEF EXERCISE 22-6

- (a) $\$400Q = \$260Q + \$210,000 + \$0$
 $\$140Q = \$210,000$
 $Q = 1,500 \text{ units}$
- (b) Contribution margin per unit $\$140$, or $(\$400 - \$260)$
 $X = \$210,000 \div \$140$
 $X = 1,500 \text{ units}$

BRIEF EXERCISE 22-7

$$X = .70X + \$210,000 + \$60,000$$
$$.30X = \$270,000$$
$$X = \$900,000$$

If variable costs are 70% of sales, the contribution margin ratio is $(\$1 - \$0.70) \div \$1 = .30$. Then, $(\$210,000 + \$60,000) \div .30 = \$900,000$.

BRIEF EXERCISE 22-8

$$\text{Margin of safety} = \$1,200,000 - \$900,000 = \$300,000$$
$$\text{Margin of safety ratio} = \$300,000 \div \$1,200,000 = 25\%$$

BRIEF EXERCISE 22-9

DILTS MANUFACTURING INC.
Income Statement
For the Quarter Ended March 31, 2010

Sales.....		\$1,800,000
Variable expenses		
Cost of goods sold	\$760,000	
Selling expenses.....	95,000	
Administrative expenses.....	79,000	
Total variable expenses.....		<u>934,000</u>
Contribution margin.....		<u>866,000</u>
Fixed expenses		
Cost of goods sold	540,000	
Selling expenses.....	60,000	
Administrative expenses.....	66,000	
Total fixed expenses.....		<u>666,000</u>
Net income		<u>\$ 200,000</u>

BRIEF EXERCISE 22-10*MEMO**

To: Chief financial officer

From: Student

Re: Absorption and variable costing

Under absorption costing, fixed manufacturing overhead is a product cost, while under variable costing, fixed manufacturing overhead is a period cost (expensed as incurred).

Since units produced (50,000) exceeded units sold (47,000) last month, income under absorption costing will be higher than under variable costing. Some fixed overhead (3,000 units X \$3 = \$9,000) will be assigned to ending inventory and therefore not expensed under absorption costing, whereas all fixed overhead is expensed under variable costing. Therefore, absorption costing net income will be higher than variable costing net income by \$9,000.

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 22-1

Variable costs: Indirect labor, direct labor, and direct materials.

Fixed costs: Property taxes and depreciation.

Mixed costs: Utilities and maintenance.

DO IT! 22-2

(a) **Variable cost:** $(\$18,750 - \$16,200) \div (10,500 - 8,800) = \$1.50$ per unit

Fixed cost: $\$18,750 - (\$1.50 \times 10,500 \text{ units}) = \$3,000$
or $\$16,200 - (\$1.50 \times 8,800) = \$3,000$

(b) **Total cost to produce 8,500 units:** $\$3,000 + (\$1.50 \times 8,500) = \$15,750$

DO IT! 22-3

(a) The formula is $\$250Q = \$160Q + \$135,000$. Therefore, $90Q = \$135,000$, and the breakeven point in units is 1,500 ($\$135,000 \div \$90$).

(b) The contribution margin per unit is $\$90 (\$250 - \$160)$. The formula therefore is $\$135,000 \div \$90$, and the breakeven point in units is 1,500.

DO IT! 22-4

(a) **CM per unit = Unit selling price – Unit variable costs**

$$\$10 = \$30 - \$20$$

CM ratio = CM per unit/Unit selling price

$$33 \frac{1}{3}\% = \$10/\$30$$

Break-even point in dollars = Fixed costs $\div$ Contribution margin ratio

$$= \$200,000 \div 33 \frac{1}{3}\%$$

$$= \$600,000$$

DO IT! 22-4 (Continued)

$$\begin{aligned} \text{(b) Margin of safety} &= \frac{\text{Actual sales} - \text{Breakeven sales}}{\text{Actual sales}} \\ &= \frac{\$750,000 - \$600,000}{\$750,000} \\ &= 20\% \end{aligned}$$

$$\begin{aligned} \text{(c) Sales} &= \text{Variable costs} + \text{Fixed costs} + \text{Net income} \\ \$30Q &= \$20Q + \$200,000 + \$120,000 \\ \$10Q &= \$320,000 \\ Q &= 32,000 \text{ units} \\ 32,000 \text{ units} \times \$30 &= \$960,000 \text{ required sales} \end{aligned}$$

SOLUTIONS TO EXERCISES

EXERCISE 22-1

- (a) The determination as to whether a cost is variable, fixed, or mixed can be made by comparing the cost in total and on a per-unit basis at two different levels of production.

Variable Costs	Vary in total but remain constant on a per-unit basis.
Fixed Costs	Remain constant in total but vary on a per-unit basis.
Mixed Costs	Contain both a fixed element and a variable element. Vary both in total and on a per-unit basis.

- (b) Using these criteria as a guideline, the classification is as follows:

Direct materials	Variable	Rent	Fixed
Direct labor	Variable	Maintenance	Mixed
Utilities	Mixed	Supervisory salaries	Fixed

EXERCISE 22-2

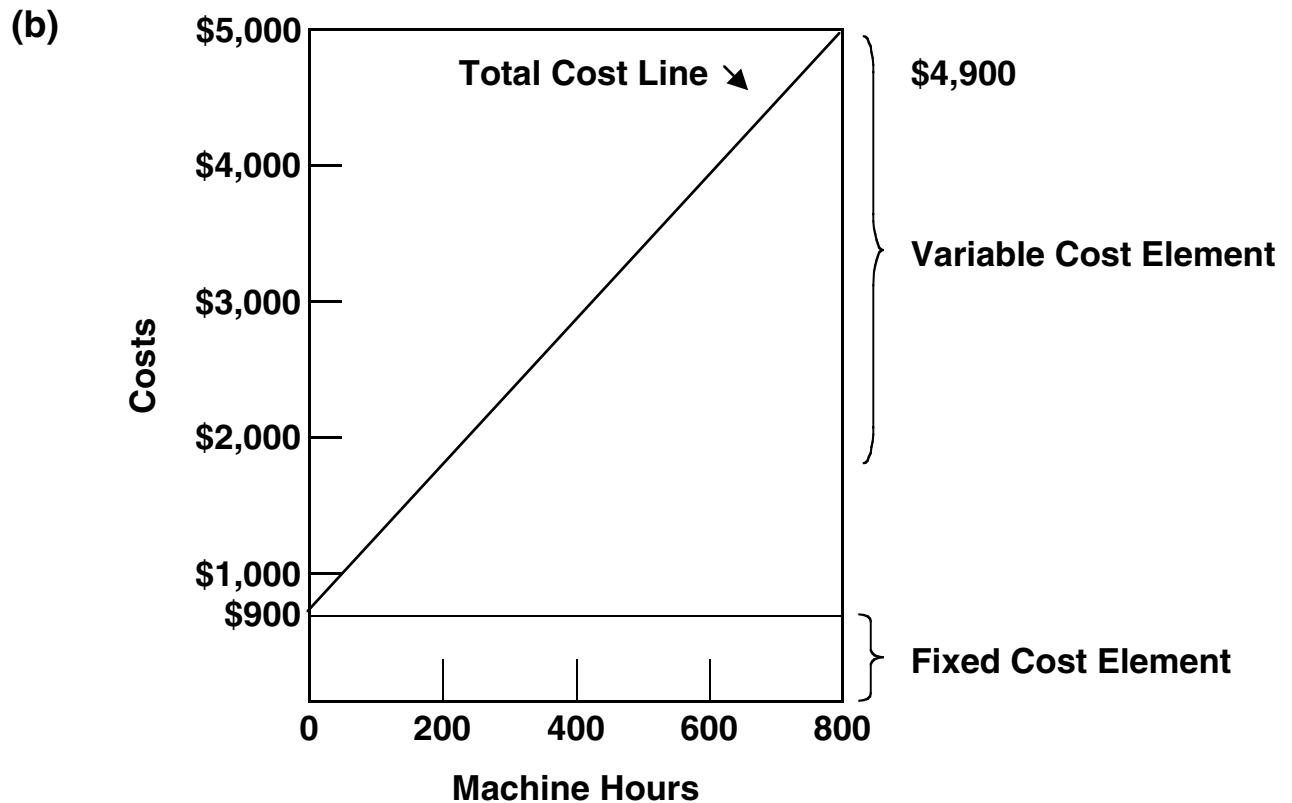
- (a) Maintenance Costs:

$$\frac{\$4,900 - \$2,400}{800 - 300} = \frac{\$2,500}{500} = \$5 \text{ variable cost per machine hour}$$

	800 Machine Hours	300 Machine Hours
Total costs	\$4,900	\$2,400
Less: Variable costs		
800 X \$5	4,000	
300 X \$5		1,500
Total fixed costs	<u>\$ 900</u>	<u>\$ 900</u>

Thus, maintenance costs are \$900 per month plus \$5 per machine hour.

EXERCISE 22-2 (Continued)



EXERCISE 22-3

1. Wood used in the production of furniture.	Variable.
2. Fuel used in delivery trucks.	Variable.
3. Straight-line depreciation on factory building.	Fixed.
4. Screws used in the production of furniture.	Variable.
5. Sales staff salaries.	Fixed.
6. Sales commissions.	Variable.
7. Property taxes.	Fixed.
8. Insurance on buildings.	Fixed.
9. Hourly wages of furniture craftsmen.	Variable.
10. Salaries of factory supervisors.	Fixed.
11. Utilities expense.	Mixed.
12. Telephone bill.	Mixed.

EXERCISE 22-4

MEMO

To: Jim Thome
From: Student
Re: Assumptions underlying CVP analysis

CVP analysis is a useful tool in analyzing the effects of changes in costs and volume on a company's profits. However, there are some assumptions which underline CVP analysis. When these assumptions are not valid, the results of CVP analysis may be inaccurate.

The five assumptions are:

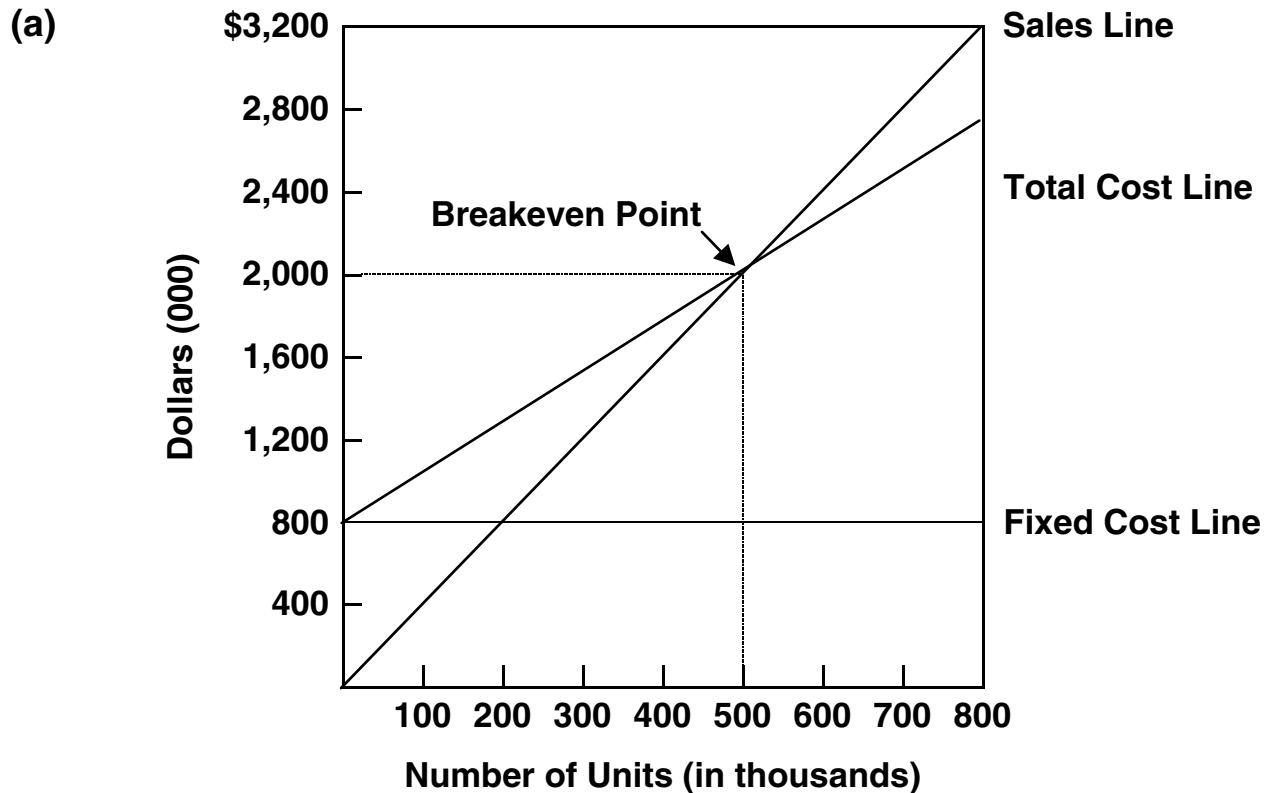
1. The behavior of both costs and revenues is linear throughout the relevant range of the activity index.
2. All costs can be classified with reasonable accuracy as either fixed or variable.
3. Changes in activity are the only factors that affect costs.
4. All units produced are sold.
5. When more than one type of product is sold, the sales mix will remain constant.

If you want further explanation of any of these assumptions, please contact me.

EXERCISE 22-5

- (a) Contribution margin (in dollars): $\text{Sales} = (2,700 \times \$30) = \$81,000$
 $\text{Variable costs} = \$81,000 \times .70 = \underline{56,700}$
 $\text{Contribution margin} = \underline{\underline{\$24,300}}$
- Variable cost (per unit): $\$30 \times .70 = \$21.$
Contribution margin (per unit): $\$30 - \$21 (\$30 \times 70\%) = \$9.$
Contribution margin (ratio): $\$9 \div \$30 = 30\%.$
- (b) Breakeven sales (in dollars): $\frac{\$18,000}{30\%} = \$60,000.$
- Breakeven sales (in units): $\frac{\$18,000}{\$9} = 2,000 \text{ units}.$
- (c) Margin of safety (in dollars): $\$81,000 - \$60,000 = \$21,000.$
Margin of safety (ratio): $\$21,000 \div \$81,000 = 26\%(\text{rounded}).$

EXERCISE 22-6



(b) (1) Breakeven sales in units:

$$\begin{aligned} \$4X &= \$2.40X + \$800,000 \\ \$1.60X &= \$800,000 \\ X &= 500,000 \text{ units} \end{aligned}$$

(2) Breakeven sales in dollars:

$$\begin{aligned} X &= .60X + \$800,000 \\ .40X &= \$800,000 \\ X &= \$2,000,000 \end{aligned}$$

(c) (1) Margin of safety in dollars: $\$2,500,000 - \$2,000,000 = \$500,000$

(2) Margin of safety ratio: $\$500,000 \div \$2,500,000 = 20\%$

EXERCISE 22-7

$$\begin{aligned}\text{(a) Unit contribution margin} &= \frac{\text{Fixed costs}}{\text{Breakeven sales in units}} \\ &= \frac{\$105,000}{(\$350,000 \div \$7)} \\ &= \$2.10\end{aligned}$$

$$\begin{aligned}\text{Variable cost per unit} &= \text{Unit selling price} - \text{Unit contribution margin} \\ &= \$7.00 - \$2.10 \\ &= \$4.90\end{aligned}$$

OR

$$\begin{aligned}50,000 \times \$7.00 &= 50,000X + \$105,000 \\ \text{where } X &= \text{Variable cost per unit} \\ \text{Variable cost per unit} &= \$4.90\end{aligned}$$

$$\text{Contribution margin ratio} = \$2.10 \div \$7.00 = 30\%$$

$$\begin{aligned}\text{(b) Fixed costs} &= \text{Breakeven sales in units} \times \text{Unit contribution margin} \\ &= (\$420,000 \div \$7.00) \times \$2.10 \\ &= \$126,000\end{aligned}$$

OR

$$\begin{aligned}\text{Fixed costs} &= \text{Breakeven sales} \times \text{Contribution margin ratio} \\ &= \$420,000 \times 30\% \\ &= \$126,000\end{aligned}$$

Since fixed costs were \$105,000 in 2010, the increase in 2011 is \$21,000 (\$126,000 – \$105,000).

EXERCISE 22-8

(a)

NIU COMPANY
CVP Income Statement
For the Month Ended September 30, 2010

	<u>Total</u>	<u>Per Unit</u>
Sales (620 video game consoles)	\$248,000	\$400
Variable costs	<u>167,400</u>	<u>270</u>
Contribution margin	80,600	<u>\$130</u>
Fixed costs	<u>52,000</u>	
Net income.....	<u>\$ 28,600</u>	

- (b) Sales = Variable costs + Fixed costs
 \$400X = \$270X + \$52,000
 \$130X = 52,000
 X = 400 units

(c)

NIU COMPANY
CVP Income Statement
For the Month Ended September 30, 2010

	<u>Total</u>	<u>Per Unit</u>
Sales (400 video game consoles).....	\$160,000	\$400
Variable costs	<u>108,000</u>	<u>270</u>
Contribution margin.....	52,000	<u>\$130</u>
Fixed costs.....	<u>52,000</u>	
Net income	<u>\$ -0-</u>	

EXERCISE 22-9

- (a) Sales = Variable cost + Fixed cost + Target net income
 \$150X = \$90X + \$570,000 + \$150,000
 \$60X = \$720,000
 X = 12,000 units

EXERCISE 22-9 (Continued)

OR

$$\text{Units sold in 2010} = \frac{\$570,000 + \$150,000}{\$150 - \$90} = \underline{12,000} \text{ units}$$

$$(b) \text{ Units needed in 2011} = \frac{\$570,000 + \$210,000^*}{\$150 - \$90} = \underline{13,000} \text{ units}$$

$$*\$150,000 + \$60,000 = \$210,000$$

$$(c) \frac{\$570,000 + \$210,000}{X - \$90} = 12,000 \text{ units, where } X = \text{new selling price}$$

$$\$780,000 = 12,000X - \$1,080,000$$

$$\$1,860,000 = 12,000X$$

$$X = \underline{\$155}$$

EXERCISE 22-10

(1) Unit sales price = $\$350,000 \div 5,000 \text{ units} = \$70$
Increase selling price to \$77, or $(\$70 \times 110\%)$.
Net income = $\$385,000 - \$210,000 - \$90,000 = \$85,000$.

(2) Reduce variable costs to 55% of sales.
Net income = $\$350,000 - \$192,500 - \$90,000 = \$67,500$.

(3) Reduce fixed costs to \$80,000, or $(\$90,000 - \$10,000)$.
Net income = $\$350,000 - \$210,000 - \$80,000 = \$60,000$.

Alternative 1, increasing selling price, will produce the highest net income.

EXERCISE 22-11

POLZIN COMPANY
CVP Income Statement (Current)
For the Year Ended December 31, 2010

	<u>Total</u>	<u>Per Unit</u>
Sales (60,000 X \$25)	\$1,500,000	\$25
Variable expenses (60,000 X \$14)	<u>840,000</u>	<u>14</u>
Contribution margin	660,000	<u>\$11</u>
Fixed expenses	<u>500,000</u>	
Net income	<u>\$ 160,000</u>	

POLZIN COMPANY
CVP Income Statement (with changes)
For the Year Ended December 31, 2010

	<u>Total</u>	<u>Per Unit</u>
Sales [64,200 units (1) X \$23.60 (2)]	\$1,515,120	\$23.60
Variable expenses [64,200 X \$11.20 (3)]	<u>719,040</u>	<u>11.20</u>
Contribution margin (64,200 X \$12.40)	796,080	<u>\$12.40</u>
Fixed expenses (\$500,000 + \$60,000)	<u>560,000</u>	
Net income	<u>\$ 236,080</u>	

(1) (60,000 X 107%).

(2) \$25.00 – (\$2.80 X 50%) = \$23.60.

(3) \$14.00 – (\$14 X 20%) = \$11.20.

***EXERCISE 22-12**

(a)	<u>Type of Cost</u> <u>Manufacturing Cost per Unit</u>	<u>Variable Costing</u>
	Direct materials	\$1,000
	Direct labor	1,500
	Variable manufacturing overhead	300
	Fixed manufacturing overhead	<u>0</u>
	Total cost	<u>\$2,800</u>

***EXERCISE 22-12 (Continued)**

(b) TITUS EQUIPMENT COMPANY
Income Statement
For the Year Ended December 31, 2010
(Variable Costing)

Sales (1,300 X \$4,500)		\$5,850,000
Variable expenses		
Variable cost of goods sold		
Inventory, January 1	\$ 0	
Variable manufacturing costs.....	<u>4,200,000</u>	(1)
Cost of goods available for sale.....	4,200,000	
Inventory, December 31	<u>560,000</u>	(2)
Variable cost of goods sold	3,640,000	
Variable selling and administrative expenses	<u>91,000</u>	(3)
Total variable expenses.....		<u>3,731,000</u>
Contribution margin		2,119,000
Fixed expenses		
Manufacturing overhead.....	1,400,000	
Selling and administrative expenses	<u>100,000</u>	
Total fixed expenses		<u>1,500,000</u>
Income from operations.....		<u>\$ 619,000</u>

(1) 1,500 X \$2,800

(2) 200 X \$2,800

(3) 1,300 X \$70

***EXERCISE 22-13**

(a)

COWELL CORPORATION
Income Statement
For the Month Ended October 31, 2010
(Absorption Costing)

Sales (20,000 X \$50)	\$1,000,000
Cost of goods sold (20,000 X \$34*)	<u>680,000</u>
Gross profit	320,000
Fixed costs	<u>30,000</u>
Net income	<u><u>\$ 290,000</u></u>

***\$10 + \$8 + \$6 + (\$250,000 ÷ 25,000)**

(b)

COWELL CORPORATION
Income Statement
For the Month Ended October 31, 2010
(Variable Costing)

Sales (20,000 X \$50)	\$1,000,000
Cost of goods sold (20,000 X \$24)	<u>480,000</u>
Contribution margin	520,000
Fixed costs (\$250,000 + \$30,000)	<u>280,000</u>
Net income	<u><u>\$ 240,000</u></u>

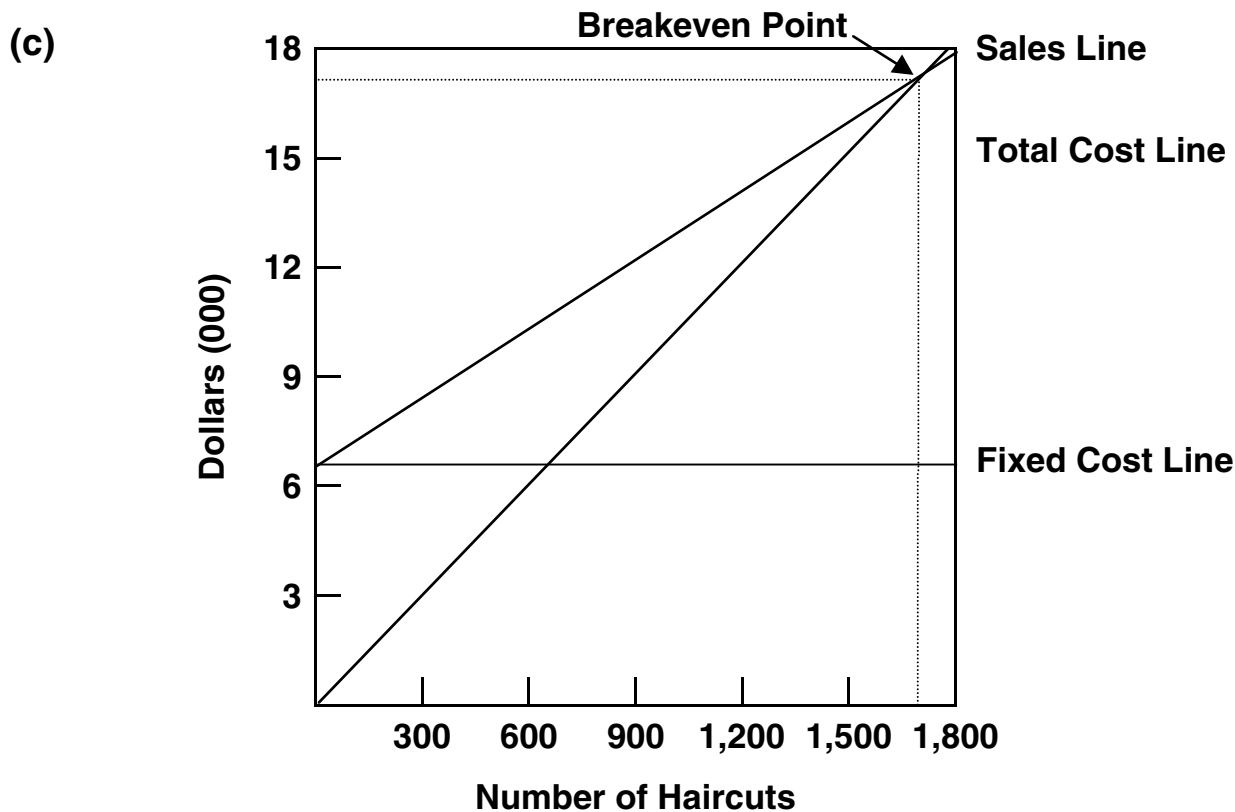
- (c) Under variable costing, all fixed manufacturing costs (\$250,000) are expensed. Under absorption costing, some of the fixed manufacturing costs have been deferred to a later period [5,000 X (\$250,000/25,000) = \$50,000].**

SOLUTIONS TO PROBLEMS

PROBLEM 22-1A

(a) Variable costs (per haircut)		Fixed costs (per month)	
Barbers' commission	\$5.50	Barbers' salaries	\$5,000
Barber supplies	.30	Manager's extra salary	500
Utilities	.20	Advertising	200
Total variable cost per haircut	<u>\$6.00</u>	Rent	900
		Utilities	175
		Magazines	25
		Total fixed	<u>\$6,800</u>

(b) $\$10.00X = \$6.00X + \$6,800$ $1,700 \text{ haircuts} \times \$10 = \$17,000$
 $\$ 4.00X = \$6,800$
 $X = 1,700 \text{ haircuts}$



(d) $\text{Net income} = \$19,000 - [(\$6.00 \times 1,900) + \$6,800]$
 $= \$800$

(a)

UTECH COMPANY
CVP Income Statement (Estimated)
For the Year Ending December 31, 2010

Net sales		\$1,800,000
Variable expenses		
Cost of goods sold	\$1,098,000*	
Selling expenses	70,000	
Administrative expenses	<u>20,000</u>	
Total variable expenses		<u>1,188,000</u>
Contribution margin		612,000
Fixed expenses		
Cost of goods sold	283,000	
Selling expenses	65,000	
Administrative expenses	<u>60,000</u>	
Total fixed expenses		<u>408,000</u>
Net income		<u>\$ 204,000</u>

*Direct materials \$430,000 + direct labor \$352,000 + variable manufacturing overhead \$316,000.

(b) Variable costs = 66% of sales (\$1,188,000 ÷ \$1,800,000) or \$.33 per bottle (\$.50 X 66%). Total fixed costs = \$408,000.

$$\begin{aligned}
 (1) \quad & \$.50X = \$.33X + \$408,000 \\
 & \$.17X = \$408,000 \\
 & X = 2,400,000 \text{ units}
 \end{aligned}$$

$$(2) \quad 2,400,000 \times \$.50 = \$1,200,000$$

(c) Contribution margin ratio = $(\$.50 - \$.33) \div \$.50$
= 34%

Margin of safety ratio = $(\$1,800,000 - \$1,200,000) \div \$1,800,000$
= 33% (rounded)

(d) Required sales

$$X = \frac{\$408,000 + \$238,000}{.34} = \$1,900,000$$

PROBLEM 22-3A

- (a) Sales were \$2,400,000, variable expenses were \$1,560,000 (65% of sales), and fixed expenses were \$980,000. Therefore, the breakeven point in dollars is:

$$\frac{\$980,000}{.35} = \$2,800,000$$

- (b) (1) The effect of this alternative is to increase the selling price per unit to \$4.80 (\$4 X 120%). Total sales become \$2,880,000 (600,000 X \$4.80). Thus, the contribution margin ratio changes to 46% [(\$2,880,000 – \$1,560,000) ÷ \$2,880,000]. The new breakeven point is:

$$\frac{\$980,000}{.46} = \$2,130,435 \text{ (rounded)}$$

- (2) The effects of this alternative are to change total fixed costs to \$890,000 (\$980,000 – \$90,000) and to change the contribution margin to 32% [(\$2,400,000 – \$1,560,000 – \$72,000) ÷ \$2,400,000]. The new breakeven point is:

$$\frac{\$890,000}{.32} = \$2,781,250 \text{ (rounded)}$$

- (3) The effects of this alternative are variable and fixed cost of goods sold become \$1,134,000 and \$966,000 respectively. As a result, total variable cost becomes \$1,254,000 (\$1,134,000 + \$72,000 + \$48,000) and total fixed cost becomes \$1,286,000 (\$966,000 + \$168,000 + \$152,000). The new breakeven point is:

$$\begin{aligned} X &= (\$1,254,000 \div \$2,400,000)X + \$1,286,000 \\ X &= .52X + \$1,286,000 \\ .48X &= \$1,286,000 \\ X &= \$2,679,167 \text{ (rounded)} \end{aligned}$$

Alternative 1 is the recommended course of action because it has the lowest breakeven point.

PROBLEM 22-4A

- (a) Current breakeven point: $\$40X = \$22X + \$270,000$
(where X = pairs of shoes)

$$\begin{aligned} \$18X &= \$270,000 \\ X &= 15,000 \text{ pairs of shoes} \end{aligned}$$

New breakeven point: $\$38X = \$22X + (\$270,000 + \$34,000)$
 $\$16X = \$304,000$
 $X = 19,000 \text{ pairs of shoes}$

(b) Current margin of safety percentage = $\frac{(20,000 \times \$40) - (15,000 \times \$40)}{(20,000 \times \$40)}$
= 25%

New margin of safety percentage = $\frac{(24,000 \times \$38) - (19,000 \times \$38)}{(24,000 \times \$38)}$
= 21% (rounded)

(c) **VALUE SHOE STORE**
CVP Income Statement

	Current	New	
Sales (20,000 X \$40)	\$800,000	\$912,000	(24,000 X \$38)
Variable expenses (20,000 X \$22)	440,000	528,000	(24,000 X \$22)
Contribution margin	360,000	384,000	
Fixed expenses	270,000	304,000	
Net income	<u>\$ 90,000</u>	<u>\$ 80,000</u>	

The proposed changes will raise the breakeven point 4,000 units. This is a significant increase. Margin of safety is 4% lower and net income is \$10,000 lower. The recommendation is to not accept the proposed changes.

PROBLEM 22-5A

(a) (1)

	<u>Current Year</u>
Net sales	\$1,600,000
Variable costs	
Direct materials	511,000
Direct labor	285,000
Manufacturing overhead (\$360,000 X .70)	252,000
Selling expenses (\$240,000 X .40)	96,000
Administrative expenses (\$280,000 X .20)	56,000
Total variable costs	<u>1,200,000</u>
Contribution margin	<u>\$ 400,000</u>

	<u>Current Year</u>		<u>Projected Year</u>
Sales	\$1,600,000	X 1.1	\$1,760,000
Variable costs			
Direct materials	511,000	X 1.1	562,100
Direct labor	285,000	X 1.1	313,500
Manufacturing overhead	252,000	X 1.1	277,200
Selling expenses	96,000	X 1.1	105,600
Administrative expenses	56,000	X 1.1	61,600
Total variable costs	<u>1,200,000</u>	X 1.1	<u>1,320,000</u>
Contribution margin	<u>\$ 400,000</u>	X 1.1	<u>\$ 440,000</u>

(2)	<u>Current Year</u>	<u>Projected Year</u>
Fixed Costs		
Manufacturing overhead (\$360,000 X .30)	\$108,000	\$108,000
Selling expenses (\$240,000 X .60)	144,000	144,000
Administrative expenses (\$280,000 X .80)	<u>224,000</u>	<u>224,000</u>
Total fixed costs	<u>\$476,000</u>	<u>\$476,000</u>

PROBLEM 22-5A (Continued)

- (b) Unit selling price = $\$1,600,000 \div 100,000 = \$16$
 Unit variable cost = $\$1,200,000 \div 100,000 = \$12$
 Unit contribution margin = $\$16 - \$12 = \$4$
 Contribution margin ratio = $\$4 \div \$16 = .25$

$$\begin{array}{lcl} \text{Break-even point in units} & = & \text{Fixed costs} \div \text{Unit contribution margin} \\ 119,000 \text{ units} & = & \$476,000 \div \$4 \end{array}$$

$$\begin{array}{lcl} \text{Break-even point in dollars} & = & \text{Fixed costs} \div \text{Contribution margin ratio} \\ \$1,904,000 & = & \$476,000 \div .25 \end{array}$$

- (c) Sales dollars
 required for target net income = $(\text{Fixed costs} + \text{Target net income}) \div \text{Contribution margin ratio}$

$$\$3,144,000 = (\$476,000 + \$310,000) \div .25$$

- (d) Margin of safety ratio = $(\text{Expected sales} - \text{Break-even sales}) \div \text{Expected sales}$

$$39.4\% = (\$3,144,000 - \$1,904,000) \div \$3,144,000$$

- (e) (1)

	<u>Projected Year</u>
Net sales	\$1,600,000
Variable costs	
Direct materials	511,000
Direct labor (\$285,000 – \$104,000)	181,000
Manufacturing overhead (\$360,000 X .30)	108,000
Selling expenses (\$240,000 X .90)	216,000
Administrative expenses (\$280,000 X .20)	56,000
Total variable costs	<u>1,072,000</u>
Contribution margin	<u>\$ 528,000</u>

PROBLEM 22-5A (Continued)

(2) Contribution margin ratio = $\$528,000 \div \$1,600,000 = .33$

(3) Break-even point in dollars = $\$500,000 \div .33 = \$1,515,152$ (rounded)

Fixed cost

Manufacturing overhead ($\$360,000 \times .70$)	\$252,000
Selling expenses ($\$240,000 \times .10$)	24,000
Administrative expenses ($\$280,000 \times .80$)	<u>224,000</u>
Total fixed costs	<u>\$500,000</u>

The break-even point in dollars declined from \$1,904,000 to \$1,515,152. This means that overall the company's risk has declined because it doesn't have to generate as much in sales. The two changes actually had opposing effects on the break-even point. By changing to a more commission based approach to compensate its sales staff the company reduced its fixed costs, and therefore reduced its break-even point. In contrast, the purchase of the new equipment increased the company's fixed costs (by increasing its equipment depreciation) and reduced its variable direct labor cost, both of which would increase the break-even point.

(a)

TLR COMPANY
Income Statement
For the Year Ended December 31
(Variable Costing)

	<u>2010</u>	<u>2011</u>
Sales.....	<u>\$5,000,000</u>	<u>\$6,000,000</u>
Variable expenses		
Variable cost of goods sold		
Inventory, January 1.....	0	150,000
Variable manufacturing costs	<u>900,000</u> (1)	<u>750,000</u> (4)
Cost of goods available for sale.....	900,000	900,000
Inventory, December 31	<u>150,000</u> (2)	<u>0</u>
Variable cost of goods sold.....	750,000	900,000
Variable selling expenses	<u>500,000</u> (3)	<u>600,000</u> (5)
Total variable expenses	<u>1,250,000</u>	<u>1,500,000</u>
Contribution margin.....	<u>3,750,000</u>	<u>4,500,000</u>
Fixed expenses		
Manufacturing overhead.....	2,100,000	2,100,000
Administrative.....	<u>500,000</u>	<u>500,000</u>
Total fixed expenses	<u>2,600,000</u>	<u>2,600,000</u>
Income from operations	<u>\$1,150,000</u>	<u>\$1,900,000</u>

2010 Computations

- (1) $6,000 \times \$1,000 \times .15$
(2) $1,000 \times \$1,000 \times .15$
(3) $5,000 \times \$1,000 \times .10$

2011 Computations

- (4) $5,000 \times \$1,000 \times .15$
(5) $6,000 \times \$1,000 \times .10$

***PROBLEM 22-6A (Continued)**

(b)

TLR COMPANY
Income Statement
For the Year Ended December 31
(Absorption Costing)

	<u>2010</u>	<u>2011</u>
Sales	<u>\$5,000,000</u>	<u>\$6,000,000</u>
Cost of goods sold		
Inventory, January 1	0	500,000
Cost of goods manufactured	<u>3,000,000</u> (1)	<u>2,850,000</u> (3)
Cost of goods available for sale	3,000,000	3,350,000
Inventory, December 31	<u>500,000</u> (2)	0
Cost of goods sold	<u>2,500,000</u>	<u>3,350,000</u>
Gross profit	<u>2,500,000</u>	<u>2,650,000</u>
Operating expenses		
Selling expenses	500,000	600,000
Administrative expenses	<u>500,000</u>	<u>500,000</u>
Total operating expenses	<u>1,000,000</u>	<u>1,100,000</u>
Income from operations	<u>\$1,500,000</u>	<u>\$1,550,000</u>

<u>2010 Computations</u>	<u>2011 Computations</u>
(1) $6,000 \times [(\$1,000 \times .15) + (\$2,100,000 \div 6,000)]$	(3) $5,000 \times [(\$1,000 \times .15) + (\$2,100,000 \div 5,000)]$
(2) $1,000 \times [(\$1,000 \times .15) + (\$2,100,000 \div 6,000)]$	

(c) The variable costing and the absorption costing income from operations can be reconciled as follows:

	<u>2010</u>	<u>2011</u>
Variable costing income	\$1,150,000	\$1,900,000
Fixed manufacturing overhead expensed with variable costing	\$2,100,000	\$2,100,000
Less: Fixed manufacturing overhead expensed with absorption costing	<u>(1,750,000)⁽¹⁾</u>	<u>(2,450,000)⁽²⁾</u>
Difference	<u>350,000</u>	<u>(350,000)</u>
Absorption costing income	<u>\$1,500,000</u>	<u>\$1,550,000</u>

⁽¹⁾In 2010, with absorption costing \$1,750,000 $\left(\$2,100,000 \times \frac{5,000 \text{ units sold}}{6,000 \text{ units manufactured}} \right)$ of the fixed manufacturing overhead is expensed as part of cost of goods sold, and \$350,000 $\left(\$2,100,000 \times \frac{1,000 \text{ units in inventory}}{6,000 \text{ units manufactured}} \right)$ is included in the ending inventory.

***PROBLEM 22-6A (Continued)**

⁽²⁾In 2011, with absorption costing \$2,450,000 of fixed manufacturing overhead is expensed as part of cost of goods sold. This includes the fixed manufacturing overhead for 2011 of \$2,100,000 plus \$350,000 of fixed manufacturing overhead from 2010 that was included in the beginning inventory for 2011.

- (d) Income is more sensitive to change in sales under variable costing as seen in the increase in income from operations in 2011 when 1,000 additional units were sold. In contrast, under absorption costing, income is also strongly influenced by production as seen in the higher income from operations in 2010 when production exceeded sales by 1,000 units.

PROBLEM 22-1B

(a) Variable costs (per haircut)

Barbers' commission	\$2.00
Rent	.60
Barber supplies	.40
Total variable	<u>\$3.00</u>

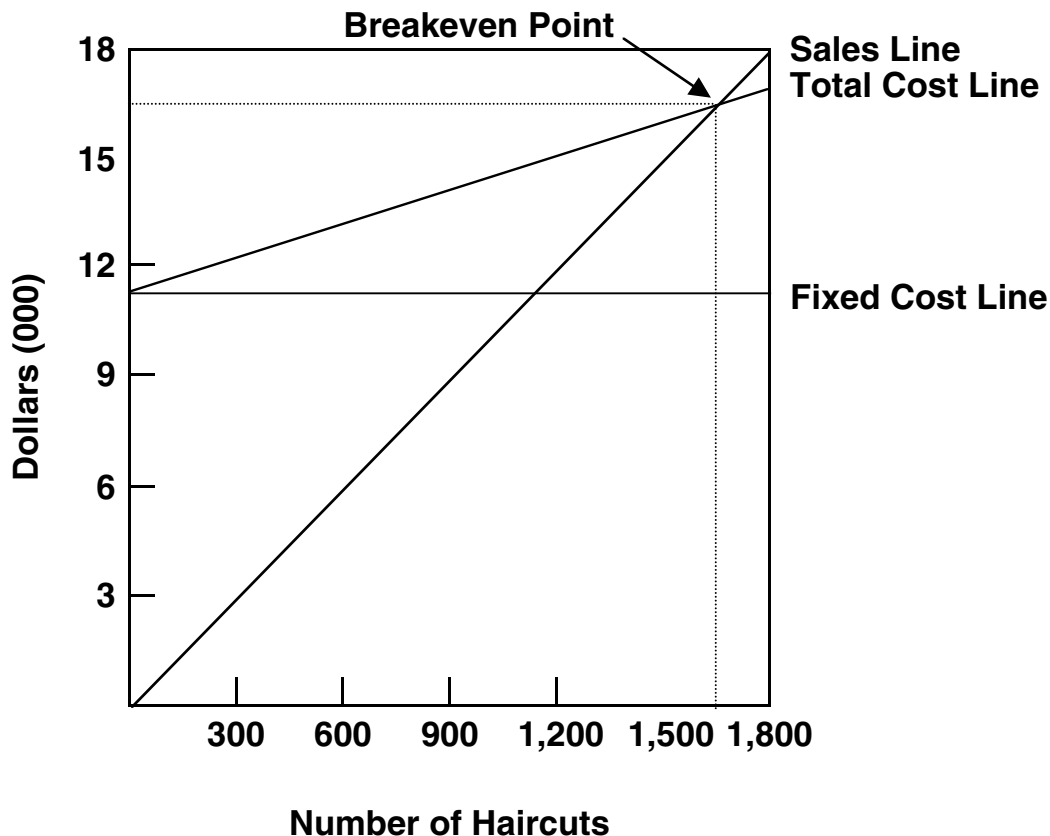
Fixed costs (per month)

Barbers' salaries	\$ 9,600
Rent	700
Depreciation	500
Utilities	300
Advertising	100
Total fixed	<u>\$11,200</u>

(b) $\$10X = \$3X + \$11,200$
 $\$7X = \$11,200$
 $X = 1,600 \text{ haircuts}$

$1,600 \text{ haircuts} \times \$10 = \$16,000$

(c)



(d) Net income = $\$17,000 - [(\$3.00 \times 1,700) + \$11,200]$
= \$700

(a)

HUBER COMPANY
CVP Income Statement (Estimated)
For the Year Ending December 31, 2010

Net sales		\$2,000,000
Variable expenses		
Cost of goods sold	\$1,080,000 (1)	
Selling expenses	80,000	
Administrative expenses	40,000	
Total variable expenses		<u>1,200,000</u>
Contribution margin		800,000
Fixed expenses		
Cost of goods sold	280,000	
Selling expenses	150,000	
Administrative expenses	70,000	
Total fixed expenses		<u>500,000</u>
Net income		<u>\$ 300,000</u>

(1) Direct materials \$360,000 + direct labor \$450,000 + variable manufacturing overhead \$270,000.

(b) Variable costs = 60% of sales (\$1,200,000 ÷ \$2,000,000) or \$.30 per bottle (\$.50 X 60%). Total fixed costs = \$500,000.

$$\begin{aligned}
 (1) \quad & \$.50X = \$.30X + \$500,000 \\
 & \$.20X = \$500,000 \\
 & X = 2,500,000 \text{ units (breakeven)}
 \end{aligned}$$

$$(2) \quad 2,500,000 \times \$.50 = \$1,250,000$$

(c) Contribution margin ratio = $(\$.50 - \$.30) \div \$.50$
= 40%

$$\begin{aligned}
 \text{Margin of safety ratio} &= (\$2,000,000 - \$1,250,000) \div \$2,000,000 \\
 &= 37.5\%
 \end{aligned}$$

(d) Required sales

$$X = \frac{\$500,000 + \$390,000}{.40} = \$2,225,000$$

PROBLEM 22-3B

- (a) Sales were \$1,500,000 and variable expenses were \$1,050,000, which means contribution margin was \$450,000 and CM ratio was 30%. Fixed expenses were \$840,000. Therefore, the breakeven point in dollars is:

$$\frac{\$840,000}{.30} = \$2,800,000$$

- (b) (1) The effect of this alternative is to increase the selling price per unit to \$35 (\$25 X 140%). Total sales become \$2,100,000 (60,000 X \$35). Thus, the contribution margin ratio changes to 50% (\$1,050,000 ÷ \$2,100,000). The new breakeven point is:

$$\frac{\$840,000}{.50} = \$1,680,000$$

- (2) The effects of this alternative are to change total fixed costs to \$670,000 (\$840,000 – \$170,000) and to change the contribution margin to .26 [(\$1,500,000 – \$1,050,000 – \$60,000) ÷ \$1,500,000]. The new breakeven point is:

$$\frac{\$670,000}{.26} = \$2,576,923$$

- (3) The effects of this alternative are: (1) variable and fixed cost of goods sold become \$675,000 each, (2) total variable costs become \$795,000 (\$675,000 + \$65,000 + \$55,000), and (3) total fixed costs are \$1,095,000 (\$675,000 + \$355,000 + \$65,000). The new breakeven point is:

$$\begin{aligned} X &= (\$795,000 \div \$1,500,000)X + \$940,000 \\ X &= .53X + \$1,095,000 \\ .47X &= \$1,095,000 \\ X &= \$2,329,787 \text{ (rounded)} \end{aligned}$$

Alternative 1 is the recommended course of action using breakeven analysis because it has the lowest breakeven point.

PROBLEM 22-4B

- (a) Current breakeven point: $\$30X = \$15X + \$210,000$
(where X = pairs of shoes)

$$\begin{aligned}\$15X &= \$210,000 \\ X &= 14,000 \text{ pairs of shoes}\end{aligned}$$

$$\begin{aligned}\text{New breakeven point: } \$28X &= \$15X + (\$210,000 + \$24,000) \\ \$13X &= \$234,000 \\ X &= 18,000 \text{ pairs of shoes}\end{aligned}$$

$$\begin{aligned}\text{(b) Current margin of safety percentage} &= \frac{(16,000 \times \$30) - (14,000 \times \$30)}{(16,000 \times \$30)} \\ &= 12.5\%\end{aligned}$$

$$\begin{aligned}\text{New margin of safety percentage} &= \frac{(20,000 \times \$28) - (18,000 \times \$28)}{(20,000 \times \$28)} \\ &= 10\%\end{aligned}$$

(c)

PAYLESS SHOE STORE
CVP Income Statement

	<u>Current</u>	<u>New</u>	
Sales (16,000 X \$30)	\$480,000	\$560,000	(20,000 X \$28)
Variable expenses (16,000 X \$15)	<u>240,000</u>	<u>300,000</u>	(20,000 X \$15)
Contribution margin	240,000	260,000	
Fixed expenses	<u>210,000</u>	<u>234,000</u>	
Net income	<u>\$ 30,000</u>	<u>\$ 26,000</u>	

No, the changes should not be made because net income will be lower than the net income currently earned. In addition, the breakeven point would be higher by 4,000 units and the margin of safety percentage would decrease from 12.5% to 10%.

PROBLEM 22-5B

(a) (1)

	<u>Current Year</u>
Net sales	\$2,000,000
Variable costs	
Direct materials	600,000
Direct labor	340,000
Manufacturing overhead (\$480,000 X .20)	96,000
Selling expenses (\$400,000 X .30)	120,000
Administrative expenses (\$500,000 X .30)	150,000
Total variable costs	<u>1,306,000</u>
Contribution margin	<u>\$ 694,000</u>

	<u>Current Year</u>		<u>Projected Year</u>
Sales	\$2,000,000	X 1.2	\$2,400,000
Variable costs			
Direct materials	600,000	X 1.2	720,000
Direct labor	340,000	X 1.2	408,000
Manufacturing overhead	96,000	X 1.2	115,200
Selling expenses	120,000	X 1.2	144,000
Administrative expenses	150,000	X 1.2	180,000
Total variable costs	<u>1,306,000</u>	X 1.2	<u>1,567,200</u>
Contribution margin	<u>\$ 694,000</u>	X 1.2	<u>\$ 832,800</u>

(2)	<u>Current Year</u>	<u>Projected Year</u>
Fixed Costs		
Manufacturing overhead (\$480,000 X .80)	\$ 384,000	\$ 384,000
Selling expenses (\$400,000 X .70)	280,000	280,000
Administrative expenses (\$500,000 X .70)	350,000	350,000
Total fixed costs	<u>\$1,014,000</u>	<u>\$1,014,000</u>

PROBLEM 22-5B (Continued)

- (b) Unit selling price = $\$2,000,000 \div 100,000 = \$20.00$
 Unit variable cost = $\$1,306,000 \div 100,000 = \$13.06$
 Unit contribution margin = $\$20.00 - \$13.06 = \$6.94$
 Contribution margin ratio = $\$6.94 \div \$20.00 = .347$

$$\begin{array}{lcl} \text{Break-even point in units} & = & \text{Fixed costs} \div \text{Unit contribution margin} \\ 146,110^* \text{ units} & = & \$1,014,000 \div \$6.94 \end{array}$$

*Rounded

$$\begin{array}{lcl} \text{Break-even point in dollars} & = & \text{Fixed costs} \div \text{Contribution margin ratio} \\ \$2,922,190^* & = & \$1,014,000 \div .347 \end{array}$$

*Rounded

- (c) Sales dollars
 required for target net income = $(\text{Fixed costs} + \text{Target net income}) \div \text{Contribution margin ratio}$
 $\$4,000,000 = (\$1,014,000 + \$374,000) \div .347$

- (d) Margin of safety = $(\text{Expected sales} - \text{Break-even sales}) \div \text{Expected sales ratio}$
 $27\% = (\$4,000,000 - \$2,922,190) \div 4,000,000$

- (e) (1)

	<u>Projected Year</u>
Net sales	\$2,000,000
Variable costs	
Direct materials	600,000
Direct labor (\$340,000 – \$140,000)	200,000
Manufacturing overhead (\$480,000 X .10)	48,000
Selling expenses (\$400,000 X .80)	320,000
Administrative expenses (\$500,000 X .30)	150,000
Total variable costs	<u>1,318,000</u>
Contribution margin	<u>\$ 682,000</u>

PROBLEM 22-5B (Continued)

(2) Contribution margin ratio = $\$682,000 \div \$2,000,000 = .341$

(3) Break-even point in dollars = $\$862,000 \div .341 = \$2,527,859$ (rounded)

Fixed costs

Manufacturing overhead (\$480,000 X .90)	\$432,000
Selling expenses (\$400,000 X .20)	80,000
Administrative expenses (\$500,000 X .70)	<u>350,000</u>
Total fixed costs	<u>\$862,000</u>

The break-even point in dollars declined from \$2,922,190 to \$2,527,859. This means that overall the company's risk has declined because it doesn't have to generate as much in sales. The two changes actually had opposing effects on the break-even point. By changing to a more commission based approach to compensate its sales staff the company reduced its fixed costs, and therefore reduced its break-even point. In contrast, the purchase of the new equipment increased the company's fixed costs (by increasing its equipment depreciation) and reduced its variable direct labor cost, both of which would increase the break-even point.

(a)

BLANCO METAL COMPANY
Income Statement
For the Year Ended December 31
(Variable Costing)

	<u>2010</u>	<u>2011</u>
Sales	<u>\$2,700,000</u>	<u>\$3,000,000</u>
Variable expenses		
Variable cost of goods sold		
Inventory, January 1	0	60,000
Variable manufacturing costs	<u>600,000 (1)</u>	<u>540,000 (4)</u>
Cost of goods available for sale	600,000	600,000
Inventory, December 31	<u>60,000 (2)</u>	<u>0</u>
Variable cost of goods sold	540,000	600,000
Variable selling expenses	<u>360,000 (3)</u>	<u>400,000 (5)</u>
Total variable expenses	<u>900,000</u>	<u>1,000,000</u>
Contribution margin	<u>1,800,000</u>	<u>2,000,000</u>
Fixed expenses		
Manufacturing overhead	1,200,000	1,200,000
Administrative	<u>230,000</u>	<u>230,000</u>
Total fixed expenses	<u>1,430,000</u>	<u>1,430,000</u>
Income from operations	<u>\$ 370,000</u>	<u>\$ 570,000</u>

2010 Computations

- (1) 50,000 X \$12
(2) 5,000 X \$12
(3) 45,000 X \$8

2011 Computations

- (4) 45,000 X \$12
(5) 50,000 X \$8

***PROBLEM 22-6B (Continued)**

(b) BLANCO METAL COMPANY
Income Statement
For the Year Ended December 31
(Absorption Costing)

	<u>2010</u>		<u>2011</u>
Sales	<u>\$2,700,000</u>		<u>\$3,000,000</u>
Cost of goods sold			
Inventory, January 1	0		180,000
Cost of goods manufactured	<u>1,800,000</u> (1)		<u>1,740,000</u> (3)
Cost of goods available for sale	1,800,000		1,920,000
Inventory, December 31	<u>180,000</u> (2)		0
Cost of goods sold	<u>1,620,000</u>		<u>1,920,000</u>
Gross profit	<u>1,080,000</u>		<u>1,080,000</u>
Operating expenses			
Selling expenses	360,000		400,000
Administrative expenses	<u>230,000</u>		<u>230,000</u>
Total operating expenses	<u>590,000</u>		<u>630,000</u>
Income from operations	<u>\$ 490,000</u>		<u>\$ 450,000</u>

	<u>2010 Computations</u>		<u>2011 Computations</u>
(1)	50,000 X [\$12 + (\$1,200,000 ÷ 50,000)]	(3)	45,000 X [\$12 + (\$1,200,000 ÷ 45,000)]
(2)	5,000 X \$36		

(c) The variable costing and the absorption costing income from operations can be reconciled as follows:

	<u>2010</u>	<u>2011</u>
Variable costing income	\$370,000	\$570,000
Fixed manufacturing overhead expensed with variable costing	\$1,200,000	\$1,200,000
Less: Fixed manufacturing overhead expensed with absorption costing	<u>(1,080,000)</u> ⁽¹⁾	<u>(1,320,000)</u> ⁽²⁾
Difference	120,000	(120,000)
Absorption costing income	<u>\$490,000</u>	<u>\$450,000</u>

⁽¹⁾In 2010, with absorption costing \$880,000 $\left(\$1,200,000 \times \frac{45,000 \text{ units sold}}{50,000 \text{ units manufactured}} \right)$ of the fixed manufacturing overhead is expensed as part of cost of goods sold, and \$120,000 $\left(\$1,200,000 \times \frac{5,000 \text{ units in inventory}}{50,000 \text{ units manufactured}} \right)$ is included in the ending inventory.

***PROBLEM 22-6B (Continued)**

⁽²⁾In 2011, with absorption costing \$1,320,000 of fixed manufacturing overhead is expensed as part of cost of goods sold. This includes the fixed manufacturing overhead for 2011 of \$1,200,000 plus \$120,000 of fixed manufacturing overhead from 2010 that was included in the beginning inventory for 2011.

- (d) Income is more sensitive to changes in sales under variable costing as seen in the increase in income from operations in 2011 when 5,000 additional units were sold. In contrast, under absorption costing, income is also strongly affected by changes in production as seen in the higher income from operations in 2010 when production exceeded sales by 5,000 units.**

(a)

(1) Capital-Intensive		(2) Labor-Intensive	
Fixed manufacturing costs	\$2,508,000	Fixed manufacturing costs	\$1,538,000
Incremental selling expenses	<u>502,000</u>	Incremental selling expenses	<u>502,000</u>
Total fixed costs	<u>\$3,010,000</u>	Total fixed costs	<u>\$2,040,000</u>
Selling price	\$30.00	Selling price	\$30.00
Variable costs		Variable costs	
Direct materials	\$5.00	Direct materials	\$5.50
Direct labor	6.00	Direct labor	8.00
Variable overhead	3.00	Variable overhead	4.50
Selling expenses	<u>2.00</u>	Selling expenses	<u>2.00</u>
Contribution margin	<u>\$14.00</u>	Contribution margin	<u>\$10.00</u>
Total fixed costs (1)	\$3,010,000	Total fixed costs (1)	\$2,040,000
Contribution margin per unit (2)	<u>\$14.00</u>	Contribution margin per unit (2)	<u>\$10.00</u>
Breakeven in units (1) ÷ (2)	<u>215,000</u>	Breakeven in units (1) ÷ (2)	<u>204,000</u>

(b) Gagliano Company would be indifferent between the two manufacturing methods at the volume (X) where total costs are equal.

$$\$16X + \$3,010,000 = \$20X + \$2,040,000$$

$$\$4X = \$970,000$$

$$X = 242,500 \text{ units}$$

(c) Gagliano should employ the capital-intensive manufacturing method if annual sales are expected to exceed 242,500 units and the labor-intensive manufacturing method if annual sales are not expected to exceed 242,500 units. The labor-intensive method is more profitable for sales up to 242,500 units because the fixed costs are lower. The capital-intensive method is more profitable for sales above 242,500 units because its contribution margin is higher.

(a) The variable costs per unit are:

Cost of goods sold (\$600,000 ÷ 200,000)	\$3.00
Selling expenses (\$140,000 ÷ 200,000)	.70
Administrative expenses (\$40,000 ÷ 200,000)	.20
Total.....	<u>\$3.90</u>

The breakeven points are:

$$\begin{aligned}
 X &= (\$3.90 \div \$6.00) X + \$460,000 \\
 X &= .65X + \$460,000 \\
 .35X &= \$460,000 \\
 X &= \$1,314,286 \text{ (rounded)}
 \end{aligned}$$

$$\$6.00X = \$3.90X + \$460,000$$

$$\$2.10X = \$460,000$$

$$X = 219,048 \text{ units (rounded)}$$

(b) Variable unit cost of goods sold = \$3.25

$$(\$600,000 \div 200,000 = \$3.00; \$3.00 + \$0.25)$$

$$\text{Sales volume} = 260,000 \text{ units (200,000 X 130\%)}$$

$$\text{Total sales} = 260,000 \text{ X } \$6.25 = \$1,625,000$$

Net income computation:

Sales.....		\$1,625,000
Variable expenses		
Cost of goods sold	\$845,000	
(260,000 X \$3.25)		
Selling expenses	182,000	
(260,000 X \$.70)		
Administrative expenses		
(260,000 X \$.20)	<u>52,000</u>	
Total variable expenses		<u>1,079,000</u>
Contribution margin.....		546,000
Fixed expenses		
Cost of goods sold	\$200,000	
Selling expenses	140,000	
Administrative expenses.....	<u>120,000</u>	
Total fixed expenses		<u>460,000</u>
Net income		<u>\$ 86,000</u>

BYP 22-2 (Continued)**Break-even point:**

$$X = (\$1,079,000 \div \$1,625,000)X + \$460,000$$

$$X = .66X + \$460,000$$

$$.34X = \$460,000$$

$$X = \$1,352,941 \text{ (rounded)}$$

Profits and the break-even point would both increase.

(c) Sales [320,000 (1) X (\$6.00 – \$.30)]		\$1,824,000
Variable expenses		
Cost of goods sold	\$960,000	
(320,000 X \$3.00)		
Selling expenses (320,000 X \$.79)	252,800	
Administrative expenses		
(320,000 X \$.20)	<u>64,000</u>	
Total variable expenses		<u>1,276,800</u>
Contribution margin		547,200
Fixed expenses		
Cost of goods sold	\$200,000	
Selling expenses	175,000	
(\$140,000 + \$35,000)		
Administrative expenses	<u>120,000</u>	
Total fixed expenses		<u>495,000</u>
Net income.....		<u>\$ 52,200</u>

$$(1) \text{ Sales volume} = 200,000 \times 160\% = 320,000$$

Break-even point:

$$X = (\$1,276,800 \div \$1,824,000)X + \$495,000$$

$$X = .70X + \$495,000$$

$$.30X = \$495,000$$

$$X = \$1,650,000$$

Profits and the break-even point would both increase.

- (d) Terri's plan should be accepted. It produces a higher net income and a lower breakeven point than Jerri's plan.**

- (a) Sweeteners and packaging are a variable cost to Coca-Cola because their use is directly proportional to the amount of product produced. If the unit cost of a variable cost item increases, the contribution margin will decline. This will lead to a decline in net income unless the company can increase its selling price, increase the number of units it sells, or reduce other costs.**
- (b) This description makes the marketing expenditures sound like they are a variable cost, since it suggests that they vary with the amount of units sold. However, unlike variable costs, the relationship of marketing costs is not directly proportional to sales, since other factors also influence units sold. Thus, it is not a pure variable cost. However, it is also not a fixed cost, in that there usually is a relationship between marketing expenditures and sales. For CVP purposes, it might best be handled as a mixed cost, having both a fixed and variable component.**
- (c) The first measure, gallon shipments of concentrates and syrups, is the activity index, since it best reflects the company's production and sales activity at the wholesale level, its primary line of business. The second measure, unit cases of finished product, indicates the amount of activity by Coke's primary customers, the bottlers. Coke also keeps track of this since it provides information about what is happening at the retail level.**

- (a) The description of the production process is as follows:

The production of hard candy begins with the blending, cooking, and kneading of ingredients. Workers add flavoring and coloring when the candy is kneaded. The candy is then pressed out and a roll of thick chocolate is placed in the middle of the candy. Workers then roll each end of the product over the middle to form a pillow shape. The roll is stretched by hand at the chicken bone machine so that the width of the roll is the width of the average chicken bone, a difficult procedure. Next, the elongated roll is fed into the cutting machine. The end result is a candy which tastes of sweet cinnamon and has a luscious surprise of chocolate in the middle.

- (b) The following costs might be identified as variable: labor (stretching chicken bones, feeding into cutting machine), materials (flavoring, coloring, chocolate).

The following costs might be identified as fixed: depreciation of machinery, indirect labor, and utilities.

To: My Roommate
From: Your Roommate
Subject: Cost-Volume-Profit Questions

In response to your request for help, I provide you the following:

- (a) The mathematical formula for breakeven sales is:**

Breakeven Sales = Variable Costs + Fixed Costs

Breakeven sales in dollars is found by expressing variable costs as a percentage of unit selling price. For example, if the percentage is 70%, the breakeven formula becomes $X = .70X + \text{Fixed Costs}$. The answer will be in sales dollars.

Breakeven sales in units is found by using unit selling price and unit variable costs in the formula. For example, if the selling price is \$300 and variable costs are \$210, the breakeven formula becomes $\$300X = \$210X + \text{Fixed Costs}$. The answer will be in sales units.

- (b) The formulas for contribution margin per unit and contribution margin ratio differ as shown below:**

Unit Selling Price – Unit Variable Costs = Contribution Margin per Unit

Contribution Margin per Unit ÷ Unit Selling Price = Contribution Margin Ratio

You can see that CM per Unit is used in computing the CM ratio.

- (c) When contribution margin is used to determine breakeven sales, total fixed costs are divided by either the contribution margin ratio or contribution margin per unit. Using the CM ratio results in determining the breakeven point in dollars. Using CM per unit results in determining the breakeven point in units.**

BYP 22-5 (Continued)

The formula for determining breakeven sales in dollars is:

Fixed Costs ÷ Contribution Margin Ratio = Breakeven Sales in Dollars

The formula for determining breakeven sales in units is:

Fixed Costs ÷ Contribution Margin per Unit = Breakeven Sales in Units

I hope this memo answers your questions.

- (a) The stakeholders in this situation are:
- ▶ Kenny Hampton, accountant of Bartley Company.
 - ▶ The dislocated personnel of Bartley.
 - ▶ The senior management who made the decision.
- (b) Kenny is hiding an error and is knowingly deceiving the company's management with inaccurate data.
- (c) Kenny's alternatives are:
- ▶ Keep quiet.
 - ▶ Confess his mistake to management.

The students' recommendations should recognize the practical aspects of the situation but they should be idealistic and ethical. If the students can't be totally ethical when really nothing is at stake, how can they expect to be ethical under real-world pressures?

- (a) The variable gasoline cost of going one mile in the hybrid car would be \$0.10 ($\$4.00/40$). The variable gasoline cost of going one mile in the traditional car would be \$0.16 ($\$4.00/25$).
- (b) The savings per mile of driving the hybrid vehicle would be \$0.06 ($\$0.16 - \$0.10$).
- (c) In order to break-even on your investment you would need to drive 50,000 miles. This is determined by dividing the additional fixed cost of \$3,000 by the contribution margin per mile of \$0.06.
- (d) There are many other factors that you would want to consider in your analysis. For example, do the vehicles differ in their expected repair bills, insurance costs, licensing fees, or ultimate resale value. Also, some states and some employers offer rebates for the purchase of hybrid vehicles. In addition, your decision might be influenced by non-financial factors, such as a desire to reduce emissions.

CHAPTER 23

Budgetary Planning

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Indicate the benefits of budgeting.	1, 2, 4		2, 3	1		
2. State the essentials of effective budgeting.	3, 5, 6, 7, 8		3	1		
3. Identify the budgets that comprise the master budget.	9, 10, 11, 12, 13, 14, 15, 16	1, 2, 3, 4, 5, 6, 7	4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1A, 2A, 3A	1B, 2B, 3B
4. Describe the sources for preparing the budgeted income statement.	17, 18	8	5	11	1A, 2A, 3A, 6A	1B, 2B, 3B
5. Explain the principal sections of a cash budget.	19, 20	9		12, 13, 14, 15, 16	4A, 6A	4B
6. Indicate the applicability of budgeting in non-manufacturing companies.	21, 22	10		3, 15, 16, 17	5A	5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare budgeted income statement and supporting budgets.	Simple	30–40
2A	Prepare sales, production, direct materials, direct labor, and income statement budgets.	Simple	40–50
3A	Prepare sales and production budgets and compute cost per unit under two plans.	Moderate	30–40
4A	Prepare cash budget for two months.	Moderate	30–40
5A	Prepare purchases and income statement budgets for a merchandiser.	Simple	30–40
6A	Prepare budgeted income statement and balance sheet.	Complex	40–50
1B	Prepare budgeted income statement and supporting budgets.	Simple	30–40
2B	Prepare sales, production, direct materials, direct labor, and income statement budgets.	Simple	40–50
3B	Prepare sales and production budgets and compute cost per unit under two plans.	Moderate	30–40
4B	Prepare cash budget for two months.	Moderate	30–40
5B	Prepare purchases and income statement budgets for a merchandiser.	Simple	30–40

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 23
BUDGETARY PLANNING

Number	SO	BT	Difficulty	Time (min.)
BE1	3	AN	Simple	4–6
BE2	3	AP	Simple	3–5
BE3	3	AP	Simple	4–6
BE4	3	AP	Simple	5–7
BE5	3	AP	Simple	4–6
BE6	3	AP	Simple	4–6
BE7	3	AP	Simple	4–6
BE8	4	AP	Simple	4–6
BE9	5	AP	Simple	4–6
BE10	6	AP	Simple	4–6
DI1	2, 3	K	Simple	2–4
DI2	3	AP	Simple	15–20
DI3	4	AP	Simple	6–8
DI4	5	AP	Simple	4–6
EX1	1–3	C	Simple	12–15
EX2	3	AP	Simple	6–8
EX3	3, 6	AP	Simple	8–10
EX4	3	AP	Simple	6–8
EX5	3	AP	Moderate	8–10
EX6	3	AP	Moderate	10–12
EX7	3	AP	Simple	6–8
EX8	3	AP	Simple	10–12
EX9	3	AP	Simple	8–10
EX10	3	AP	Moderate	10–12
EX11	3, 4	AP	Simple	8–10
EX12	5	AP	Simple	10–12
EX13	5	AP	Simple	6–8
EX14	5	AP	Simple	8–10

BUDGETARY PLANNING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX15	5, 6	AP	Simple	10–12
EX16	5, 6	AP	Simple	12–15
EX17	6	AP	Simple	6–8
P1A	3, 4	AP	Simple	30–40
P2A	3, 4	AP	Simple	40–50
P3A	3, 4	E	Moderate	30–40
P4A	5	AP	Moderate	30–40
P5A	6	AP	Simple	30–40
P6A	4, 5	AP	Complex	40–50
P1B	3, 4	AP	Simple	30–40
P2B	3, 4	AP	Simple	40–50
P3B	3, 4	E	Moderate	30–40
P4B	5	AP	Moderate	30–40
P5B	6	AP	Simple	30–40
BYP1	2	S, E	Moderate	20–25
BYP2	3	AN, S	Simple	15–20
BYP3	2	C, AN	Simple	10–15
BYP4	5	AN, S	Moderate	15–20
BYP5	3	C, E	Simple	10–15
BYP6	5	AP	Simple	10–15

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Indicate the benefits of budgeting.		Q23-1 Q23-2 Q23-4 E23-1				
2. State the essentials of effective budgeting.	DI23-1	Q23-3 Q23-5 Q23-6 Q23-7 Q23-8 E23-1				
3. Identify the budgets that comprise the master budget.	DI23-1	Q23-9 Q23-10 Q23-11 E23-1	Q23-12 Q23-13 Q23-14 Q23-15 Q23-16 Q23-17 BE23-2 BE23-3 BE23-4 BE23-5 BE23-6 BE23-7	BE23-1		P23-3A P23-3B
4. Describe the sources for preparing the budgeted income statement.		Q23-18	Q23-17 BE23-8 DI23-3			P23-3A P23-3B
5. Explain the principal sections of a cash budget.	Q23-19		Q23-20 BE23-9 DI23-4 E23-12			
6. Indicate the applicability of budgeting in non-manufacturing companies.	Q23-21 Q23-22		Q23-17 E23-3 E23-15 E23-16			
Broadening Your Perspective		Real-World Focus	All About You	Manag. Analysis Communication Real-World Focus	Decision Making Across the Organization Manag. Analysis Communication	Ethics Case Decision Making Across the Organization All About You

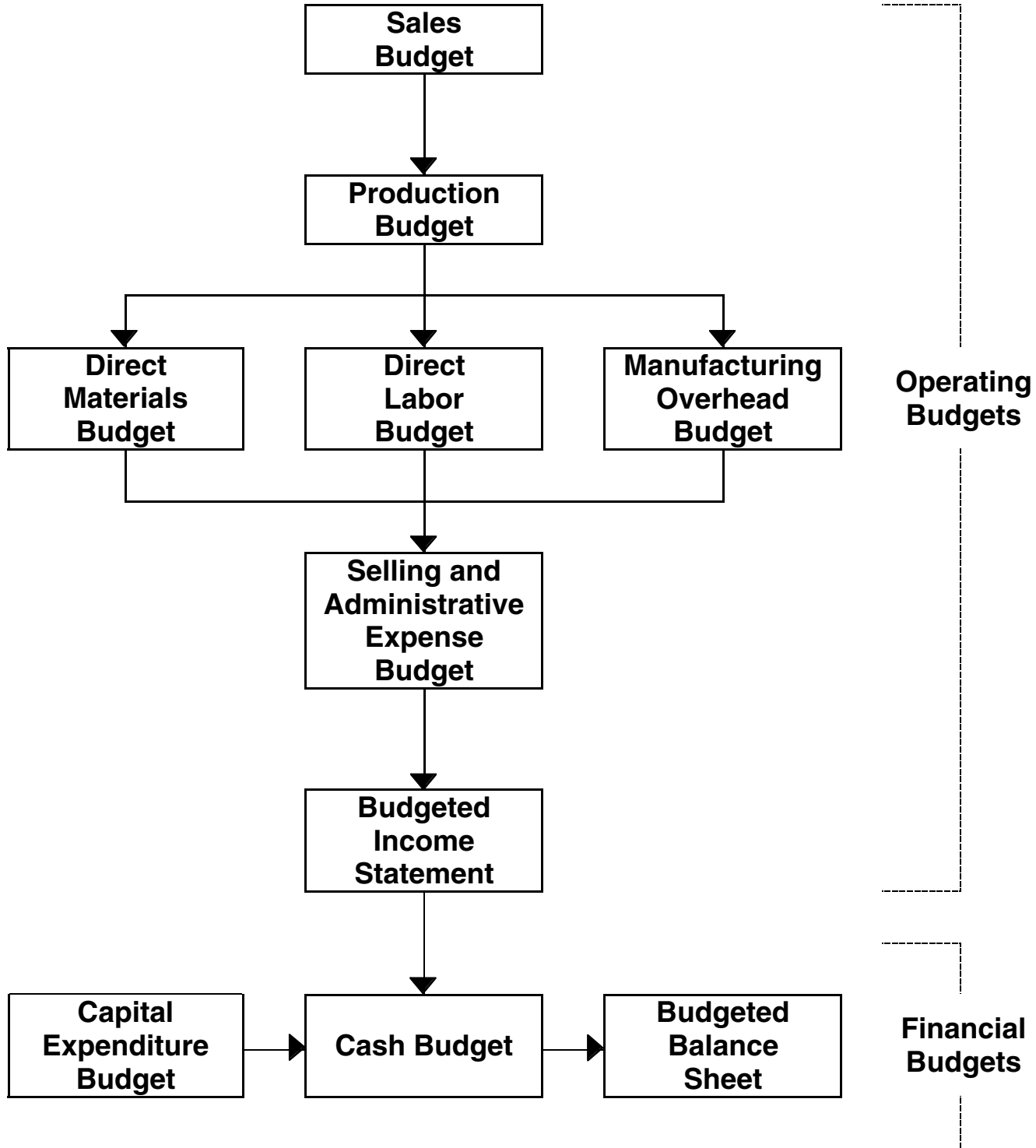
ANSWERS TO QUESTIONS

1. (a) A budget is a formal written statement of management's plans for a specified future time period, expressed in financial terms.
(b) A budget aids management in planning because it represents the primary means of communicating agreed-upon objectives throughout the organization. Once adopted, a budget becomes an important basis for evaluating performance.
2. The primary benefits of budgeting are:
 - (1) It requires all levels of management to plan ahead and to formalize goals on a recurring basis.
 - (2) It provides definite objectives for evaluating performance at each level of responsibility.
 - (3) It creates an early warning system for potential problems, so that management can make changes before things get out of hand.
 - (4) It facilitates the coordination of activities within the business by correlating the goals of each segment with overall company objectives.
 - (5) It results in greater management awareness of the entity's overall operations and the impact of external factors such as economic trends.
 - (6) It motivates personnel throughout the organization to meet planned objectives.
3. The essentials of effective budgeting are: (1) a sound organizational structure, (2) research and analysis, and (3) acceptance by all levels of management.
4. (a) Disagree. Accounting information makes major contributions to the budgeting process. Accounting provides the starting point of budgeting by providing historical data on revenues, costs, and expenses. Accounting becomes the translator of the budget and communicates the budget to all areas of responsibility. It also prepares periodic budget reports that compare actual results with planned objectives and provide a basis for evaluating performance.
(b) The budget itself, and the administration of the budget, are the responsibility of management.
5. The budget period should be long enough to provide an attainable goal under normal business conditions. The budget period should minimize the impact of seasonal and cyclical business fluctuations, but it should not be so long that reliable estimates are impossible. The most common budget period is one year.
6. Disagree. Long-range planning usually encompasses a period of at least five years. It involves the selection of strategies to achieve long-term goals and the development of policies and plans to implement the strategies. In addition, long-range planning reports contain considerably less detail than budget reports.
7. Participative budgeting involves the use of a "bottom to top" approach, which requires input from lower level management during the budgeting process so as to involve employees from various levels and areas within the company. The potential benefits of this approach are lower level managers have more detailed knowledge of the specifics of their job, and thus should be able to provide better budgetary estimates. In addition, by involving lower level managers in the process, it is more likely that they will perceive the budget as being fair and reasonable. One disadvantage of participative budgeting is that it takes more time, and thus costs more. Another disadvantage of participative budgeting is that it may enable managers to game the system through such practices as budgetary slack.

8. Budgetary slack is the amount by which a manager intentionally underestimates budgeted revenues or overestimates budgeted expenses in order to make it easier to achieve budgetary goals. Managers may have an incentive to create budgetary slack in order to increase the likelihood of receiving a bonus, or decrease the likelihood of losing their job.
9. A master budget is a set of interrelated budgets that constitutes a plan of action for a specified time period. The master budget is developed within the framework of a sales forecast.
10. The sales budget is the starting point in preparing the master budget. An inaccurate sales budget may adversely affect net income. An overly optimistic sales budget may result in excessive inventories and a very conservative sales budget may lead to inventory shortages.
11. The statement is false. The production budget only shows the units that must be produced to meet anticipated sales and ending inventory requirements.
12. The required units of production are 165,000 ($160,000 + 20,000 = 180,000 - 15,000 = 165,000$).
13. The desired ending direct materials units are 19,000 ($64,000 + 7,000 = 71,000 - 52,000 = 19,000$).
14. Total budgeted direct labor costs are \$640,000 ($80,000 \times .5 \times \$16 = \$640,000$).
15. (a) Manufacturing overhead rate based on direct labor cost is 60% [$\$198,000 + \$162,000 = \$360,000$; $\$360,000 \div (160,000 \times 1/4 \times \$15/\text{hr.}) = 60\%$].
(b) Manufacturing overhead rate per direct labor hour is \$9 ($\$360,000 \div 40,000$).
16. The first quarter budgeted selling and administrative expenses are \$70,000 [$(10\% \times \$200,000) + \$50,000$]. The second quarter total is \$75,000 [$(10\% \times \$250,000) + \$50,000$].
17. The budgeted cost per unit of product is \$48 ($\$10 + \$20 + \$18$). Gross profit per unit is \$21 ($\$69 - \$48$). Total budgeted gross profit is \$525,000 ($25,000 \times \$21$).
18. The supporting schedules are the budgets for sales, direct materials, direct labor, and manufacturing overhead.
19. The three sections of a cash budget are: (1) cash receipts, (2) cash disbursements, and (3) financing. The cash budget also shows the beginning and ending cash balances.
20. Cash collections are:
January— $\$500,000 \times 45\% = \$225,000$.
February— $\$500,000 \times 50\% = \$250,000$.
March— $\$500,000 \times 5\% = \$25,000$.
21. The formula is: Budgeted cost of goods sold plus desired ending merchandise inventory minus beginning merchandise inventory equals required merchandise purchases.
22. In a service enterprise, expected revenues can be obtained from expected output or expected input. The former is based on anticipated billings of clients for services rendered. The latter is based on expected billable time of the professional staff.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 23-1



BRIEF EXERCISE 23-2

GOODY COMPANY
Sales Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Expected unit sales	10,000	12,000	14,000	18,000	54,000
Unit selling price	X \$80	X \$80	X \$80	X \$80	X \$80
Total sales	<u>\$800,000</u>	<u>\$960,000</u>	<u>\$1,120,000</u>	<u>\$1,440,000</u>	<u>\$4,320,000</u>

BRIEF EXERCISE 23-3

GOODY COMPANY
Production Budget
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Expected unit sales	10,000	12,000	
Add: Desired ending finished goods	<u>2,400^a</u>	<u>2,800^c</u>	
Total required units	12,400	14,800	
Less: Beginning finished goods inventory	<u>2,000^b</u>	<u>2,400</u>	
Required production units	<u>10,400</u>	<u>12,400</u>	<u>22,800</u>

^a12,000 X .20^b10,000 X .20^c14,000 X .20

BRIEF EXERCISE 23-4

ORTIZ COMPANY
Direct Materials Budget
For the Month Ending January 31, 2011

Units to be produced	4,000
Direct materials per unit	<u>X 2</u>
Total pounds required for production.....	8,000
Add: Desired ending inventory (20% X 5,500 X 2).....	<u>2,200</u>
Total materials required.....	10,200
Less: Beginning materials inventory	<u>1,600</u>
Direct materials purchases.....	8,600
Cost per pound	<u>X \$6</u>
Total cost of direct materials purchases.....	<u><u>\$51,600</u></u>

BRIEF EXERCISE 23-5

EVERLY COMPANY
Direct Labor Budget
For the Six Months Ending June 30, 2010

	<u>Quarter</u>		<u>Six</u>
	<u>1</u>	<u>2</u>	<u>Months</u>
Units to be produced	5,000	6,000	
Direct labor time (hours) per unit	<u>X 1.5</u>	<u>X 1.5</u>	
Total required direct labor hours	7,500	9,000	
Direct labor cost per hour	<u>X \$14</u>	<u>X \$14</u>	
Total direct labor cost	<u><u>\$105,000</u></u>	<u><u>\$126,000</u></u>	<u><u>\$231,000</u></u>

BRIEF EXERCISE 23-6

JUSTUS INC.
Manufacturing Overhead Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Variable costs	\$20,000	\$24,000	\$28,000	\$32,000	\$104,000
Fixed costs	35,000	35,000	35,000	35,000	140,000
Total manufacturing overhead	<u>\$55,000</u>	<u>\$59,000</u>	<u>\$63,000</u>	<u>\$67,000</u>	<u>\$244,000</u>

BRIEF EXERCISE 23-7

MIZE COMPANY
Selling and Administrative Expense Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Variable expenses	\$25,000	\$30,000	\$35,000	\$40,000	\$130,000
Fixed expenses	40,000	40,000	40,000	40,000	160,000
Total selling and administrative expenses	<u>\$65,000</u>	<u>\$70,000</u>	<u>\$75,000</u>	<u>\$80,000</u>	<u>\$290,000</u>

BRIEF EXERCISE 23-8

PERINE COMPANY
Budgeted Income Statement
For the Year Ending December 31, 2010

Sales.....	\$2,000,000
Cost of goods sold (50,000 X \$22)	<u>1,100,000</u>
Gross profit.....	900,000
Selling and administrative expenses	<u>300,000</u>
Income before income taxes.....	600,000
Income tax expense	<u>150,000</u>
Net income	<u>\$ 450,000</u>

BRIEF EXERCISE 23-9

<u>Credit Sales</u>	<u>Collections from Customers</u>		
	<u>January</u>	<u>February</u>	<u>March</u>
January, \$200,000	\$140,000	\$ 60,000	
February, \$260,000		182,000	\$ 78,000
March, \$310,000			217,000
	<u>\$140,000</u>	<u>\$242,000</u>	<u>\$295,000</u>

BRIEF EXERCISE 23-10

Budgeted cost of goods sold ($\$400,000 \times 60\%$)	\$240,000
Add: Desired ending inventory ($\$475,000 \times 60\% \times 20\%$)	<u>57,000</u>
Total inventory required	297,000
Less: Beginning inventory ($\$400,000 \times 60\% \times 20\%$)	<u>48,000</u>
Required merchandise purchases for April	<u>\$249,000</u>

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 23-1

1. Operating budgets
2. Master budget
3. Participative budgeting
4. Financial budgets
5. Sales forecast
6. Long-range plans

OAK CREEK COMPANY
Sales Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Expected unit sales	200,000	250,000	250,000	300,000	1,000,000
Unit selling price	X \$40	X \$40	X \$40	X \$45	
Total sales	<u>\$8,000,000</u>	<u>\$10,000,000</u>	<u>\$10,000,000</u>	<u>\$13,500,000</u>	<u>\$41,500,000</u>

OAK CREEK COMPANY
Production Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Expected unit sales	200,000	250,000	250,000	300,000	
Add: Desired ending finished goods units	50,000	50,000	60,000	44,000*	
Total required units	250,000	300,000	310,000	344,000	
Less: Beginning finished goods units	<u>40,000**</u>	<u>50,000</u>	<u>50,000</u>	<u>60,000</u>	
Required production units	<u>210,000</u>	<u>250,000</u>	<u>260,000</u>	<u>284,000</u>	<u>1,004,000</u>

*Estimated first-quarter 2011 sales volume $200,000 + (200,000 \times 10\%) = 220,000$; $220,000 \times 20\%$.

**20% of estimated first-quarter 2010 sales units ($200,000 \times 20\%$).

DO IT! 23-2 (Continued)

OAK CREEK COMPANY Direct Materials Budget For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Units to be produced	210,000	250,000	260,000	284,000	
Direct materials per unit	<u>X 2</u>	<u>X 2</u>	<u>X 2</u>	<u>X 2</u>	
Total pounds needed for production	420,000	500,000	520,000	568,000	
Add: Desired ending direct materials (pounds)	<u>50,000</u>	<u>52,000</u>	<u>56,800</u>	<u>*50,000</u>	
Total materials required	470,000	552,000	576,800	618,000	
Less: Beginning direct materials (pounds)	<u>**42,000</u>	<u>50,000</u>	<u>52,000</u>	<u>56,800</u>	
Direct materials purchases	428,000	502,000	524,800	561,200	
Cost per pound	<u>X \$10</u>	<u>X \$10</u>	<u>X \$10</u>	<u>X \$10</u>	
Total cost of direct materials purchases	<u>\$4,280,000</u>	<u>\$5,020,000</u>	<u>\$5,248,000</u>	<u>\$5,612,000</u>	<u>\$20,160,000</u>

*Estimated first-quarter 2011 production requirements 500,000 X 10% = 50,000

**10% of estimated first-quarter pounds needed for production.

DO IT! 23-3

(a) Total unit cost:

Cost Element	Quantity	Unit Cost	Total
Direct materials	2 pounds	\$10.00	\$20.00
Direct labor	0.3 hours	\$14.00	4.20
Manufacturing overhead	0.3 hour	\$20.00	6.00
Total unit cost.....			<u>\$30.20</u>

(b)

OAK CREEK COMPANY
Budgeted Income Statement
For the Year Ending December 31, 2010

Sales (1,000,000) units from sales budget, page 23-13.....	\$41,500,000
Cost of goods sold (1,000,000 X \$30.20/unit)	<u>30,200,000</u>
Gross profit.....	11,300,000
Selling and administrative expenses	<u>7,000,000</u>
Net income	<u>\$ 4,300,000</u>

DO IT! 23-4

VENETIAN COMPANY
Cash Budget
April

Beginning cash balance	\$ 22,000
Add: Cash receipts for March	<u>245,000</u>
Total available cash	267,000
Less: Cash disbursements in March	<u>256,000</u>
Excess of available cash over cash disbursements.....	11,000
Financing (\$20,000 – \$11,000)	<u>9,000</u>
Ending cash balance	<u>\$ 20,000</u>

To maintain the desired minimum cash balance of \$20,000, Venetian Company must borrow \$9,000.

SOLUTIONS TO EXERCISES

EXERCISE 23-1

MEMO

To Jack Bruno

From: Student

Re: Budgeting

I am glad Black Rose Company is considering preparing a formal budget. There are many benefits derived from budgeting, as I will discuss later in this memo.

A budget is a formal written statement of management's plans for a specified future time period, expressed in financial terms. The master budget generally consists of operating budgets such as the sales budget, production budget, direct materials budget, direct labor budget, manufacturing overhead budget, selling and administrative expense budget, and budgeted income statement; and financial budgets such as the capital expenditure budget, cash budget, and budgeted balance sheet.

The primary benefits of budgeting are:

- 1. It requires all levels of management to plan ahead and formalize their goals.**
- 2. It provides definite objectives for evaluating performance.**
- 3. It creates an early warning system for potential problems.**
- 4. It facilitates the coordination of activities within the business.**
- 5. It results in greater management awareness of the entity's overall operations.**
- 6. It motivates personnel throughout the organization to meet planned objectives.**

In order maximize these benefits, it is essential that budgeting takes place within a sound organizational structure, so authority and responsibility for all phases of operations are clearly defined. Also, the budget should be based on research and analysis that results in realistic goals. Finally, the effectiveness of a budget program is directly related to its acceptance by all levels of management.

If you want further explanation of any of these assumptions, please contact me.

ZELLER ELECTRONICS INC.
Sales Budget
For the Six Months Ending June 30, 2010

Product	Quarter 1			Quarter 2			Six Months		
	Units	Selling Price	Total Sales	Units	Selling Price	Total Sales	Units	Selling Price	Total Sales
XQ-103	20,000	\$12	\$240,000	25,000	\$12	\$300,000	45,000	\$12	\$ 540,000
XQ-104	12,000	25	300,000	15,000	25	375,000	27,000	25	675,000
Totals	32,000		\$540,000	40,000		\$675,000	72,000		\$1,215,000

ROCHE AND YOUNG, CPAs
Sales Revenue Budget
For the Year Ending December 31, 2010

Dept.	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	Billable Hours	Billable Rate	Total Rev.	Billable Hours	Billable Rate	Total Rev.	Billable Hours	Billable Rate	Total Rev.	Billable Hours	Billable Rate	Total Rev.
Auditing	2,200	\$ 80	\$176,000	1,600	\$ 80	128,000	2,000	\$ 80	\$160,000	2,400	\$ 80	\$192,000
Tax	3,000	90	270,000	2,400	90	216,000	2,000	90	180,000	2,500	90	225,000
Consulting	1,500	100	150,000	1,500	100	150,000	1,500	100	150,000	1,500	100	150,000
Totals			<u>\$596,000</u>			<u>\$494,000</u>			<u>\$490,000</u>			<u>\$567,000</u>

Dept.	Year		
	Billable Hours	Billable Rate	Total Rev.
Auditing	8,200 ^a	\$ 80	\$ 656,000
Tax	9,900 ^b	90	891,000
Consulting	6,000 ^c	100	600,000
Totals			<u>\$2,147,000</u>

^a2,200 + 1,600 + 2,000 + 2,400

^b3,000 + 2,400 + 2,000 + 2,500

^c1,500 X 4

EXERCISE 23-4

TURNERY COMPANY
Production Budget
For the Year Ending December 31, 2010

	<u>Product HD-240</u>				
	Quarter				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Year</u>
Expected unit sales	5,000	7,000	8,000	10,000	
Add: Desired ending finished goods units ⁽¹⁾	<u>3,500</u>	<u>4,000</u>	<u>5,000</u>	<u>3,250</u> ⁽²⁾	
Total required units	8,500	11,000	13,000	13,250	
Less: Beginning finished goods units	<u>2,500</u>	<u>3,500</u>	<u>4,000</u>	<u>5,000</u>	
Required production units	<u>6,000</u>	<u>7,500</u>	<u>9,000</u>	<u>8,250</u>	<u>30,750</u>

⁽¹⁾50% of next quarter's sales.

⁽²⁾50% X (5,000 X 130%).

EXERCISE 23-5

MORENO INDUSTRIES
Direct Materials Purchases Budget
For the Quarter Ending March 31, 2011

	<u>January</u>	<u>February</u>	<u>March</u>
Units to be produced	10,000	8,000	5,000
Direct materials per unit	<u>X 3</u>	<u>X 3</u>	<u>X 3</u>
Total pounds needed for production	30,000	24,000	15,000
Add: Desired ending direct materials (pounds)*	<u>7,200</u>	<u>4,500</u>	<u>3,600</u>
Total materials required	37,200	28,500	18,600
Less: Beginning direct materials (pounds)	<u>9,000</u>	<u>7,200</u>	<u>4,500</u>
Direct materials purchases	28,200	21,300	14,100
Cost per pound	<u>X \$2</u>	<u>X \$2</u>	<u>X \$2</u>
Total cost of direct materials purchases	<u>\$56,400</u>	<u>\$42,600</u>	<u>\$28,200</u>

*30% of next month's production needs.

EXERCISE 23-6

(a) **BATISTA COMPANY**
Production Budget
For the Six Months Ending June 30, 2011

	<u>Quarter</u>		<u>Six Months</u>
	<u>1</u>	<u>2</u>	
Expected unit sales	5,000	6,000	
Add: Desired ending finished goods units	<u>1,800⁽¹⁾</u>	<u>2,100⁽²⁾</u>	
Total required units	6,800	8,100	
Less: Beginning finished goods units	<u>1,500⁽³⁾</u>	<u>1,800</u>	
Required production units	<u>5,300</u>	<u>6,300</u>	<u>11,600</u>

⁽¹⁾30% X 6,000.

⁽²⁾30% X 7,000.

⁽³⁾30% X 5,000.

EXERCISE 23-6 (Continued)**(b)**

BATISTA COMPANY
Direct Materials Budget
For the Six Months Ending June 30, 2011

	Quarter		Six Months
	1	2	
Units to be produced	5,300	6,300	
Direct materials per unit	X 3	X 3	
Total pounds needed for production	15,900	18,900	
Add: Desired ending direct materials (pounds)	9,450 ⁽¹⁾	10,875 ⁽²⁾	
Total materials required	25,350	29,775	
Less: Beginning direct materials (pounds)	7,950 ⁽³⁾	9,450	
Direct materials purchases	17,400	20,325	
Cost per pound	X \$4	X \$4	
Total cost of direct materials Purchases	<u>\$69,600</u>	<u>\$81,300</u>	<u>\$150,900</u>

⁽¹⁾50% X 18,900.⁽²⁾7,250 X (3 X 50%).⁽³⁾50% X 15,900.**EXERCISE 23-7**

NEELY, INC.
Direct Labor Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Units to be produced	20,000	25,000	35,000	30,000	
Direct labor time (hours) per unit	X 1.6	X 1.6	X 1.6	X 1.6	
Total required direct labor hours	32,000	40,000	56,000	48,000	
Direct labor cost per hour	X \$15	X \$15	X \$16	X \$16	
Total direct labor cost	<u>\$480,000</u>	<u>\$600,000</u>	<u>\$896,000</u>	<u>\$768,000</u>	<u>\$2,744,000</u>

EXERCISE 23-8

HARDIN COMPANY
Manufacturing Overhead Budget
For the Year Ending December 31, 2010

	Quarter				Year
	1	2	3	4	
Variable costs					
Indirect materials (\$.70/hour)	\$10,500	\$ 12,600	\$ 14,700	\$ 16,800	\$ 54,600
Indirect labor (\$1.20/hour)	18,000	21,600	25,200	28,800	93,600
Maintenance (\$.50/hour)	7,500	9,000	10,500	12,000	39,000
Total variable	<u>36,000</u>	<u>43,200</u>	<u>50,400</u>	<u>57,600</u>	<u>187,200</u>
Fixed costs					
Supervisory salaries	35,000	35,000	35,000	35,000	140,000
Depreciation	16,000	16,000	16,000	16,000	64,000
Maintenance	12,000	12,000	12,000	12,000	48,000
Total fixed	<u>63,000</u>	<u>63,000</u>	<u>63,000</u>	<u>63,000</u>	<u>252,000</u>
Total manufacturing overhead	<u>\$99,000</u>	<u>\$106,200</u>	<u>\$113,400</u>	<u>\$120,600</u>	<u>\$439,200</u>
Direct labor hours	<u>15,000</u>	<u>18,000</u>	<u>21,000</u>	<u>24,000</u>	<u>78,000</u>
Manufacturing overhead rate per direct labor hour (\$439,200 ÷ 78,000)					<u>\$5.63</u>

EXERCISE 23-9

EDINGTON COMPANY
Selling and Administrative Expense Budget
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Budgeted sales in units	20,000	22,000	
Variable expenses (1)			
Sales commissions	\$20,000	\$22,000	\$42,000
Delivery expense	8,000	8,800	16,800
Advertising	12,000	13,200	25,200
Total variable	<u>40,000</u>	<u>44,000</u>	<u>84,000</u>

EXERCISE 23-9 (Continued)

EDINGTON COMPANY
Selling and Administrative Expense Budget (Continued)
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Fixed expenses			
Sales salaries	10,000	10,000	20,000
Office salaries	6,000	6,000	12,000
Depreciation	4,200	4,200	8,400
Insurance	1,500	1,500	3,000
Utilities	800	800	1,600
Repairs expense	600	600	1,200
Total fixed	<u>23,100</u>	<u>23,100</u>	<u>46,200</u>
Total selling and administrative expenses	<u>\$63,100</u>	<u>\$67,100</u>	<u>\$130,200</u>

- (1) Variable costs per dollar of sales are: Sales commissions \$.05, Delivery expense \$.02, and Advertising \$.03.

EXERCISE 23-10

(a) **TYSON CHANDLER COMPANY**
Production Budget
For the Two Months Ending February 28, 2010

	January	February
Expected unit sales.....	10,000	12,000
Add: Desired ending finished goods inventory.....	<u>3,000*</u>	<u>3,250*</u>
Total required units.....	13,000	15,250
Less: Beginning finished goods inventory.....	<u>2,500**</u>	<u>3,000</u>
Required production units.....	<u>10,500</u>	<u>12,250</u>

*25% X next month's expected sales

**25% X 10,000

EXERCISE 23-10 (Continued)

(b)

TYSON CHANDLER COMPANY
Direct Materials Budget
For the Month Ending January 31, 2010

	<u>January</u>
Units to be produced	10,500
Direct material pounds per unit	X 2
Total pounds needed for production	21,000
Add: Desired pounds in ending materials inventory.....	9,800*
Total materials required	30,800
Less: Beginning direct materials (pounds)	8,400**
Direct materials purchases	22,400
Cost per pound	X \$3
Total cost of direct materials purchases	<u>\$67,200</u>

*(12,250 X 2) X 40%

** (10,500 X 2) X 40%

EXERCISE 23-11

(a)

FUQUA COMPANY
Computation of Cost of Goods Sold
For the Year Ending December 31, 2010

Cost of one unit of finished goods:

Direct materials (2 X \$5)	\$10
Direct labor (3 X \$12)	36
Manufacturing overhead (3 X \$6)	18
Total	<u>\$64</u>

30,000 units X \$64 = \$1,920,000.

EXERCISE 23-11 (Continued)**(b)**

FOQUA COMPANY
Budgeted Income Statement
For the Year Ending December 31, 2010

Sales (30,000 X \$80)	\$2,400,000
Cost of goods sold (see part (a))	<u>1,920,000</u>
Gross profit	480,000
Selling and administrative expenses	<u>200,000</u>
Income before income taxes	280,000
Income tax expense (\$280,000 X 30%)	<u>84,000</u>
Net income	<u>\$ 196,000</u>

EXERCISE 23-12

GARZA COMPANY
Cash Budget
For the Two Months Ending February 28, 2010

	<u>January</u>	<u>February</u>
Beginning cash balance	\$ 46,000	\$ 26,000
Add: Receipts		
Collections from customers	85,000	150,000
Sale of marketable securities	<u>10,000</u>	<u>0</u>
Total receipts	<u>95,000</u>	<u>150,000</u>
Total available cash	<u>141,000</u>	<u>176,000</u>
Less: Disbursements		
Direct materials	50,000	70,000
Direct labor	30,000	45,000
Manufacturing overhead	20,000	24,000
Selling and administrative expenses	<u>15,000</u>	<u>20,000</u>
Total disbursements	<u>115,000</u>	<u>159,000</u>
Excess (deficiency) of available cash over cash disbursements	26,000	17,000
Financing		
Borrowings	0	3,000
Repayments	<u>0</u>	<u>0</u>
Ending cash balance	<u>\$ 26,000</u>	<u>\$ 20,000</u>

EXERCISE 23-13

PINK MARTINI CORPORATION
Cash Budget
For the Quarter Ended March 31, 2010

Beginning cash balance	<u>\$ 31,000</u>
Add: Receipts	
Collections from customers.....	180,000
Sale of equipment.....	<u>3,500</u>
Total receipts.....	<u>183,500</u>
Total available cash	<u>214,500</u>
Less: Disbursements	
Direct materials	41,000
Direct labor	70,000
Manufacturing overhead.....	35,000
Selling and administrative expense	45,000
Purchase of securities.....	<u>12,000</u>
Total disbursements.....	<u>203,000</u>
Excess of available cash over disbursements	11,500
Financing	
Borrowings	13,500
Repayments	<u>-0-</u>
Ending cash balance	<u><u>\$ 25,000</u></u>

EXERCISE 23-14**(a)****NIU COMPANY
Expected Collections from Customers**

	<u>March</u>
March cash sales (40% X \$270,000)	\$108,000
Collection of March credit sales	
[(60% X \$270,000) X 10%]	16,200
Collection of February credit sales	
[(60% X \$220,000) X 50%]	66,000
Collection of January credit sales	
[(60% X \$200,000) X 36%]	43,200
Total collections	<u>\$233,400</u>

(b)**NIU COMPANY
Expected Payments for Direct Materials**

	<u>March</u>
March cash purchases (50% X \$41,000)	\$20,500
Payment of March credit purchases	
[(50% X \$41,000) X 40%]	8,200
Payment of February credit purchases	
[(50% X \$35,000) X 60%]	10,500
Total payments	<u>\$39,200</u>

EXERCISE 23-15**(a) (1)**

ENVIRONMENTAL LANDSCAPING INC.
Schedule of Expected Collections From Clients
For the Quarter Ending March 31, 2010

	<u>January</u>	<u>February</u>	<u>March</u>	<u>Quarter</u>
November (\$90,000)	\$ 9,000			\$ 9,000
December (\$80,000)	24,000	\$ 8,000		32,000
January (\$100,000)	60,000	30,000	\$ 10,000	100,000
February (\$120,000)		72,000	36,000	108,000
March (\$130,000)			78,000	78,000
Total collections	<u>\$93,000</u>	<u>\$110,000</u>	<u>\$124,000</u>	<u>\$327,000</u>

(2)

ENVIRONMENTAL LANDSCAPING INC.
Schedule of Expected Payments for Landscaping Supplies
For the Quarter Ending March 31, 2010

	<u>January</u>	<u>February</u>	<u>March</u>	<u>Quarter</u>
December (\$14,000)	\$ 8,400			\$ 8,400
January (\$12,000)	4,800	\$ 7,200		12,000
February (\$15,000)		6,000	\$ 9,000	15,000
March (\$18,000)			7,200	7,200
Total payments	<u>\$13,200</u>	<u>\$13,200</u>	<u>\$16,200</u>	<u>\$42,600</u>

(b) (1) Accounts receivable at March 31, 2010: (\$120,000 X 10%) + (\$130,000 X 40%) = \$64,000

(2) Accounts payable at March 31, 2010: (\$18,000 X 60%) = \$10,800

DONNEGAL DENTAL CLINIC
Cash Budget
For the Two Quarters Ending June 30, 2010

	<u>1st Quarter</u>	<u>2nd Quarter</u>
Beginning cash balance.....	<u>\$ 30,000</u>	<u>\$ 25,000</u>
Add: Receipts		
Collections from clients	230,000	380,000
Sale of equipment	15,000	0
Investment interest	<u>0</u>	<u>5,000</u>
Total receipts.....	<u>245,000</u>	<u>385,000</u>
Total cash available	<u>275,000</u>	<u>410,000</u>
Less: Disbursements		
Professional salaries	140,000	140,000
Overhead costs	75,000	100,000
Selling and administrative costs	47,000*	67,000**
Equipment purchase	0	50,000
Payment of income taxes.....	<u>0</u>	<u>4,000</u>
Total disbursements	<u>262,000</u>	<u>361,000</u>
Excess (deficiency) of cash available		
over cash disbursements	13,000	49,000
Financing		
Borrowings	12,000	0
Repayments.....	<u>0</u>	<u>12,300</u>
Ending cash balance.....	<u>\$ 25,000</u>	<u>\$ 36,700</u>

*\$50,000 – \$3,000

**\$70,000 – \$3,000

EXERCISE 23-17

(a)

DALBY STORES
Merchandise Purchases Budget
For the Month Ending June 30, 2010

Budgeted cost of goods sold (\$500,000 X 70%)	\$350,000
Add: Desired ending merchandise inventory	
 (\$600,000 X 70% X 40%).....	<u>168,000</u>
Total	<u>518,000</u>
Less: Beginning merchandise inventory	
 (\$350,000 X 40%).....	<u>140,000</u>
Required merchandise purchases	<u><u>\$378,000</u></u>

(b)

DALBY STORES
Budgeted Income Statement
For the Month Ending June 30, 2010

Sales	\$500,000
Cost of goods sold (70% X \$500,000).....	<u>350,000</u>
Gross profit	<u><u>\$150,000</u></u>

SOLUTIONS TO PROBLEMS

PROBLEM 23-1A

DANNER FARM SUPPLY COMPANY Sales Budget For the Six Months Ending June 30, 2011

	Quarter		Six Months
	1	2	
Expected unit sales	28,000	42,000	70,000
Unit selling price.....	X \$60	X \$60	X \$60
Total sales.....	<u>\$1,680,000</u>	<u>\$2,520,000</u>	<u>\$4,200,000</u>

DANNER FARM SUPPLY COMPANY Production Budget For the Six Months Ending June 30, 2011

	Quarter		Six Months
	1	2	
Expected unit sales.....	28,000	42,000	
Add: Desired ending finished goods units	<u>12,000</u>	<u>18,000</u>	
Total required units.....	40,000	60,000	
Less: Beginning finished goods units	<u>8,000</u>	<u>12,000</u>	
Required production units	<u>32,000</u>	<u>48,000</u>	<u>80,000</u>

PROBLEM 23-1A (Continued)

DANNER FARM SUPPLY COMPANY
Direct Materials Budget—Gumm
For the Six Months Ending June 30, 2011

	<u>Quarter</u>		<u>Six Months</u>
	<u>1</u>	<u>2</u>	
Units to be produced	32,000	48,000	
Direct materials per unit	<u>X 4</u>	<u>X 4</u>	
Total pounds needed for production	128,000	192,000	
Add: Desired ending direct materials (pounds)	<u>10,000</u>	<u>13,000</u>	
Total materials required	138,000	205,000	
Less: Beginning direct materials (pounds)	<u>9,000</u>	<u>10,000</u>	
Direct materials purchases	129,000	195,000	
Cost per pound	<u>X \$4</u>	<u>X \$4</u>	
Total cost of direct materials purchases	<u>\$516,000</u>	<u>\$780,000</u>	<u>\$1,296,000</u>

DANNER FARM SUPPLY COMPANY
Direct Labor Budget
For the Six Months Ending June 30, 2011

	<u>Quarter</u>		<u>Six Months</u>
	<u>1</u>	<u>2</u>	
Units to be produced	32,000	48,000	
Direct labor time (hours) per unit	<u>X 1/4</u>	<u>X 1/4</u>	
Total required direct labor hours	8,000	12,000	
Direct labor cost per hour	<u>X \$14</u>	<u>X \$14</u>	
Total direct labor cost	<u>\$112,000</u>	<u>\$168,000</u>	<u>\$280,000</u>

PROBLEM 23-1A (Continued)

DANNER FARM SUPPLY COMPANY
Selling and Administrative Expense Budget
For the Six Months Ending June 30, 2011

	Quarter		Six Months
	1	2	
Budgeted sales in units	28,000	42,000	70,000
Variable (.15 X sales)	\$252,000	\$378,000	\$630,000
Fixed.....	175,000	175,000	350,000
Total	<u>\$427,000</u>	<u>\$553,000</u>	<u>\$980,000</u>

DANNER FARM SUPPLY COMPANY
Budgeted Income Statement
For the Six Months Ending June 30, 2011

Sales.....	\$4,200,000
Cost of goods sold (70,000 X \$33.75)*	<u>2,362,500</u>
Gross profit.....	1,837,500
Selling and administrative expenses	<u>980,000</u>
Income from operations	857,500
Income tax expense (30%).....	<u>257,250</u>
Net income	<u>\$ 600,250</u>

***Cost Per Bag**

Cost Element	Quantity	Unit Cost	Total
Direct materials			
Gumm	4 pounds	\$ 4.00	\$16.00
Tarr	6 pounds	1.50	9.00
Direct labor.....	1/4 hour	14.00	3.50
Manufacturing overhead			
(150% of direct labor cost)			<u>5.25</u>
Total			<u>\$33.75</u>

PROBLEM 23-2A

(a) **LARUSSA INC.**
Sales Budget
For the Year Ending December 31, 2011

	<u>JB 50</u>	<u>JB 60</u>	<u>Total</u>
Expected unit sales.....	400,000	200,000	
Unit selling price	<u>X \$20</u>	<u>X \$25</u>	
Total sales	<u>\$8,000,000</u>	<u>\$5,000,000</u>	<u>\$13,000,000</u>

(b) **LARUSSA INC.**
Production Budget
For the Year Ending December 31, 2011

	<u>JB 50</u>	<u>JB 60</u>	<u>Total</u>
Expected unit sales	400,000	200,000	
Add: Desired ending finished goods units	<u>25,000</u>	<u>15,000</u>	
Total required units	425,000	215,000	
Less: Beginning finished goods units.....	<u>30,000</u>	<u>10,000</u>	
Required production units	<u>395,000</u>	<u>205,000</u>	<u>600,000</u>

PROBLEM 23-2A (Continued)**(c)**

LARUSSA INC.
Direct Materials Budget
For the Year Ending December 31, 2011

	<u>JB 50</u>	<u>JB 60</u>	<u>Total</u>
Units to be produced.....	395,000	205,000	
Direct materials per unit.....	<u>X 2</u>	<u>X 3</u>	
Total pounds needed for production	790,000	615,000	
Add: Desired ending direct materials (pounds).....	<u>30,000</u>	<u>15,000</u>	
Total materials required	820,000	630,000	
Less: Beginning direct materials (pounds)	<u>40,000</u>	<u>10,000</u>	
Direct materials purchases	780,000	620,000	
Cost per pound.....	<u>X \$3</u>	<u>X \$4</u>	
Total cost of direct materials purchases	<u>\$2,340,000</u>	<u>\$2,480,000</u>	<u>\$4,820,000</u>

(d)

LARUSSA INC.
Direct Labor Budget
For the Year Ending December 31, 2011

	<u>JB 50</u>	<u>JB 60</u>	<u>Total</u>
Units to be produced.....	395,000	205,000	
Direct labor time (hours) per unit	<u>X .4</u>	<u>X .6</u>	
Total required direct labor hours	158,000	123,000	
Direct labor cost per hour	<u>X \$12</u>	<u>X \$12</u>	
Total direct labor cost.....	<u>\$1,896,000</u>	<u>\$1,476,000</u>	<u>\$3,372,000</u>

PROBLEM 23-2A (Continued)

(e)

LARUSSA INC.
Budgeted Income Statement
For the Year Ending December 31, 2011

	<u>JB 50</u>	<u>JB 60</u>	<u>Total</u>
Sales	\$8,000,000	\$5,000,000	\$13,000,000
Cost of goods sold.....	<u>4,800,000</u> ⁽¹⁾	<u>4,200,000</u> ⁽²⁾	<u>9,000,000</u>
Gross profit	<u>3,200,000</u>	<u>800,000</u>	<u>4,000,000</u>
Operating expenses			
Selling expenses	660,000	360,000	1,020,000
Administrative			
expenses	<u>540,000</u>	<u>340,000</u>	<u>880,000</u>
Total operating			
expenses	<u>1,200,000</u>	<u>700,000</u>	<u>1,900,000</u>
Income before income			
taxes	<u>\$2,000,000</u>	<u>\$ 100,000</u>	2,100,000
Income tax expense			
(30%)			<u>630,000</u>
Net income.....			<u>\$ 1,470,000</u>

⁽¹⁾400,000 X \$12.

⁽²⁾200,000 X \$21.

PROBLEM 23-3A

(a)

COLT INDUSTRIES **Sales Budget** **For the Year Ending December 31, 2011**

	<u>Plan A</u>	<u>Plan B</u>
Expected unit sales	760,000 ⁽¹⁾	950,000 ⁽²⁾
Unit selling price	X \$8.40	X \$7.50
Total sales	<u>\$6,384,000</u>	<u>\$7,125,000</u>

⁽¹⁾\$6,400,000 ÷ \$8 = 800,000 X 95% = 760,000.

⁽²⁾800,000 + 150,000 = 950,000.

(b)

COLT INDUSTRIES **Production Budget** **For the Year Ending December 31, 2011**

	<u>Plan A</u>	<u>Plan B</u>
Expected unit sales	760,000	950,000
Add: Desired ending finished goods units	38,000 ⁽¹⁾	50,000
Total required units	798,000	1,000,000
Less: Beginning finished goods units	40,000	40,000
Required production units	<u>758,000</u>	<u>960,000</u>

⁽¹⁾760,000 X 5%

(c) Variable costs = \$5.00 per unit (\$1.80 + \$2.00 + \$1.20) for both plans.

	<u>Plan A</u>	<u>Plan B</u>
Total variable costs	\$3,790,000 (758,000 X \$5.00)	\$4,800,000 (960,000 X \$5.00)
Total fixed costs	<u>1,895,000</u>	<u>1,895,000</u>
Total costs (a)	<u>\$5,685,000</u>	<u>\$6,695,000</u>
 Total units (b)	 <u>758,000</u>	 <u>960,000</u>
Unit cost (a) ÷ (b)	<u>\$7.50</u>	<u>\$6.97</u>

The difference is due to the fact that fixed costs are spread over a larger number of units (202,000) in Plan B.

PROBLEM 23-3A (Continued)

(d)

Gross Profit

	<u>Plan A</u>	<u>Plan B</u>
Sales	\$6,384,000	\$7,125,000
Cost of goods sold	<u>5,700,000</u> (760,000 X \$7.50)	<u>6,621,500</u> (950,000 X \$6.97)
Gross profit	<u>\$ 684,000</u>	<u>\$ 503,500</u>

Plan A should be accepted because it produces a higher gross profit than Plan B.

PROBLEM 23-4A**(a) (1) Expected Collections from Customers**

	<u>January</u>	<u>February</u>
November (\$260,000).....	\$ 52,000	\$ 0
December (\$320,000).....	96,000	64,000
January (\$350,000).....	175,000	105,000
February (\$400,000)		200,000
Total collections.....	<u>\$323,000</u>	<u>\$369,000</u>

(2) Expected Payments for Direct Materials

	<u>January</u>	<u>February</u>
December (\$100,000).....	\$ 40,000	\$ 0
January (\$110,000).....	66,000	44,000
February (\$130,000)		78,000
Total payments.....	<u>\$106,000</u>	<u>\$122,000</u>

(b)

HAAS COMPANY
Cash Budget
For the Two Months Ending February 28, 2011

	<u>January</u>	<u>February</u>
Beginning cash balance.....	\$ 60,000	\$ 54,000
Add: Receipts		
Collections from customers.....	323,000	369,000
[See Schedule (1)]		
Notes receivable	15,000	
Sale of securities		6,000
Total receipts	<u>338,000</u>	<u>375,000</u>
Total available cash.....	<u>398,000</u>	<u>429,000</u>
Less: Disbursements		
Direct materials.....	106,000	122,000
[See Schedule 2]		
Direct labor.....	90,000	100,000
Manufacturing overhead.....	70,000	75,000
Selling and administrative		
expenses*	78,000	85,000
Withdrawal by owner		5,000
Total disbursements	<u>344,000</u>	<u>387,000</u>
Excess (deficiency) of available cash		
over cash disbursements.....	54,000	42,000
Financing		
Borrowings.....	0	8,000
Repayments	0	0
Ending cash balance	<u>\$ 54,000</u>	<u>\$ 50,000</u>

***Selling and administrative expenses less \$1,000 depreciation.**

PROBLEM 23-5A

(a)

DELEON COMPANY
San Miguel Store
Merchandise Purchases Budget
For the Months of May and June, 2011

	<u>May</u>	<u>June</u>
Budgeted cost of goods sold	\$600,000	\$660,000 ⁽¹⁾
Add: Desired ending merchandise inventory	<u>132,000</u> ⁽²⁾	<u>145,200</u> ⁽³⁾
Total	732,000	805,200
Less: Beginning merchandise inventory	<u>120,000</u> ⁽⁴⁾	<u>132,000</u>
Required merchandise purchases	<u>\$612,000</u>	<u>\$673,200</u>

⁽¹⁾ \$800,000 X 110% = \$880,000; \$880,000 X 75% = \$660,000.

⁽²⁾ \$660,000 X 20% = \$132,000.

⁽³⁾ \$880,000 X 110% = \$968,000; \$968,000 X 75% = \$726,000; \$726,000 X 20% = \$145,200.

⁽⁴⁾ \$600,000 X 20% = \$120,000.

(b)

DELEON COMPANY
San Miguel Store
Budgeted Income Statement
For the Months of May and June, 2011

	<u>May</u>	<u>June</u>
Sales	<u>\$800,000</u>	<u>\$880,000</u>
Cost of goods sold		
Beginning inventory	120,000	132,000
Purchases	612,000	673,200
Cost of goods available for sale	732,000	805,200
Less: Ending inventory	132,000	145,200
Cost of goods sold	<u>600,000</u>	<u>660,000</u>
Gross profit	<u>200,000</u>	<u>220,000</u>
Operating expenses		
Sales salaries	30,000	30,000
Advertising*	40,000	44,000
Delivery**	24,000	26,400
Sales commissions***	32,000	35,200
Rent	5,000	5,000
Depreciation	800	800
Utilities	600	600
Insurance	500	500
Total	<u>132,900</u>	<u>142,500</u>
Income from operations	<u>67,100</u>	<u>77,500</u>
Income tax expense (30%)	<u>20,130</u>	<u>23,250</u>
Net income	<u>\$ 46,970</u>	<u>\$ 54,250</u>

*5% of sales.

**3% of sales.

***4% of sales.

PROBLEM 23-6A

GLENDI INDUSTRIES
Budgeted Income Statement
For the Year Ending December 31, 2011

Sales (8,000 X \$35)		\$280,000
Cost of goods sold		
Finished goods inventory, January 1	\$ 30,000	
Cost of goods manufactured		
(\$69,400 + \$56,600 + \$54,000).....	180,000	
Cost of goods available for sale	210,000	
Finished goods inventory, December 31		
(3,000 X \$20).....	60,000	
Cost of goods sold		150,000
Gross profit.....		130,000
Selling and administrative expenses		76,000
Income from operations		54,000
Interest expense.....		3,500
Income before income taxes.....		50,500
Income tax expense (30%).....		15,150
Net income		\$ 35,350

GLENDO INDUSTRIES
Budgeted Balance Sheet
December 31, 2011

Assets		
Current assets		
Cash.....	\$ 7,950	
Accounts receivable (\$84,000 X 40%)	33,600	
Finished goods inventory		
(3,000 units X \$20)	<u>60,000</u>	
Total current assets		\$101,550
Property, plant, and equipment		
Equipment (\$40,000 + \$19,000).....	\$59,000	
Less: Accumulated depreciation		
(\$10,000 + \$4,000)	<u>14,000</u>	<u>45,000</u>
Total assets		<u>\$146,550</u>
Liabilities and Stockholders' Equity		
Liabilities		
Notes payable (\$25,000 – \$8,000).....	\$17,000	
Accounts payable (\$8,500* + \$5,700).....	14,200	
Income taxes payable	<u>5,000</u>	
Total liabilities		\$ 36,200
Stockholders' equity		
Common stock.....	\$50,000	
Retained earnings		
(\$30,000 + \$35,350 – \$5,000).....	<u>60,350</u>	
Total stockholders' equity		<u>110,350</u>
Total liabilities and stockholders'		
equity		<u>\$146,550</u>

*\$17,000 X 50%

PROBLEM 23-1B

SUPPAN FARM SUPPLY COMPANY
Sales Budget
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Expected unit sales	40,000	50,000	90,000
Unit selling price	X \$65	X \$65	X \$65
Total sales	<u>\$2,600,000</u>	<u>\$3,250,000</u>	<u>\$5,850,000</u>

SUPPAN FARM SUPPLY COMPANY
Production Budget
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Expected unit sales	40,000	50,000	
Add: Desired ending finished goods units	<u>15,000</u>	<u>20,000</u>	
Total required units	55,000	70,000	
Less: Beginning finished goods units	<u>10,000</u>	<u>15,000</u>	
Required production units	<u>45,000</u>	<u>55,000</u>	<u>100,000</u>

PROBLEM 23-1B (Continued)

SUPPAN FARM SUPPLY COMPANY
Direct Materials Budget—Crup
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Units to be produced	45,000	55,000	
Direct materials per unit	X 6	X 6	
Total pounds needed for production	270,000	330,000	
Add: Desired ending direct materials (pounds)	12,000	15,000	
Total materials required	282,000	345,000	
Less: Beginning direct materials (pounds)	9,000	12,000	
Direct materials purchases	273,000	333,000	
Cost per pound	X \$4	X \$4	
Total cost of direct materials purchases	<u>\$1,092,000</u>	<u>\$1,332,000</u>	<u>\$2,424,000</u>

SUPPAN FARM SUPPLY COMPANY
Direct Labor Budget
For the Six Months Ending June 30, 2010

	Quarter		Six Months
	1	2	
Units to be produced	45,000	55,000	
Direct labor time (hours) per unit	X .25	X .25	
Total required direct labor hours	11,250	13,750	
Direct labor cost per hour	X \$10	X \$10	
Total direct labor cost	<u>\$112,500</u>	<u>\$137,500</u>	<u>\$250,000</u>

SUPPAN FARM SUPPLY COMPANY
Selling and Administrative Expense Budget
For the Six Months Ending June 30, 2010

	<u>Quarter</u>		<u>Six Months</u>
	<u>1</u>	<u>2</u>	
Budgeted sales in units	40,000	50,000	90,000
Variable (.10 X sales)	\$260,000	\$325,000	\$585,000
Fixed	160,000	160,000	320,000
Total	<u>\$420,000</u>	<u>\$485,000</u>	<u>\$905,000</u>

SUPPAN FARM SUPPLY COMPANY
Budgeted Income Statement
For the Six Months Ending June 30, 2010

Sales.....	\$5,850,000
Cost of goods sold (90,000 X \$44)	<u>3,960,000</u>
Gross profit.....	1,890,000
Selling and administrative expenses	<u>905,000</u>
Income from operations	985,000
Income tax expense (30%).....	<u>295,500</u>
Net income	<u>\$ 689,500</u>

Cost Per Bag

<u>Cost Element</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total</u>
Direct materials			
Crup.....	6 pounds	\$ 4.00	\$24.00
Dert	10 pounds	1.50	15.00
Direct labor	.25 hour	10.00	2.50
Manufacturing overhead (100% of direct labor cost).....			<u>2.50</u>
Total			<u>\$44.00</u>

PROBLEM 23-2B

(a) **DURHAM INC.**
Sales Budget
For the Year Ending December 31, 2010

	<u>LN 35</u>	<u>LN 40</u>	<u>Total</u>
Expected unit sales	400,000	240,000	
Unit selling price.....	X \$25	X \$35	
Total sales.....	<u>\$10,000,000</u>	<u>\$8,400,000</u>	<u>\$18,400,000</u>

(b) **DURHAM INC.**
Production Budget
For the Year Ending December 31, 2010

	<u>LN 35</u>	<u>LN 40</u>	<u>Total</u>
Expected unit sales	400,000	240,000	
Add: Desired ending finished goods units	<u>30,000</u>	<u>25,000</u>	
Total required units	430,000	265,000	
Less: Beginning finished goods units.....	<u>20,000</u>	<u>15,000</u>	
Required production units	<u>410,000</u>	<u>250,000</u>	<u>660,000</u>

PROBLEM 23-2B (Continued)**(c)**

DURHAM INC.
Direct Materials Budget
For the Year Ending December 31, 2010

	<u>LN 35</u>	<u>LN 40</u>	<u>Total</u>
Units to be produced.....	410,000	250,000	
Direct materials per unit.....	<u>X 2</u>	<u>X 3</u>	
Total pounds needed for production.....	820,000	750,000	
Add: Desired ending direct materials (pounds).....	<u>50,000</u>	<u>20,000</u>	
Total materials required	870,000	770,000	
Less: Beginning direct materials (pounds).....	<u>40,000</u>	<u>10,000</u>	
Direct materials purchases	830,000	760,000	
Cost per pound.....	<u>X \$2</u>	<u>X \$3</u>	
Total cost of direct materials purchases	<u>\$1,660,000</u>	<u>\$2,280,000</u>	<u>\$3,940,000</u>

(d)

DURHAM INC.
Direct Labor Budget
For the Year Ending December 31, 2010

	<u>LN 35</u>	<u>LN 40</u>	<u>Total</u>
Units to be produced.....	410,000	250,000	
Direct labor time (hours) per unit.....	<u>X .5</u>	<u>X .75</u>	
Total required direct labor hours	205,000	187,500	
Direct labor cost per hour	<u>X \$12</u>	<u>X \$12</u>	
Total direct labor cost.....	<u>\$2,460,000</u>	<u>\$2,250,000</u>	<u>\$4,710,000</u>

PROBLEM 23-2B (Continued)

(e)

DURHAM INC.
Budgeted Income Statement
For the Year Ending December 31, 2010

	<u>LN 35</u>	<u>LN 40</u>	<u>Total</u>
Sales	\$10,000,000	\$8,400,000	\$18,400,000
Cost of goods sold.....	<u>4,400,000</u>⁽¹⁾	<u>4,800,000</u>⁽²⁾	<u>9,200,000</u>
Gross profit	<u>5,600,000</u>	<u>3,600,000</u>	<u>9,200,000</u>
Operating expenses			
Selling expenses	750,000	590,000	1,340,000
Administrative			
expenses	<u>420,000</u>	<u>380,000</u>	<u>800,000</u>
Total operating			
expenses	<u>1,170,000</u>	<u>970,000</u>	<u>2,140,000</u>
Income before income			
taxes	<u>\$ 4,430,000</u>	<u>\$2,630,000</u>	7,060,000
Income tax expense			
(30%).....			<u>2,118,000</u>
Net income			<u>\$ 4,942,000</u>

⁽¹⁾400,000 X \$11.

⁽²⁾240,000 X \$20.

PROBLEM 23-3B

(a)

SPEIER INDUSTRIES Sales Budget For the Year Ending December 31, 2011

	Plan A	Plan B
Expected unit sales	720,000 ⁽¹⁾	900,000 ⁽²⁾
Unit selling price	X \$7.60	X \$6.65 ⁽³⁾
Total sales	<u>\$5,472,000</u>	<u>\$5,985,000</u>

⁽¹⁾800,000 X 90% = 720,000.

⁽²⁾800,000 + 100,000 = 900,000.

⁽³⁾\$7.00 X 95% = \$6.65.

(b)

SPEIER INDUSTRIES Production Budget For the Year Ending December 31, 2011

	Plan A	Plan B
Expected unit sales	720,000	900,000
Add: Desired ending finished goods units	90,000	100,000
Total required units	810,000	1,000,000
Less: Beginning finished goods units	70,000	70,000
Required production units	<u>740,000</u>	<u>930,000</u>

(c) Variable costs = \$4.00 per unit (\$2.00 + \$1.50 + \$.50) for both plans.

	Plan A	Plan B
Total variable costs	\$2,960,000 (740,000 X \$4.00)	\$3,720,000 (930,000 X \$4.00)
Total fixed costs	925,000	925,000
Total costs (a)	<u>\$3,885,000</u>	<u>\$4,645,000</u>
Total units (b)	<u>740,000</u>	<u>930,000</u>
Unit cost (a) ÷ (b)	<u>\$5.25</u>	<u>\$4.99</u>

The difference is due to the fact that fixed costs are spread over a larger number of units (190,000) in Plan B.

PROBLEM 23-3B (Continued)

(d)

Gross Profit

	<u>Plan A</u>	<u>Plan B</u>
Sales	\$5,472,000	\$5,985,000
Cost of goods sold	<u>3,780,000</u> (720,000 X \$5.25)	<u>4,491,000</u> (900,000 X \$4.99)
Gross profit	<u>\$1,692,000</u>	<u>\$1,494,000</u>

Plan A should be accepted because it produces a higher gross profit than Plan B.

PROBLEM 23-4B

(a) (1) Expected Collections from Customers

	<u>January</u>	<u>February</u>
November (\$200,000).....	\$ 20,000	\$ 0
December (\$280,000).....	84,000	28,000
January (\$350,000).....	210,000	105,000
February (\$400,000)		240,000
Total collections.....	<u>\$314,000</u>	<u>\$373,000</u>

(2) Expected Payments for Direct Materials

	<u>January</u>	<u>February</u>
December (\$90,000)	\$63,000	\$ 0
January (\$120,000).....	36,000	84,000
February (\$110,000)		33,000
Total payments.....	<u>\$99,000</u>	<u>\$117,000</u>

PROBLEM 23-4B (Continued)**(b)**

VIDRO COMPANY
Cash Budget
For the Two Months Ending February 28, 2011

	<u>January</u>	<u>February</u>
Beginning cash balance	\$ 50,000	\$ 48,000
Add: Receipts		
Collections from customers	314,000	373,000
[See Schedule (1)]		
Interest receivable.....	3,000	
Sale of securities.....		5,000
Total receipts.....	<u>317,000</u>	<u>378,000</u>
Total available cash.....	<u>367,000</u>	<u>426,000</u>
Less: Disbursements		
Direct materials	99,000	117,000
[See Schedule 2]		
Direct labor.....	85,000	115,000
Manufacturing overhead.....	60,000	75,000
Selling and administrative		
expenses	75,000	80,000
Purchase of land		20,000
Total disbursements	<u>319,000</u>	<u>407,000</u>
Excess (deficiency) of available cash		
over cash disbursements	48,000	19,000
Financing		
Borrowings.....	0	21,000
Repayments.....	<u>0</u>	<u>0</u>
Ending cash balance.....	<u>\$ 48,000</u>	<u>\$ 40,000</u>

PROBLEM 23-5B**(a)**

GUZMAN COMPANY
Westwood Store
Merchandise Purchases Budget
For the Months of July and August, 2010

	<u>July</u>	<u>August</u>
Budgeted cost of goods sold	\$240,000	\$270,000
Add: Desired ending merchandise inventory	<u>54,000⁽¹⁾</u>	<u>60,000⁽²⁾</u>
Total.....	294,000	330,000
Less: Beginning merchandise inventory	<u>48,000⁽³⁾</u>	<u>54,000</u>
Required merchandise purchases	<u>\$246,000</u>	<u>\$276,000</u>

⁽¹⁾ \$270,000 X 20% = \$54,000.

⁽²⁾ \$500,000 X 60% = \$300,000; \$300,000 X 20% = \$60,000.

⁽³⁾ \$240,000 X 20% = \$48,000.

(b)

GUZMAN COMPANY
Westwood Store
Budgeted Income Statement
For the Months of July and August, 2010

	<u>July</u>	<u>August</u>
Sales	<u>\$400,000</u>	<u>\$450,000</u>
Cost of goods sold		
Beginning inventory	48,000	54,000
Purchases	246,000	276,000
Cost of goods available for sale	294,000	330,000
Less: Ending inventory	54,000	60,000
Cost of goods sold	<u>240,000</u>	<u>270,000</u>
Gross profit	<u>160,000</u>	<u>180,000</u>
Operating expenses		
Sales salaries	50,000	50,000
Advertising*	16,000	18,000
Delivery expense**	8,000	9,000
Sales commissions***	12,000	13,500
Rent	3,000	3,000
Depreciation	700	700
Utilities	500	500
Insurance	300	300
Total	<u>90,500</u>	<u>95,000</u>
Income from operations	<u>69,500</u>	<u>85,000</u>
Income tax expense (30%)	<u>20,850</u>	<u>25,500</u>
Net income	<u>\$ 48,650</u>	<u>\$ 59,500</u>

***4% of sales**

****2% of sales**

*****3% of sales**

- (a) The budget at Lanier Corporation is an imposed “top-down” budget which fails to consider both the need for realistic data and the human interaction essential to an effective budgeting/control process. The president has not given any basis for his goals, so one cannot know whether they are realistic for the company. True participation of company employees in preparation of the budget is minimal and limited to mechanical gathering and manipulation of data. This suggests there will be little enthusiasm for implementing the budget.

The budget process is the merging of the requirements of all facets of the company on a basis of sound judgment and equity. Specific instances of poor procedures other than the approach and goals include the following:

1. The sales by product line should be based upon an accurate sales forecast of potential market. Therefore, the sales by product line should have been developed first to derive the sales target rather than the reverse.
 2. Production costs probably would be the easiest and most certain costs to estimate. Given variable and fixed production costs, one could estimate the sales volume needed to cover manufacturing costs plus the costs of other aspects of the operation. This would be helpful before budgets for marketing costs and corporate office expenses are set.
 3. The initial meeting between the vice president of finance, executive vice president, marketing manager, and production manager should be held earlier. This meeting is held too late in the budgeting process.
- (b) Lanier Corporation should consider the adoption of a “bottom to top” (participative) budget process. This means that the people responsible for performance under the budget would participate in the decisions by which the budget is established. In addition, this approach requires initial and continuing involvement of sales, financial, and production personnel to define sales and profit goals which are realistic within the constraints under which management operates. Although time-consuming, the approach should produce a more acceptable, honest, and workable goal-control mechanism. It also provides for goal congruence possibilities for both individuals and departments within the firm.

The sales forecast should be developed considering internal sales forecasts as well as external factors. Costs within departments should be divided into fixed and variable, discretionary and nondiscretionary.

(c) The functional areas should not necessarily be expected to cut costs when sales volume falls below budget. The time frame of the budget (one year) is short enough so that many costs are relatively fixed in amount. For those costs which are fixed, there is little hope for a reduction as a consequence of short-run changes in volume. However, the functional areas should be expected to cut costs should sales volume fall below target when:

- 1. Control is exercised over the costs within their function.**
- 2. Budgeted costs were more than adequate for the originally targeted sales; i.e., slack was present.**
- 3. Budgeted costs vary to some extent with changes in sales.**
- 4. There are discretionary costs which can be delayed or omitted with no serious effect on the department.**

(CMA adapted)

(a) Direct materials	Either lower quality materials resulting in an inferior product and possible lost sales, or fewer units produced resulting in lost sales.
Direct labor	Reduced production resulting in lost sales, or reduction in quality of product resulting in lost sales.
Insurance	Less coverage; may increase risk beyond acceptable levels.
Depreciation	To reduce depreciation, fixed assets would have to be disposed of. Could result in less production and lost sales.
Machine repairs	Less efficient operations, or lost production and sales.
Sales salaries	Lost sales.
Office salaries	Less effective administrative functions.
Factory salaries	Lost production due to inefficiency, and therefore lost sales.
- (b) Given the nature of their product, a decline in quality should be avoided, since this could result in lower future sales. Direct materials represent the largest single cost, and thus perhaps the greatest potential savings. Perhaps substitute materials of similar quality can be found, or less expensive materials can be used for aspects of the product where quality is not as critical. Additionally, it may be possible to renegotiate prices with the supplier. Bedner & Flott should be very reluctant to reduce repair costs, since in the long run this can be very expensive. Perhaps salaried and hourly employees can be encouraged to take pay cuts if a profit-sharing mechanism is introduced.

- (a) The factors that affect the budgeting process at Network Computing Devices, Inc. are general economic conditions affecting industry demand for computer products, the timing and market acceptance of new products of the Company and its competitors, the timing of significant orders from large customers, periodic changes in product pricing and discounting due to competitive factors, and the availability of key product components (raw materials).

In addition, the budgeting process will be affected by the Company's success with its products, its product and customer mix, and the level of competition it experiences.

- (b) Internationally, third quarter sales are adversely affected because European customers reduce their business activity in August. In addition, international sales are denominated in U.S. dollars and any change in the value of the dollar relative to foreign currencies could make the Company's products more or less competitive in foreign markets.

Date 2011

**Mrs. Julie Fleming, CEO
Life Protection Products**

Dear Mrs. Fleming:

Allow me to congratulate you on the success of your new venture! The growth in sales you have experienced is phenomenal. You have managed the business side of the venture very well also. At the same time, I understand your concern about cash flow. You are selling these kits as fast as you can make them, and yet you are running out of cash.

There is a solution to your problem. Before describing that, it may be helpful for you to understand why this situation occurred. The primary reason is that you are purchasing kit supplies at least two months in advance of sales. As your business expands, these materials costs continue to increase. Sales do not “catch up” until the Drs. Fleming have a seminar. You did not describe in detail how often these seminars are, but I would guess that they tend to run in cycles rather than being regularly spaced.

Eventually, as sales stabilize, you will find that cash inflows exceed cash outflows, and your need for additional cash will subside. Presently, I think it would be a good idea to try to borrow additional funds. I have not seen all your financial data, but judging only from the cash budget you showed me, it appears that you have the basis of a very successful company. If so, your banker will be able to see the potential in your business and should be happy to provide the cash you need. You will need to prepare a full set of financial statements. I will be happy to assist you, if you desire.

There is also a possibility that you have underpriced your product. You are providing a valuable service in assembling this information and these materials. The fact that every seminar results in a sellout of the materials may mean that you have priced your product too low. I know that your husband wishes to have these materials available to every family, but increasing the price a little may not make the price too high, and would better compensate you for your efforts.

BYP 23-4 (Continued)

However, even if you raised prices, you will find that you need additional cash as long as the business continues to expand. It certainly does not mean that you and Amy are doing anything wrong. It just means that you will be investing additional funds as long as you continue to grow.

In my opinion, the best way to make sure these kits are available to as many families as possible is for you and Amy to have a consultant evaluate and determine the size of the market for you. Then you can decide whether to expand to meet the need, or whether to keep your own business small and allow competitors to imitate your product.

Congratulations again on a very successful product. Call or email this office if we may be of further assistance preparing financial statements or providing additional advice.

Sincerely,

**Ima Student
Best and Superior, Certified Public Accountants**

- (a) At best, if you disclose the errors in your calculations, you will be embarrassed. At worst, you will be dismissed without a recommendation for another job.**
- (b) The president will continue making presentations using data that are grossly overstated. In time, your error may be detected when the events you projected do not materialize.**
- (c) The most ethical scenario would be to admit your error, let the president know about the error, provide the president with corrected projections, and allow the president to decide how to alter his presentations during the second week of his speech-making.**

**Personal Budget
Typical Month**

Income:

Wages and bonuses	\$2,000	
Interest income	50	
Income subtotal	2,050	
Income taxes withheld	300	
Spendable income		\$1,750

Expenses:

Rent	400	
Utilities		
Electricity	22	
Telephone Internet	90	
Food:		
Groceries	80	
Eating out	150	
Insurance	100	
Transportation	150	
Student loans	275	
Entertainment/recreation	250	
Savings	50	
Miscellaneous	110	
Total investments and expenses		1,677
Surplus/Shortage		<u>\$ 73</u>

CHAPTER 24

Budgetary Control and Responsibility Accounting

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Describe the concept of budgetary control.	1, 2		3	1		
2. Evaluate the usefulness of static budget reports.	3, 4, 5	1, 2	3	1, 2, 8	3A	3B
3. Explain the development of flexible budgets and the usefulness of flexible budget reports.	6, 7, 8, 9, 10, 11, 12	3, 4, 5	6	1, 3, 4, 5, 6, 7, 8, 9, 10	1A, 2A, 3A	1B, 2B, 3B
4. Describe the concept of responsibility accounting.	13, 14, 15, 16, 17, 18, 24		7	11	6A	
5. Indicate the features of responsibility reports for cost centers.	19	6		7, 9, 12		
6. Identify the content of responsibility reports for profit centers.	20, 21	7		13, 14	4A	4B
7. Explain the basis and formula used in evaluating performance in investment centers.	22, 23, 24	8, 9, 10		14, 15, 16, 17	5A	5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare flexible budget and budget report for manufacturing overhead.	Simple	20–30
2A	Prepare flexible budget, budget report, and graph for manufacturing overhead.	Moderate	30–40
3A	State total budgeted cost formula, and prepare flexible budget reports for two time periods.	Simple	20–30
4A	Prepare responsibility report for a profit center.	Moderate	20–30
5A	Prepare responsibility report for an investment center, and compute ROI.	Moderate	40–50
6A	Prepare reports for cost centers under responsibility accounting, and comment on performance of managers.	Moderate	40–50
1B	Prepare flexible budget and budget report for manufacturing overhead.	Simple	20–30
2B	Prepare flexible budget, budget report, and graph for manufacturing overhead.	Moderate	30–40
3B	State total budgeted cost formula, and prepare flexible budget reports for two time periods.	Simple	20–30
4B	Prepare responsibility report for a profit center.	Moderate	20–30
5B	Prepare responsibility report for an investment center, and compute ROI.	Moderate	40–50

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 24
BUDGETARY CONTROL AND RESPONSIBILITY
ACCOUNTING

Number	SO	BT	Difficulty	Time (min.)
BE1	2	AP	Simple	2–4
BE2	2	AP	Simple	4–6
BE3	3	E	Simple	6–8
BE4	3	AP	Simple	6–8
BE5	3	AN	Simple	6–8
BE6	5	AP	Simple	4–6
BE7	6	AP	Simple	5–7
BE8	7	AP	Simple	6–8
BE9	7	AP	Simple	4–6
BE10	7	AP	Simple	6–8
DI1	3	AP	Simple	3–5
DI2	3	AP	Simple	6–8
DI3	6	AP	Simple	4–6
DI4	7	AP	Simple	6–8
EX1	1, 2, 3	K	Simple	6–8
EX2	2	AN	Simple	8–10
EX3	3	AP	Simple	8–10
EX4	3	AN	Moderate	12–15
EX5	3	AP	Simple	8–10
EX6	3	AN	Moderate	10–12
EX7	3, 5	AP	Simple	10–12
EX8	3	E	Moderate	8–10
EX9	3, 5	AP	Simple	10–12
EX10	3	AP	Simple	10–12
EX11	4	AP	Simple	10–12
EX12	5	AN	Simple	8–10
EX13	6	AN	Moderate	10–12
EX14	6, 7	AP	Simple	8–10
EX15	7	AP	Simple	8–10
EX16	7	AP	Simple	12–15
EX17	7	AN	Moderate	8–10

BUDGETARY CONTROL AND RESPONSIBILITY ACCOUNTING (Continued)

Number	SO	BT	Difficulty	Time (min.)
P1A	3	AN	Simple	20–30
P2A	3	E	Moderate	30–40
P3A	2, 3	AN	Simple	20–30
P4A	6	AN	Moderate	20–30
P5A	7	E	Moderate	40–50
P6A	4	AN	Moderate	40–50
P1B	3	AN	Simple	20–30
P2B	3	E	Moderate	30–40
P3B	2, 3	AN	Simple	20–30
P4B	6	AN	Moderate	20–30
P5B	7	E	Moderate	40–50
BYP1	2, 3	S, E	Moderate	25–30
BYP2	3, 4	S, E	Moderate	15–20
BYP3	1	AN, E	Simple	5–10
BYP4	3	AP	Simple	15–20
BYP5	4, 5	AN, S	Moderate	20–25
BYP6	7	AN, E	Simple	10–15
BYP7	—	E	Simple	10–15

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Describe the concept of budgetary control.	E24-1	Q24-1 Q24-2				
2. Evaluate the usefulness of static budget reports.	E24-1	Q24-3 Q24-4 Q24-5	BE24-1 BE24-2	E24-2 P24-3A P24-3B		E24-8
3. Explain the development of flexible budgets and the usefulness of flexible budget reports.	Q24-9 Q24-12 E24-1	Q24-6 Q24-7 Q24-8 Q24-10	Q24-11 BE24-4 DI24-1 DI24-2 E24-3	BE24-5 E24-4 E24-6 P24-1A P24-3A	P24-1B P24-3B	BE24-3 E24-8 P24-2A P24-2B
4. Describe the concept of responsibility accounting.		Q24-13 Q24-14 Q24-15 Q24-16	E24-11	P24-6A		
5. Indicate the features of responsibility reports for cost centers.	Q24-19		BE24-6 E24-7 E24-9	E24-12		
6. Identify the content of responsibility reports for profit centers.		Q24-20 Q24-21	BE24-7 DI24-3 E24-14	E24-13 P24-4A P24-4B		
7. Explain the basis and formula used in evaluating performance in investment centers.		Q24-22 Q24-23 Q24-24	BE24-8 BE24-9 BE24-10 DI24-4	E24-17		P24-5A P24-5B
Broadening Your Perspective			Exploring the Web	Real-World Focus Ethics Case Communication	Communication Manag. Analysis Decision Making Across the Organization	All About You Decision Making Across the Organization Ethics Case Manag. Analysis Real-World Focus

ANSWERS TO QUESTIONS

1. (a) Budgetary control is the use of budgets in controlling operations.
 (b) The steps in budgetary control are:
 - (1) Develop the planned objectives (budget).
 - (2) Analyze differences between actual and budgeted results.
 - (3) Take corrective action.
 - (4) Modify future plans, if necessary.

2. Purpose	Name of Report	Frequency	Primary Recipient(s)
(a)	Scrap	Daily	Production manager
(b)	Departmental overhead costs	Monthly	Department manager
(c)	Income statement	Monthly and Quarterly	Top management

3. The budget report for the second quarter can include year-to-date information as well as data for the second quarter.
4. There is no justification for Joe's concern. The sales budget is derived from the sales forecast and it represents management's best estimate of sales. Thus, it is a useful basis for evaluating sales performance.
5. A static budget is an appropriate basis for evaluating a manager's effectiveness in controlling costs when:
 - (1) The actual level of activity closely approximates the master budget activity level and/or
 - (2) The behavior of the costs in response to changes in activity is fixed.
6. Yes, this is true. A flexible budget is a series of static budgets at different levels of activity.
7. The performance is unfavorable. The budgeted indirect labor cost in the static budget is \$1.35 per direct labor hour ($\$54,000 \div 40,000$). At 45,000 direct labor hours, budgeted costs are \$60,750 ($45,000 \times \$1.35$). Thus, indirect labor is \$4,250 over budget ($\$65,000 - \$60,750$).
8. The performance is favorable. Factory insurance is a fixed cost. At 50,000 direct labor hours, the budgeted cost is still \$6,500. Thus, factory insurance is \$300 under budget ($\$6,500 - \$6,200$).
9. The steps in preparing a flexible budget are:
 - (1) Identify the activity index and the relevant range of activity.
 - (2) Identify the variable costs and determine the budgeted variable cost per unit of activity for each cost.
 - (3) Identify the fixed costs and determine the budgeted amount for each cost.
 - (4) Prepare the budget for selected increments of activity within the relevant range.
10. Alou Company can say that total budgeted costs are \$25,000 fixed plus \$6 per direct labor hour [$(\$85,000 - \$25,000) \div 10,000$].
11. (a) At 9,000 hours, total budgeted costs are \$76,000, or $[\$40,000 + (\$4 \times 9,000)]$.
 (b) At 12,345 hours, total budgeted costs are \$89,380, or $[\$40,000 + (\$4 \times 12,345)]$.

12. Management by exception means that top management's review of a budget report is focused either entirely or primarily on differences between actual results and planned objectives. The criteria for identifying exceptions are materiality and controllability of the item.
13. Responsibility accounting is a method of controlling operations that involves accumulating and reporting costs (and revenues, where relevant) on the basis of the manager who has the authority to make the day-to-day decisions about the items. The purpose of responsibility accounting is to evaluate a manager's performance on the basis of matters directly under that manager's control.
14. Ann should know that the following conditions contribute to the effective use of responsibility accounting:
 - (1) Costs and revenues can be directly associated with the specific level of management responsibility.
 - (2) The costs and revenues are controllable at the level of responsibility with which they are associated.
 - (3) Budget data can be developed for evaluating the manager's effectiveness in controlling the costs and revenues.
15. A cost is controllable at a given level of managerial responsibility if the manager has the power to incur the cost within a given period of time. Most costs incurred directly are controllable, whereas costs incurred indirectly and allocated to a responsibility level are noncontrollable at that level.
16. Responsibility reports differ from budget reports in two respects: (1) a distinction is made between controllable and noncontrollable items and (2) performance reports either emphasize, or only include, items controllable by the individual manager.
17. Usually there is a relationship between a responsibility reporting system and a company's organization chart. In a responsibility reporting system, reports are prepared for each level of responsibility in the organization chart.
18. There are three types of responsibility centers:
 - (a) A cost center incurs costs (and expenses) but does not generate revenues.
 - (b) A profit center incurs costs (and expenses) and also generates revenues.
 - (c) An investment center incurs costs (and expenses), generates revenues, and controls the investment funds available for use.
19.
 - (a) Only controllable costs are included in a performance report for a cost center.
 - (b) Variable and fixed costs are not identified in the report.
20. Direct fixed costs relate specifically to one center and are incurred for the sole benefit of that center. An indirect fixed cost relates to the company's overall activities and is incurred for the benefit of more than one profit center. Both types of fixed costs are controllable. A direct fixed cost is controllable by a specific center manager and an indirect fixed cost is controllable by an officer higher up in the organization.
21. Controllable margin is contribution margin less controllable fixed costs in a profit center. The purpose of controllable margin is to provide a basis for evaluating the manager's effectiveness in controlling revenues and costs.

Questions Chapter 24 (Continued)

- 22.** The primary basis for evaluating the performance of the manager of an investment center is return on investment (ROI). The formula is: Controllable Margin divided by Average Operating Assets.
- 23.** ROI can be improved by: (1) increasing controllable margin and (2) reducing average operating assets. Controllable margin can be increased by increasing sales or by reducing variable and controllable fixed costs.
- 24.** (a) The manager being evaluated should have direct input into the process of establishing budget goals and have the opportunity to respond to the evaluation.
(b) Top management should make the evaluation entirely on matters controllable by the manager, and should fully support the evaluation process.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 24-1

VOORHEES COMPANY
Sales Budget Report
For the Quarter Ended March 31, 2010

<u>Product Line</u>	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
Garden-Tools	\$310,000	\$304,000	\$6,000 U

BRIEF EXERCISE 24-2

VOORHEES COMPANY
Sales Budget Report
For the Quarter Ended June 30, 2010

<u>Product Line</u>	<u>Second Quarter</u>			<u>Year to Date</u>		
	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
Garden-Tools	\$380,000	\$383,000	\$3,000 F	\$690,000	\$687,000	\$3,000 U

BRIEF EXERCISE 24-3

(a) **MUSSATTO COMPANY**
Direct Labor Static Budget Report
For the Month Ended January 31, 2010

	<u>Budget</u>		<u>Actual</u>	<u>Difference</u>
Direct Labor	\$200,000	(10,000 X \$20)	\$203,000	\$3,000 U

(b) **MUSSATTO COMPANY**
Direct Labor Flexible Budget Report
For the Month Ended January 31, 2010

	<u>Budget</u>		<u>Actual</u>	<u>Difference</u>
Direct Labor	\$208,000	(10,400 X \$20)	\$203,000	\$5,000 F

BRIEF EXERCISE 24-3 (Continued)

The static budget does not provide a proper basis for evaluating performance because the budget is not based on the hours actually worked. In contrast, the flexible budget provides the proper basis for evaluating performance because the budget is based on the hours actually worked.

BRIEF EXERCISE 24-4

HANNON COMPANY Monthly Manufacturing Flexible Budget For the Year 2010

Activity level			
Finished units	<u>80,000</u>	<u>100,000</u>	<u>120,000</u>
Variable costs			
Direct materials (\$4)	\$ 320,000	\$ 400,000	\$ 480,000
Direct labor (\$6)	480,000	600,000	720,000
Overhead (\$8)	<u>640,000</u>	<u>800,000</u>	<u>960,000</u>
Total variable costs (\$18)	<u>\$1,440,000</u>	<u>\$1,800,000</u>	<u>\$2,160,000</u>
Fixed costs			
Depreciation (1)	200,000	200,000	200,000
Supervision (2)	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
Total fixed costs	<u>300,000</u>	<u>300,000</u>	<u>300,000</u>
Total costs	<u>\$1,740,000</u>	<u>\$2,100,000</u>	<u>\$2,460,000</u>

(1) $\$2 \times 1,200,000 \div 12$

(2) $\$1 \times 1,200,000 \div 12$

BRIEF EXERCISE 24-5

HANNON COMPANY
Manufacturing Flexible Budget Report
For the Month Ended March 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
			<u>Favorable F</u> <u>Unfavorable U</u>
Units produced	<u>100,000</u>	<u>100,000</u>	
Variable costs			
Direct materials	\$ 400,000	\$ 425,000	\$25,000 U
Direct labor	600,000	590,000	10,000 F
Overhead	<u>800,000</u>	<u>805,000</u>	<u>5,000 U</u>
Total variable costs	<u>\$1,800,000</u>	<u>\$1,820,000</u>	<u>\$20,000 U</u>
Fixed costs			
Depreciation	200,000	200,000	<u>-0-</u>
Supervision	<u>100,000</u>	<u>100,000</u>	<u>-0-</u>
Total fixed costs	<u>300,000</u>	<u>300,000</u>	<u>-0-</u>
Total costs	<u>\$2,100,000</u>	<u>\$2,120,000</u>	<u>\$20,000 U</u>

Costs were not entirely controlled as evidence by the difference between budgeted and actual for the variable costs.

BRIEF EXERCISE 24-6

COBB COMPANY
Assembly Department
Responsibility Report
For the Month Ended April 30, 2010

<u>Controllable Cost</u>	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
			<u>Favorable F</u> <u>Unfavorable U</u>
Indirect materials	\$15,000	\$14,300	\$700 F
Indirect labor	20,000	20,600	600 U
Utilities	10,000	10,750	750 U
Supervision	<u>5,000</u>	<u>5,000</u>	<u>0</u>
	<u>\$50,000</u>	<u>\$50,650</u>	<u>\$650 U</u>

BRIEF EXERCISE 24-7

ECKERT MANUFACTURING COMPANY
Water Division
Responsibility Report
For the Year Ended December 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
			Favorable F Unfavorable U
Sales	\$2,000,000	\$2,080,000	\$80,000 F
Variable costs	<u>1,000,000</u>	<u>1,050,000</u>	<u>50,000 U</u>
Contribution margin	1,000,000	1,030,000	30,000 F
Controllable fixed costs	<u>300,000</u>	<u>310,000</u>	<u>10,000 U</u>
Controllable margin	<u>\$ 700,000</u>	<u>\$ 720,000</u>	<u>\$20,000 F</u>

BRIEF EXERCISE 24-8

KASPAR COMPANY
Plastics Division
Responsibility Report
For the Year Ended December 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
			Favorable F Unfavorable U
Contribution margin	\$700,000	\$715,000	\$15,000 F
Controllable fixed costs	<u>300,000</u>	<u>309,000</u>	<u>9,000 U</u>
Controllable margin	<u>\$400,000</u>	<u>\$406,000</u>	<u>\$ 6,000 F</u>
Return on investment	20%	20.3%	.3% F
	(\$400,000 ÷ \$2,000,000)	(\$406,000 ÷ \$2,000,000)	(\$6,000 ÷ \$2,000,000)

BRIEF EXERCISE 24-9

- I 24% (\$1,200,000 ÷ \$5,000,000)
- II 25% (\$2,000,000 ÷ \$8,000,000)
- III 32% (\$3,200,000 ÷ \$10,000,000)

BRIEF EXERCISE 24-10

- I A \$300,000 ($\$2,000,000 \times .15$) increase in sales will increase contribution margin and controllable margin \$225,000 ($\$300,000 \times 75\%$). The new ROI is 28.5% ($\$1,425,000 \div \$5,000,000$).
- II A decrease in costs results in a corresponding increase in controllable margin. The new ROI is 27.5% ($\$2,200,000 \div \$8,000,000$).
- III A decrease in average operating assets reduces the denominator. The new ROI is 33.3% ($\$3,200,000 \div \$9,600,000$).

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 24-1

Using the graph data, fixed costs are \$90,000, and variable costs are \$4 per direct labor hour [$(\$330,000 - \$90,000) \div 60,000$]. Thus, at 70,000 direct labor hours, total budgeted costs are \$370,000 [$\$90,000 + (70,000 \times \$4)$].

DO IT! 24-2

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
Units produced	<u>6,000 units</u>	<u>6,000 units</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Variable costs			
Direct materials	\$ 42,000	\$ 38,900	\$3,100 F
Direct labor	72,000	70,200	1,800 F
Overhead	<u>108,000</u>	<u>116,500</u>	<u>8,500 U</u>
Total variable costs	<u>222,000</u>	<u>225,600</u>	<u>3,600 U</u>
Fixed costs			
Depreciation	8,000	8,000	0
Supervision	<u>3,750</u>	<u>4,000</u>	<u>250 U</u>
Total fixed costs	<u>11,750</u>	<u>12,000</u>	<u>250 U</u>
Total costs	<u>\$233,750</u>	<u>\$237,600</u>	<u>\$3,850 U</u>

DO IT! 24-2 (Continued)

The responsibility report indicates that actual overhead was 7.9% over budget. This cost was not well-controlled and should be examined further. The other variable costs came in under budget. The direct materials cost was 7.4% under budget; Chickasaw should also investigate the cause of this difference, even though it is favorable. Finally, Chickasaw also should investigate the unfavorable difference in supervision (6.7%) to determine if the budget amount is out-of-date.

DO IT! 24-3

DEEP SOUTH DIVISION
Responsibility Report
For the Year Ended December 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Sales	\$2,000,000	\$1,800,000	\$200,000 U
Variable costs	800,000	750,000	50,000 F
Contribution margin	1,200,000	1,050,000	150,000 U
Controllable fixed costs	550,000	550,000	—0—
Controllable margin	<u>\$ 650,000</u>	<u>\$ 500,000</u>	<u>\$150,000 U</u>

DO IT! 24-4

(a) Return on investment for 2010

Sales	\$500,000
Variable costs	<u>300,000</u>
Contribution margin	200,000
Controllable fixed costs	<u>75,000</u>
Controllable margin	<u>\$125,000</u>

$$\text{Return on investment} = \frac{\$125,000}{\$450,000} = 27.8\%$$

Expected return on investment for alternative 1:

$$\frac{\$125,000}{\$400,000} = 31.3\%$$

Expected return on investment for alternative 2:

Sales (\$500,000 + 100,000)	\$600,000		
Variable costs			
(\$300,000/500,000 X \$600,000)	<u>360,000</u>		
Contribution margin	240,000		
Controllable fixed costs	<u>75,000</u>		
Controllable margin	<u>\$165,000</u>		
 Return on investment	 <u>\$165,000</u> <u>\$450,000</u>	 =	 36.7%

SOLUTIONS TO EXERCISES

EXERCISE 24-1

1. True.
2. False. Budget reports are prepared *as frequently as needed*.
3. True.
4. True.
5. False. Budgetary control works best when a company has *a formalized reporting system*.
6. False. The primary recipients of the sales report are the sales manager and top management.
7. True.
8. True.
9. False. Top management's reaction to unfavorable differences is *often* influenced by the materiality of the difference.
10. True.

EXERCISE 24-2

(a) **PARGO COMPANY**
Selling Expense Report
For March

Month	By Month			Year-to-Date		
	Budget	Actual	Difference	Budget	Actual	Difference
January	\$30,000	\$31,000	\$1,000 U	\$ 30,000	\$ 31,000	\$1,000 U
February	\$35,000	\$34,500	\$ 500 F	\$ 65,000	\$ 65,500	\$ 500 U
March	\$40,000	\$47,000	\$7,000 U	\$105,000	\$112,500	\$7,500 U

- (b) The purpose of the Selling Expense Report is to help management control selling expenses. The primary recipient is the sales manager.
- (c) Most likely, when management scrutinized the results for January and February, they would determine that the difference was insignificant (3.3% in January and 1.4% in February), and require no action. When the March results are examined, however, the fact that the difference is 17.5% of budget would probably cause management to investigate further. As a result of their investigation, management would either take corrective action or modify the amounts of budgeted selling expense for future months to reflect changing conditions.

EXERCISE 24-3

RANEY COMPANY
Monthly Manufacturing Overhead Flexible Budget
For the Year 2010

Activity level				
Direct labor hours	<u>7,000</u>	<u>8,000</u>	<u>9,000</u>	<u>10,000</u>
Variable costs				
Indirect labor (\$1)	\$ 7,000	\$ 8,000	\$ 9,000	\$10,000
Indirect materials (\$.50)	3,500	4,000	4,500	5,000
Utilities (\$.40)	<u>2,800</u>	<u>3,200</u>	<u>3,600</u>	<u>4,000</u>
Total variable costs (\$1.90)	<u>13,300</u>	<u>15,200</u>	<u>17,100</u>	<u>19,000</u>
Fixed costs				
Supervision	4,000	4,000	4,000	4,000
Depreciation	1,500	1,500	1,500	1,500
Property taxes	<u>800</u>	<u>800</u>	<u>800</u>	<u>800</u>
Total fixed costs	<u>6,300</u>	<u>6,300</u>	<u>6,300</u>	<u>6,300</u>
Total costs	<u>\$19,600</u>	<u>\$21,500</u>	<u>\$23,400</u>	<u>\$25,300</u>

EXERCISE 24-4

(a) **RANEY COMPANY**
Manufacturing Overhead Flexible Budget Report
For the Month Ended July 31, 2010

			Difference
	Budget at	Actual Costs	Favorable F
Direct labor hours (DLH)	<u>9,000 DLH</u>	<u>9,000 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$ 9,000	\$ 8,700	\$300 F
Indirect materials	4,500	4,300	200 F
Utilities	<u>3,600</u>	<u>3,200</u>	<u>400 F</u>
Total variable costs	<u>17,100</u>	<u>16,200</u>	<u>900 F</u>
Fixed costs			
Supervision	4,000	4,000	—
Depreciation	1,500	1,500	—
Property taxes	<u>800</u>	<u>800</u>	<u>—</u>
Total fixed costs	<u>6,300</u>	<u>6,300</u>	<u>—</u>
Total costs	<u>\$23,400</u>	<u>\$22,500</u>	<u>\$900 F</u>

EXERCISE 24-4 (Continued)**(b)**

RANEY COMPANY
Manufacturing Overhead Flexible Budget Report
For the Month Ended July 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Direct labor hours (DLH)	<u>8,500 DLH</u>	<u>8,500 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$ 8,500	\$ 8,700	\$200 U
Indirect materials	4,250	4,300	50 U
Utilities	<u>3,400</u>	<u>3,200</u>	<u>200 F</u>
Total variable costs	<u>16,150</u>	<u>16,200</u>	<u>50 U</u>
Fixed costs			
Supervision	4,000	4,000	—
Depreciation	1,500	1,500	—
Property taxes	<u>800</u>	<u>800</u>	<u>—</u>
Total fixed costs	<u>6,300</u>	<u>6,300</u>	<u>—</u>
Total costs	<u>\$22,450</u>	<u>\$22,500</u>	<u>\$ 50 U</u>

- (c)** In case (a) the performance for the month was satisfactory. In case (b) management may need to determine the causes of the unfavorable differences for indirect labor and indirect materials, or since the differences are small, 2.4% of budgeted cost for indirect labor and 1.2% for indirect materials, they might be considered immaterial.

EXERCISE 24-5

TRUSLER COMPANY
Monthly Selling Expense Flexible Budget
For the Year 2010

Activity level					
Sales	\$170,000	\$180,000	\$190,000	\$200,000	
Variable expenses					
Sales commissions (5%)	\$ 8,500	\$ 9,000	\$ 9,500	\$ 10,000	
Advertising (4%)	6,800	7,200	7,600	8,000	
Traveling (3%)	5,100	5,400	5,700	6,000	
Delivery (2%)	<u>3,400</u>	<u>3,600</u>	<u>3,800</u>	<u>4,000</u>	
Total variable expenses (14%)	<u>23,800</u>	<u>25,200</u>	<u>26,600</u>	<u>28,000</u>	
Fixed expenses					
Sales salaries	34,000	34,000	34,000	34,000	
Depreciation	7,000	7,000	7,000	7,000	
Insurance	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	
Total fixed expenses	<u>42,000</u>	<u>42,000</u>	<u>42,000</u>	<u>42,000</u>	
Total expenses	<u>\$ 65,800</u>	<u>\$ 67,200</u>	<u>\$ 68,600</u>	<u>\$ 70,000</u>	

EXERCISE 24-6**(a)**

TRUSLER COMPANY
Selling Expense Flexible Budget Report
For the Month Ended March 31, 2010

			Difference
	Budget	Actual	Favorable F
	<u>\$170,000</u>	<u>\$170,000</u>	Unfavorable U
Sales			
Variable expenses			
Sales commissions	\$ 8,500	\$ 9,200	\$ 700 U
Advertising	6,800	7,000	200 U
Travel	5,100	5,100	0
Delivery	<u>3,400</u>	<u>3,500</u>	<u>100 U</u>
Total variable expenses	<u>23,800</u>	<u>24,800</u>	<u>1,000 U</u>
Fixed expenses			
Sales salaries	34,000	34,000	0
Depreciation	7,000	7,000	0
Insurance	<u>1,000</u>	<u>1,000</u>	<u>0</u>
Total fixed expenses	<u>42,000</u>	<u>42,000</u>	<u>0</u>
Total expenses	<u>\$ 65,800</u>	<u>\$ 66,800</u>	<u>\$1,000 U</u>

EXERCISE 24-6 (Continued)

(b)

TRUSLER COMPANY
Selling Expense Flexible Budget Report
For the Month Ended March 31, 2010

			<u>Difference</u>
	<u>Budget</u>	<u>Actual</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Sales	<u>\$180,000</u>	<u>\$180,000</u>	
Variable expenses			
Sales commissions	\$ 9,000	\$ 9,200	\$200 U
Advertising	7,200	7,000	200 F
Travel	5,400	5,100	300 F
Delivery	<u>3,600</u>	<u>3,500</u>	<u>100 F</u>
Total variable expenses	<u>25,200</u>	<u>24,800</u>	<u>400 F</u>
Fixed costs			
Sales salaries	34,000	34,000	0
Depreciation	7,000	7,000	0
Insurance	<u>1,000</u>	<u>1,000</u>	<u>0</u>
Total fixed expenses	<u>42,000</u>	<u>42,000</u>	<u>0</u>
Total expenses	<u>\$ 67,200</u>	<u>\$ 66,800</u>	<u>\$400 F</u>

- (c)** Flexible budgets are essential in evaluating a manager's performance in controlling variable expenses because the budget allowance varies directly with changes in the activity index. At \$170,000 of sales, the manager was over budget (unfavorable) by \$1,000 but at \$180,000 of sales, the manager was under budget (favorable) by \$400.

EXERCISE 24-7**(a)**

PLETCHER COMPANY
Manufacturing Overhead Flexible Budget Report
For the Quarter Ended March 31, 2010

			<u>Difference</u>
			<u>Favorable F</u> <u>Unfavorable U</u>
	<u>Budget</u>	<u>Actual</u>	
Variable costs			
Indirect materials	\$12,000	\$13,800	\$1,800 U
Indirect labor	10,000	9,600	400 F
Utilities	8,000	8,700	700 U
Maintenance	6,000	4,900	1,100 F
Total variable costs	<u>36,000</u>	<u>37,000</u>	<u>1,000 U</u>
Fixed costs			
Supervisory salaries	36,000	36,000	0
Depreciation	7,000	7,000	0
Property taxes and insurance	8,000	8,200	200 U
Maintenance	5,000	5,000	0
Total fixed costs	<u>56,000</u>	<u>56,200</u>	<u>200 U</u>
Total costs	<u>\$92,000</u>	<u>\$93,200</u>	<u>\$1,200 U</u>

(b)

PLETCHER COMPANY
Responsibility Report
For the Quarter Ended March 31, 2010

			<u>Difference</u>
			<u>Favorable F</u> <u>Unfavorable U</u>
<u>Controllable Costs</u>	<u>Budget</u>	<u>Actual</u>	
Indirect materials	\$12,000	\$13,800	\$1,800 U
Indirect labor	10,000	9,600	400 F
Utilities	8,000	8,700	700 U
Maintenance*	11,000	9,900	1,100 F
Supervisory salaries	36,000	36,000	0
	<u>\$77,000</u>	<u>\$78,000</u>	<u>\$1,000 U</u>

***Includes variable and fixed costs**

EXERCISE 24-8

(a)

GARBER COMPANY
Selling Expense Flexible Budget Report
Clothing Department
For the Month Ended October 31, 2010

	Budget	Actual	Difference
	<u>10,000</u>	<u>10,000</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Sales in units			
Variable expenses			
Sales commissions (\$.25)	\$ 2,500	\$ 2,600	\$ 100 U
Advertising expense (\$.10)	1,000	850	150 F
Travel expense (\$.45)	4,500	4,000	500 F
Free samples (\$.20)	<u>2,000</u>	<u>1,300</u>	<u>700 F</u>
Total variable			
expenses (\$1.00)	<u>10,000</u>	<u>8,750</u>	<u>1,250 F</u>
Fixed expenses			
Rent	1,500	1,500	0
Sales salaries	1,200	1,200	0
Office salaries	800	800	0
Depreciation—salesmen autos	<u>500</u>	<u>500</u>	<u>0</u>
Total fixed expenses	<u>4,000</u>	<u>4,000</u>	<u>0</u>
Total expenses	<u>\$14,000</u>	<u>\$12,750</u>	<u>\$1,250 F</u>

- (b)** Terry should not have been reprimanded. As shown in the flexible budget report, variable costs were \$1,250 below budget.

EXERCISE 24-9**(a)**

PRONTO PLUMBING COMPANY
Home Plumbing Services Segment
Responsibility Report
For the Quarter Ended March 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Service revenue	<u>\$25,000</u>	<u>\$26,000</u>	<u>\$1,000 F</u>
Variable costs:			
Material and supplies	<u>1,500</u>	<u>1,200</u>	<u>300 F</u>
Wages	<u>3,000</u>	<u>3,300</u>	<u>300 U</u>
Gas and oil	<u>2,700</u>	<u>3,400</u>	<u>700 U</u>
Total variable costs	<u>7,200</u>	<u>7,900</u>	<u>700 U</u>
Contribution margin	<u>17,800</u>	<u>18,100</u>	<u>300 F</u>
Controllable fixed costs:			
Supervisory salaries	<u>9,000</u>	<u>9,400</u>	<u>400 U</u>
Insurance	<u>4,000</u>	<u>3,500</u>	<u>500 F</u>
Equipment depreciation	<u>1,600</u>	<u>1,300</u>	<u>300 F</u>
Total controllable fixed costs	<u>14,600</u>	<u>14,200</u>	<u>400 F</u>
Controllable margin	<u>\$ 3,200</u>	<u>\$ 3,900</u>	<u>\$ 700 F</u>

(b)**MEMO****TO: Paul Pronto****FROM: Student****SUBJECT: The Reporting Principles of Performance Reports**

When evaluating the performance of a company's segments, the performance reports should:

- 1. Contain only data that are controllable by the segment's manager.**
- 2. Provide accurate and reliable budget data to measure performance.**
- 3. Highlight significant differences between actual results and budget goals.**
- 4. Be tailor-made for the intended evaluation.**
- 5. Be prepared at reasonable intervals.**

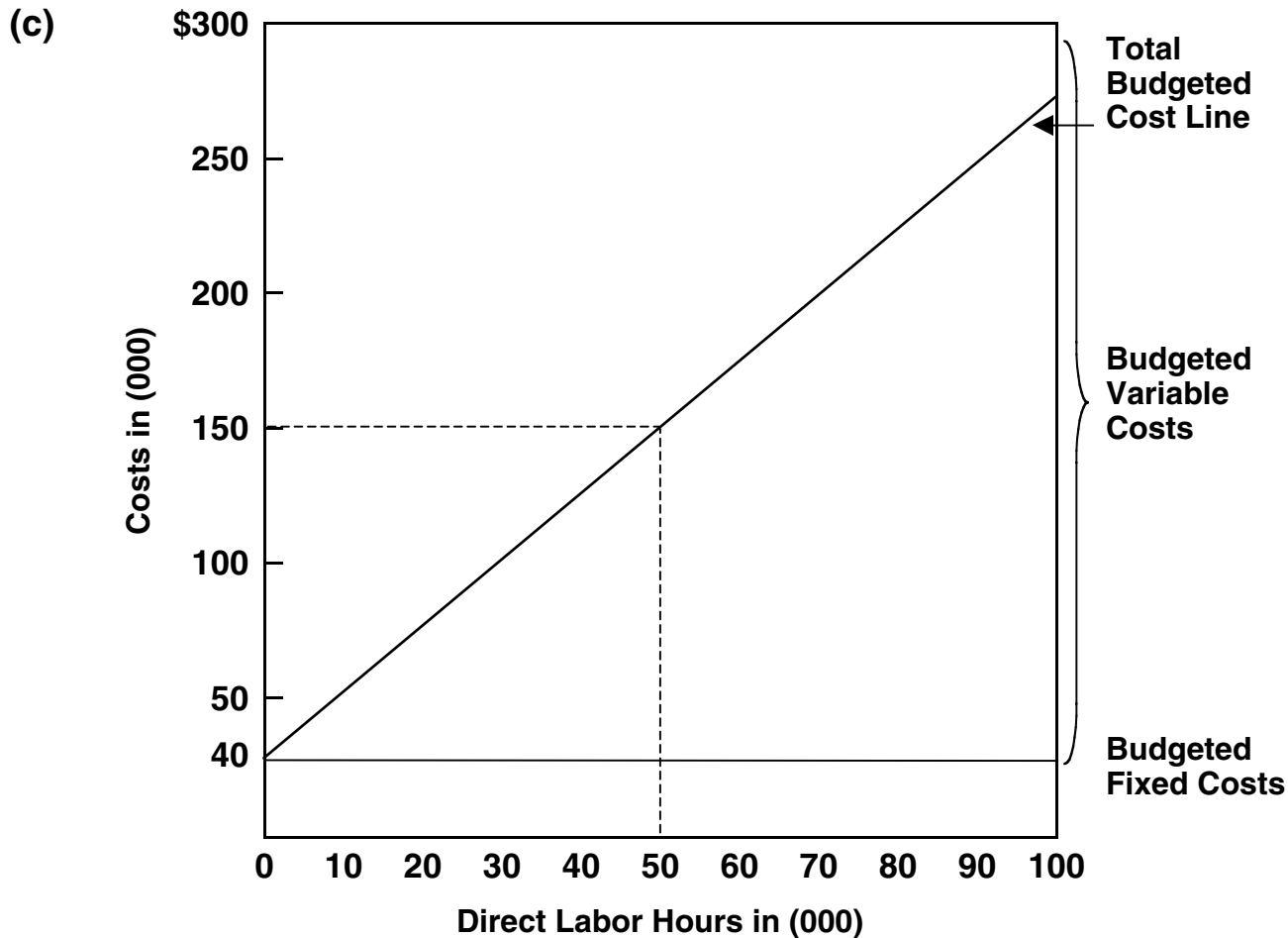
I hope these suggested guidelines will be helpful in establishing the performance reporting system to be used by Pronto Plumbing Company.

EXERCISE 24-10

(a) **Fabricating Department** = \$40,000 fixed costs plus total variable costs of \$2.20 per direct labor hour $[(\$150,000 - \$40,000) \div 50,000]$.

Assembling Department = \$30,000 fixed costs plus total variable costs of \$1.60 per direct labor hour $[(\$110,000 - \$30,000) \div 50,000]$.

(b) **Fabricating Department** = \$40,000 + (\$2.20 X 53,000) = \$156,600.
Assembling Department = \$30,000 + (\$1.60 X 47,000) = \$105,200.



EXERCISE 24-11

(a) To Dallas Department Manager—Finishing Month: July

<u>Controllable Costs:</u>	<u>Budget</u>	<u>Actual</u>	<u>Fav/Unfav</u>
Direct Materials	\$ 45,000	\$ 41,500	\$3,500 F
Direct Labor	82,000	83,000	1,000 U
Manufacturing Overhead	49,200	51,000	1,800 U
Total	<u>\$176,200</u>	<u>\$175,500</u>	<u>\$ 700 F</u>

(b) To Assembly Plant Manager—Dallas Month: July

<u>Controllable Costs:</u>	<u>Budget</u>	<u>Actual</u>	<u>Fav/Unfav</u>
Dallas Office	\$ 92,000	\$ 95,000	\$3,000 U
Departments:			
Machining	216,000	220,000	4,000 U
Finishing	176,200	175,500	700 F
Total	<u>\$484,200</u>	<u>\$490,500</u>	<u>\$6,300 U</u>

(c) To Vice President—Production Month: July

<u>Controllable Costs:</u>	<u>Budget</u>	<u>Actual</u>	<u>Fav/Unfav</u>
V P Production	\$ 130,000	\$ 132,000	\$2,000 U
Assembly plants:			
Atlanta	421,000	424,000	3,000 U
Dallas	484,200	490,500	6,300 U
Tucson	496,500	494,000	2,500 F
Total	<u>\$1,531,700</u>	<u>\$1,540,500</u>	<u>\$8,800 U</u>

EXERCISE 24-12

(a)

CREDE COMPANY
Mixing Department
Responsibility Report
For the Month Ended January 31, 2010

<u>Controllable Costs</u>	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
Indirect labor	\$12,000	\$12,200	\$ 200 U
Indirect materials	7,500	10,200	2,700 U
Lubricants	1,700	1,650	50 F
Maintenance	3,500	3,500	—0—
Utilities	5,000	6,500	1,500 U
	<u>\$29,700</u>	<u>\$34,050</u>	<u>\$4,350 U</u>

- (b) Most likely, when management examined the responsibility report for January, they would determine that the difference was insignificant for indirect labor (1.7% of budget), lubricants (2.9%), and maintenance (0%) and require no action. However, the differences for indirect materials (36%), and utilities (30%) would cause management to investigate further. As a result of their investigation, management would either take corrective action or modify the budgeted amounts for future months to reflect changing conditions.

EXERCISE 24-13

(a)	(1) Controllable margin (\$240,000 – \$100,000)	\$140,000
	(2) Variable costs (\$600,000 – \$240,000)	360,000
	(3) Contribution margin (\$450,000 – \$330,000)	120,000
	(4) Controllable fixed costs (\$120,000 – \$90,000)	30,000
	(5) Controllable fixed costs (\$180,000 – \$96,000)	84,000
	(6) Sales (\$250,000 + \$180,000)	430,000

EXERCISE 24-13 (Continued)**(b)**

GONZALES MANUFACTURING INC.
Women's Shoe Division
Responsibility Report
For the Month Ended June 30, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Sales	\$600,000	\$600,000	\$ 0
Variable costs	<u>350,000</u>	<u>360,000</u>	<u>10,000 U</u>
Contribution margin	250,000	240,000	10,000 U
Controllable fixed costs	<u>100,000</u>	<u>100,000</u>	<u>0</u>
Controllable margin	<u>\$150,000</u>	<u>\$140,000</u>	<u>\$10,000 U</u>

EXERCISE 24-14**(a)**

BRANDON McCARTHY COMPANY
Sports Equipment Division
Responsibility Report
2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u>
Sales	<u>\$900,000</u>	<u>\$880,000</u>	<u>\$20,000 U</u>
Variable costs			
Cost of goods sold	440,000	409,000	31,000 F
Selling and administrative	<u>60,000</u>	<u>61,000</u>	<u>1,000 U</u>
Total	<u>500,000</u>	<u>470,000</u>	<u>30,000 F</u>
Contribution margin	400,000	410,000	10,000 F
Controllable fixed costs			
Cost of goods sold	100,000	105,000	5,000 U
Selling and administrative	<u>90,000</u>	<u>67,000</u>	<u>23,000 F</u>
Total	<u>190,000</u>	<u>172,000</u>	<u>18,000 F</u>
Controllable margin	<u>\$210,000</u>	<u>\$238,000</u>	<u>\$28,000 F</u>

(b) \$238,000/\$1,000,000 = 23.8%

EXERCISE 24-15

- (a) Controllable margin = $(\$3,000,000 - \$1,950,000 - \$600,000) = \$450,000$
ROI = $\$450,000 \div \$5,000,000 = 9\%$
- (b) 1. Contribution margin percentage is 35%, or $(\$1,050,000 \div \$3,000,000)$
Increase in controllable margin = $\$320,000 \times 35\% = \$112,000$
ROI = $(\$450,000 + \$112,000) \div \$5,000,000 = 11.2\%$
2. $(\$450,000 + \$100,000) \div \$5,000,000 = 11\%$
3. $\$450,000 \div (\$5,000,000 - \$200,000) = 9.4\%$

EXERCISE 24-16

(a)

MEDINA AND ORTIZ DENTAL CLINIC
Preventive Services
Responsibility Report
For the Month Ended May 31, 2010

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Service revenue	<u>\$39,000</u>	<u>\$40,000</u>	<u>\$1,000 F</u>
Variable costs			
Filling materials	4,900	5,000	100 U
Novocain	3,800	4,000	200 U
Dental assistant wages	2,500	2,500	0
Supplies	2,250	2,000	250 F
Utilities	<u>450</u>	<u>500</u>	<u>50 U</u>
Total variable costs	<u>13,900</u>	<u>14,000</u>	<u>100 U</u>
Contribution margin	<u>25,100</u>	<u>26,000</u>	<u>900 F</u>
Controllable fixed costs			
Dentist salary	9,500	10,000	500 U
Equipment depreciation	<u>6,000</u>	<u>6,000</u>	<u>0</u>
Total controllable fixed costs	<u>15,500</u>	<u>16,000</u>	<u>500 U</u>
Controllable margin	<u>\$ 9,600</u>	<u>\$10,000</u>	<u>\$ 400 F</u>
Return on investment*	<u>12.0%</u>	<u>12.5%</u>	<u>0.5% F</u>

*Average investment = $(\$82,400 + \$77,600) \div 2 = \$80,000$

Budget ROI = $\$9,600 \div \$80,000$

Actual ROI = $\$10,000 \div \$80,000$

ROI Difference = $\$400 \div \$80,000$

(b)

MEMO

TO: Drs. Martin Medina and Olga Ortiz

FROM: Student

SUBJECT: Deficiencies in the Current Responsibility Reporting System

The current reporting system has the following deficiencies:

- 1. It does not clearly show both budgeted goals and actual performance.**
- 2. It does not indicate the contribution margin generated by the center, showing the amount available to go towards covering controllable fixed costs.**
- 3. It does not report only those costs controllable by the manager of the center. Instead, it includes both controllable and common fixed costs. This results in the center appearing to be unprofitable.**
- 4. It does not indicate the return on investment earned by the center.**

All of these deficiencies have been addressed in the recommended responsibility report attached. As can be seen from that report, the Preventative Services center is profitable. The service revenues generated in this center are adequate to cover all of its costs, both variable and controllable fixed costs, and contribute toward the covering of the clinic's common fixed costs. In addition, the report indicates the return on investment earned by the center and that it exceeds the budget goal.

EXERCISE 24-17

Planes:

ROI = Controllable margin ÷ Average operating assets

12% = Controllable margin ÷ \$25,000,000

Controllable margin = \$25,000,000 X 12%
= \$3,000,000

Contribution margin = Controllable margin + Controllable fixed costs

= \$3,000,000 + \$1,500,000

= \$4,500,000

Service revenue = Contribution margin + Variable costs

= \$4,500,000 + \$5,500,000

= \$10,000,000

Taxis:

ROI = Controllable margin ÷ Average operating assets

10% = \$80,000 ÷ Average operating assets

Average operating assets = \$80,000 ÷ 10%
= \$800,000

Controllable margin = Contribution margin – Controllable fixed costs

\$80,000 = \$200,000 – Controllable fixed costs

Controllable fixed costs = \$200,000 – \$80,000
= \$120,000

Contribution margin = Service revenue – Variable costs

\$200,000 = \$500,000 – Variable costs

Variable costs = \$500,000 – \$200,000
= \$300,000

EXERCISE 24-17 (Continued)

Limos:

$$\begin{aligned}\text{ROI} &= \text{Controllable margin} \div \text{Average operating assets} \\ &= \$240,000 \div \$1,600,000 \\ &= \underline{15\%}\end{aligned}$$

$$\begin{aligned}\text{Controllable margin} &= \text{Contribution margin} - \text{Controllable fixed costs} \\ \$240,000 &= \$480,000 - \text{Controllable fixed costs} \\ \text{Controllable fixed costs} &= \$480,000 - \$240,000 \\ &= \underline{\$240,000}\end{aligned}$$

$$\begin{aligned}\text{Contribution margin} &= \text{Service revenue} - \text{Variable costs} \\ \$480,000 &= \text{Service revenue} - \$320,000 \\ \text{Service revenue} &= \$480,000 + \$320,000 \\ &= \underline{\$800,000}\end{aligned}$$

SOLUTIONS TO PROBLEMS

PROBLEM 24-1A

(a)

MALONE COMPANY
Packaging Department
Monthly Manufacturing Overhead Flexible Budget
For the Year 2010

Activity level				
Direct labor hours	<u>27,000</u>	<u>30,000</u>	<u>33,000</u>	<u>36,000</u>
Variable costs				
Indirect labor (\$.35)	\$ 9,450	\$10,500	\$11,550	\$12,600
Indirect materials (\$.25)	6,750	7,500	8,250	9,000
Repairs (\$.15)	4,050	4,500	4,950	5,400
Utilities (\$.20)	5,400	6,000	6,600	7,200
Lubricants (\$.05)	<u>1,350</u>	<u>1,500</u>	<u>1,650</u>	<u>1,800</u>
Total variable costs (\$1.00)	<u>27,000</u>	<u>30,000</u>	<u>33,000</u>	<u>36,000</u>
Fixed costs				
Supervision	7,500	7,500	7,500	7,500
Depreciation	5,000	5,000	5,000	5,000
Insurance	2,500	2,500	2,500	2,500
Rent	2,000	2,000	2,000	2,000
Property taxes	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>
Total fixed costs	<u>18,500</u>	<u>18,500</u>	<u>18,500</u>	<u>18,500</u>
Total costs	<u>\$45,500</u>	<u>\$48,500</u>	<u>\$51,500</u>	<u>\$54,500</u>

PROBLEM 24-1A (Continued)**(b)**

MALONE COMPANY
Packaging Department
Manufacturing Overhead Flexible Budget Report
For the Month Ended October 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Direct labor hours (DLH)	<u>27,000 DLH</u>	<u>27,000 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$ 9,450	\$10,360	\$ 910 U
Indirect materials	6,750	6,400	350 F
Repairs	4,050	4,000	50 F
Utilities	5,400	5,700	300 U
Lubricants	1,350	1,640	290 U
Total variable costs	<u>27,000</u>	<u>28,100</u>	<u>1,100 U</u>
Fixed costs			
Supervision	7,500	7,500	0
Depreciation	5,000	5,000	0
Insurance	2,500	2,470	30 F
Rent	2,000	2,000	0
Property taxes	1,500	1,500	0
Total fixed costs	<u>18,500</u>	<u>18,470</u>	<u>30 F</u>
Total costs	<u>\$45,500</u>	<u>\$46,570</u>	<u>\$1,070 U</u>

- (c) The overall performance of management was slightly unfavorable. However, none of the unfavorable differences exceeded 10% of budget except for lubricants (21%).**

PROBLEM 24-2A

(a)

FULTZ COMPANY
Monthly Manufacturing Overhead Flexible Budget
Ironing Department
For the Year 2010

Activity level				
Direct labor hours	<u>35,000</u>	<u>40,000</u>	<u>45,000</u>	<u>50,000</u>
Variable costs				
Indirect labor (\$.40)	\$14,000	\$16,000	\$18,000	\$20,000
Indirect materials (\$.50)	17,500	20,000	22,500	25,000
Factory utilities (\$.30)	10,500	12,000	13,500	15,000
Factory repairs (\$.20)	<u>7,000</u>	<u>8,000</u>	<u>9,000</u>	<u>10,000</u>
Total variable costs (\$1.40)	<u>49,000</u>	<u>56,000</u>	<u>63,000</u>	<u>70,000</u>
Fixed costs				
Supervision	3,500	3,500	3,500	3,500
Depreciation	1,500	1,500	1,500	1,500
Insurance	1,000	1,000	1,000	1,000
Rent	<u>2,000</u>	<u>2,000</u>	<u>2,000</u>	<u>2,000</u>
Total fixed costs	<u>8,000</u>	<u>8,000</u>	<u>8,000</u>	<u>8,000</u>
Total costs	<u>\$57,000</u>	<u>\$64,000</u>	<u>\$71,000</u>	<u>\$78,000</u>

PROBLEM 24-2A (Continued)**(b)**

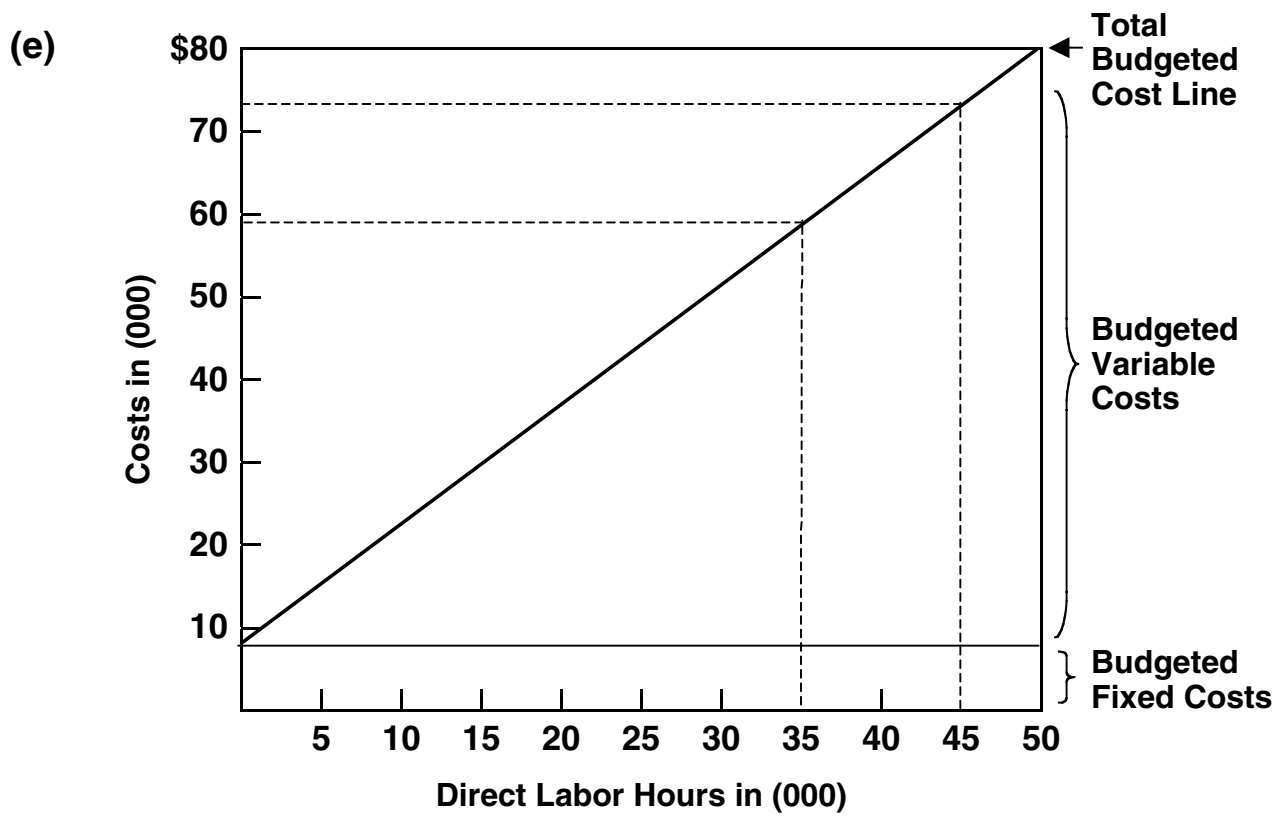
FULTZ COMPANY
Ironing Department
Manufacturing Overhead Flexible Budget Report
For the Month Ended June 30, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Direct labor hours (DLH)	<u>42,000 DLH</u>	<u>42,000 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$16,800 (1)	\$18,060 (5)	\$1,260 U
Indirect materials	21,000 (2)	20,580 (6)	420 F
Factory utilities	12,600 (3)	13,440 (7)	840 U
Factory repairs	8,400 (4)	10,080 (8)	1,680 U
Total variable costs	<u>58,800</u>	<u>62,160</u>	<u>3,360 U</u>
Fixed costs			
Supervision	3,500	3,500	0
Depreciation	1,500	1,500	0
Insurance	1,000	1,000	0
Rent	2,000	2,000	0
Total fixed costs	<u>8,000</u>	<u>8,000</u>	<u>0</u>
Total costs	<u>\$66,800</u>	<u>\$70,160</u>	<u>\$3,360 U</u>

(1) 42,000 X \$0.40 (2) 42,000 X \$0.50 (3) 42,000 X \$0.30 (4) 42,000 X \$0.20
 (5) 42,000 X \$0.43 (6) 42,000 X \$0.49 (7) 42,000 X \$0.32 (8) 42,000 X \$0.24

- (c) The manager was ineffective in controlling variable costs (\$3,360 U). Fixed costs were effectively controlled.**
- (d) The formula is fixed costs of \$8,000 plus total variable costs of \$1.40 per direct labor hour.**

PROBLEM 24-2A (Continued)



PROBLEM 24-3A

- (a) The formula is fixed costs \$36,000 plus variable costs of \$2.80 per unit (\$168,000 ÷ 60,000 units).

(b)

ZELMER COMPANY Assembling Department Flexible Budget Report For the Month Ended August 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Units	<u>58,000 Units</u>	<u>58,000 Units</u>	<u>Unfavorable U</u>
Variable costs*			
Direct materials (\$.80 X 58,000)	\$ 46,400	\$ 47,000	\$ 600 U
Direct labor (\$.90 X 58,000)	52,200	51,300	900 F
Indirect materials (\$.40 X 58,000)	23,200	24,200	1,000 U
Indirect labor (\$.30 X 58,000)	17,400	17,500	100 U
Utilities (\$.25 X 58,000)	14,500	14,900	400 U
Maintenance (\$.15 X 58,000)	8,700	9,200	500 U
Total variable (\$2.80 X 58,000)	<u>162,400</u>	<u>164,100</u>	<u>1,700 U</u>
Fixed costs			
Rent	12,000	12,000	0
Supervision	17,000	17,000	0
Depreciation	7,000	7,000	0
Total fixed	<u>36,000</u>	<u>36,000</u>	<u>0</u>
Total costs	<u>\$198,400</u>	<u>\$200,100</u>	<u>\$1,700 U</u>

*Note that the per unit variable costs are computed by taking the budget amount at 60,000 units and dividing it by 60,000. For example, direct materials per unit is therefore \$0.80 or $\frac{\$48,000}{60,000}$.

This report provides a better basis for evaluating performance because the budget is based on the level of activity actually achieved. The manager should be criticized because every variable cost was over budget except for direct labor.

PROBLEM 24-3A (Continued)

(c)

ZELMER COMPANY
Assembling Department
Flexible Budget Report
For the Month Ended September 30, 2010

Units	Budget at 64,000 Units	Actual Costs 64,000 Units	Difference
			Favorable F Unfavorable U
Variable costs			
Direct materials (.80 X 64,000)	\$ 51,200	\$ 51,700	\$ 500 U
Direct labor (\$.90 X 64,000)	57,600	56,430	1,170 F
Indirect materials (\$.40 X 64,000)	25,600	26,620	1,020 U
Indirect labor (\$.30 X 64,000)	19,200	19,250	50 U
Utilities (\$.25 X 64,000)	16,000	16,390	390 U
Maintenance (\$.15 X 64,000)	9,600	10,120	520 U
Total variable costs	<u>179,200</u>	<u>180,510</u>	<u>1,310 U</u>
Fixed costs			
Rent	12,000	12,000	0
Supervision	17,000	17,000	0
Depreciation	7,000	7,000	0
Total fixed costs	<u>36,000</u>	<u>36,000</u>	<u>0</u>
Total costs	<u>\$215,200</u>	<u>\$216,510</u>	<u>\$1,310 U</u>

The manager's performance was slightly better in September than it was in August. However, each variable cost was slightly over budget again except for direct labor.

Note that actual variable costs in September were 10% higher than the actual variable costs in August. Therefore to find the actual variable costs in September, the actual variable costs in August must be increased 10% as follows:

	August (actual)		September (actual)
Direct materials	\$ 47,000 X 110%	=	\$ 51,700
Direct labor	51,300 X 110%		56,430
Indirect materials	24,200 X 110%		26,620
Indirect labor	17,500 X 110%		19,250
Utilities	14,900 X 110%		16,390
Maintenance	9,200 X 110%		10,120
	<u>\$164,100</u>		<u>\$180,510</u>

PROBLEM 24-4A

(a) **JANTZEN MANUFACTURING INC.**
Patio Furniture Division
Responsibility Report
For the Year Ended December 31, 2010

			<u>Difference</u>
	<u>Budget</u>	<u>Actual</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Sales	<u>\$2,500,000</u>	<u>\$2,560,000</u>	<u>\$60,000 F</u>
Variable costs			
Cost of goods sold	1,300,000	1,259,000	41,000 F
Selling and administrative	<u>220,000</u>	<u>227,000</u>	<u>7,000 U</u>
Total	<u>1,520,000</u>	<u>1,486,000</u>	<u>34,000 F</u>
Contribution margin	<u>980,000</u>	<u>1,074,000</u>	<u>94,000 F</u>
Controllable fixed costs			
Cost of goods sold	200,000	206,000	6,000 U
Selling and administrative	<u>50,000</u>	<u>52,000</u>	<u>2,000 U</u>
Total	<u>250,000</u>	<u>258,000</u>	<u>8,000 U</u>
Controllable margin	<u>\$ 730,000</u>	<u>\$ 816,000</u>	<u>\$86,000 F</u>

- (b) The manager effectively controlled revenues and costs. Contribution margin was \$94,000 favorable and controllable margin was \$86,000 favorable. Contribution margin was favorable primarily because sales were \$60,000 over budget and variable cost of goods sold was \$41,000 under budget. Apparently, the manager was able to control variable cost of goods sold when sales exceeded budget expectations. The manager was ineffective in controlling fixed costs. However, the unfavorable difference of \$8,000 was only 9% of the favorable difference in contribution margin.
- (c) Two costs are excluded from the report: (1) noncontrollable fixed costs and (2) indirect fixed costs. The reason is that neither cost is controllable by the Patio Furniture Division Manager.

PROBLEM 24-5A

(a) **DINKLE MANUFACTURING COMPANY**
Home Division
Responsibility Report
For the Year Ended December 31, 2010
(in thousands of dollars)

	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Sales	<u>\$1,400</u>	<u>\$1,500</u>	<u>\$100 F</u>
Variable costs			
Cost of goods sold	640	700	60 U
Selling and administrative	<u>100</u>	<u>125</u>	<u>25 U</u>
Total	<u>740</u>	<u>825</u>	<u>85 U</u>
Contribution margin	<u>660</u>	<u>675</u>	<u>15 F</u>
Controllable fixed costs			
Cost of goods sold	170	170	0
Selling and administrative	<u>80</u>	<u>80</u>	<u>0</u>
Total	<u>250</u>	<u>250</u>	<u>0</u>
Controllable margin	<u>\$ 410</u>	<u>\$ 425</u>	<u>\$ 15 F</u>
ROI	16.4%	17%	.6% F
	(1)	(2)	(3)

$$(1) \left(\frac{\$410}{\$2,500} \right) \quad (2) \left(\frac{\$425}{\$2,500} \right) \quad (3) \left(\frac{\$15}{\$2,500} \right)$$

- (b) The performance of the manager of the Home Division was slightly above budget expectations for the year. The item that top management would likely investigate is the reason why variable cost of goods sold is \$60,000 unfavorable. In making the inquiry, it should be recognized that the budget amount should be adjusted for the increased sales as follows: $\$1,500,000 \times \left(\frac{\$640}{\$1,400} \right) = \$685,714$. Thus, there should be an explanation of a \$14,286 unfavorable difference.

PROBLEM 24-5A (Continued)

$$(c) \quad (1) \quad \frac{\$425,000 + (\$700,000 \times 6\%)}{\$2,500,000} = 18.7\%.$$

$$(2) \quad \frac{\$425,000}{\$2,500,000 - (\$2,500,000 \times 10\%)} = 18.9\%.$$

$$(3) \quad \frac{\$425,000 + \$90,000}{\$2,500,000} = 20.6\%.$$

PROBLEM 24-6A

(a) (1) No. 1

To Cutting Department Manager—Seattle Division			Month: January
Controllable Costs:	Budget	Actual	Fav/Unfav
Indirect labor	\$ 70,000	\$ 73,000	\$ 3,000 U
Indirect materials	46,000	47,700	1,700 U
Maintenance	18,000	20,500	2,500 U
Utilities	17,000	20,100	3,100 U
Supervision	20,000	22,000	2,000 U
Total	<u>\$171,000</u>	<u>\$183,300</u>	<u>\$12,300 U</u>

(2) No. 2

To Division Production Manager—Seattle			Month: January
Controllable Costs:	Budget	Actual	Fav/Unfav
Seattle Division	\$ 51,000	\$ 52,500	\$ 1,500 U
Departments:			
Cutting	171,000	183,300	12,300 U
Shaping	148,000	158,000	10,000 U
Finishing	206,000	210,000	4,000 U
Total	<u>\$576,000</u>	<u>\$603,800</u>	<u>\$27,800 U</u>

(3) No. 3

To Vice President—Production			Month: January
Controllable Costs:	Budget	Actual	Fav/Unfav
V-P Production	\$ 64,000	\$ 65,000	\$ 1,000 U
Divisions:			
Seattle	576,000	603,800	27,800 U
Denver	673,000	676,000	3,000 U
San Diego	715,000	722,000	7,000 U
Total	<u>\$2,028,000</u>	<u>\$2,066,800</u>	<u>\$38,800 U</u>

(4)

No. 4

To President		Month: January	
Controllable Costs:	Budget	Actual	Fav/Unfav
President	\$ 74,200	\$ 76,400	\$ 2,200 U
Vice-Presidents:			
Production	2,028,000	2,066,800	38,800 U
Marketing	130,000	133,600	3,600 U
Finance	105,000	109,000	4,000 U
Total	<u>\$2,337,200</u>	<u>\$2,385,800</u>	<u>\$48,600 U</u>

- (b) (1) Within the Seattle division the rankings of the department managers were: (1) Finishing, (2) Shaping, and (3) Cutting. If the rankings were done on a percentage basis, they would rank as follows: (1) Finishing – 2.0 U (2) Shaping – 6.8 U and (3) Cutting – 7.2 U.
- (2) At the division manager level, the rankings were: (1) Denver, (2) San Diego, and (3) Seattle.
- (3) Rankings in terms of dollars may be somewhat misleading in this case because of the substantial difference between the production budget and the other budgets. On a percentage basis the differences and rankings are: (1) production, 1.9%; (2) marketing, 2.8%; and (3) finance, 3.8%.

PROBLEM 24-1B

(a)

OGLEBY COMPANY
Monthly Manufacturing Overhead Flexible Budget
Assembly Department
For the Year 2010

Activity level				
Direct labor hours	<u>18,000</u>	<u>20,000</u>	<u>22,000</u>	<u>24,000</u>
Variable costs				
Indirect labor (\$.30)	\$ 5,400	\$ 6,000	\$ 6,600	\$ 7,200
Indirect materials (\$.20)	3,600	4,000	4,400	4,800
Repairs (\$.15)	2,700	3,000	3,300	3,600
Utilities (\$.11)	1,980	2,200	2,420	2,640
Lubricants (\$.04)	<u>720</u>	<u>800</u>	<u>880</u>	<u>960</u>
Total variable costs (\$\$.80)	<u>14,400</u>	<u>16,000</u>	<u>17,600</u>	<u>19,200</u>
Fixed costs				
Supervision	6,250	6,250	6,250	6,250
Depreciation	2,500	2,500	2,500	2,500
Insurance	1,000	1,000	1,000	1,000
Rent	750	750	750	750
Property taxes	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>
Total fixed costs	<u>11,000</u>	<u>11,000</u>	<u>11,000</u>	<u>11,000</u>
Total costs	<u>\$25,400</u>	<u>\$27,000</u>	<u>\$28,600</u>	<u>\$30,200</u>

PROBLEM 24-1B (Continued)**(b)**

OGLEBY COMPANY
Manufacturing Overhead Flexible Budget Report
Assembly Department
For the Month Ended January 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Direct labor hours (DLH)	<u>20,000 DLH</u>	<u>20,000 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$ 6,000	\$ 6,200	\$200 U
Indirect materials	4,000	3,600	400 F
Repairs	3,000	2,400	600 F
Utilities	2,200	1,700	500 F
Lubricants	800	830	30 U
Total variable costs	<u>16,000</u>	<u>14,730</u>	<u>1,270 F</u>
Fixed costs			
Supervision	6,250	6,250	0
Depreciation	2,500	2,500	0
Insurance	1,000	1,000	0
Rent	750	850	100 U
Property taxes	500	500	0
Total fixed costs	<u>11,000</u>	<u>11,100</u>	<u>100 U</u>
Total costs	<u>\$27,000</u>	<u>\$25,830</u>	<u>\$1,170 F</u>

(c) Control over both variable and fixed costs was good.

PROBLEM 24-2B

(a)

PARCELLS MANUFACTURING COMPANY
Monthly Manufacturing Overhead Flexible Budget
Assembly Department
For the Year 2010

Activity level				
Direct labor hours	<u>22,500</u>	<u>25,000</u>	<u>27,500</u>	<u>30,000</u>
Variable costs				
Indirect labor (\$1.10)	\$24,750	\$27,500	\$30,250	\$33,000
Indirect materials (\$.60)	13,500	15,000	16,500	18,000
Utilities (\$.30)	6,750	7,500	8,250	9,000
Maintenance (\$.20)	<u>4,500</u>	<u>5,000</u>	<u>5,500</u>	<u>6,000</u>
Total variable costs (\$2.20)	<u>49,500</u>	<u>55,000</u>	<u>60,500</u>	<u>66,000</u>
Fixed costs				
Supervision	12,500	12,500	12,500	12,500
Depreciation	8,000	8,000	8,000	8,000
Insurance and taxes	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>
Total fixed costs	<u>25,500</u>	<u>25,500</u>	<u>25,500</u>	<u>25,500</u>
Total costs	<u>\$75,000</u>	<u>\$80,500</u>	<u>\$86,000</u>	<u>\$91,500</u>

PROBLEM 24-2B (Continued)

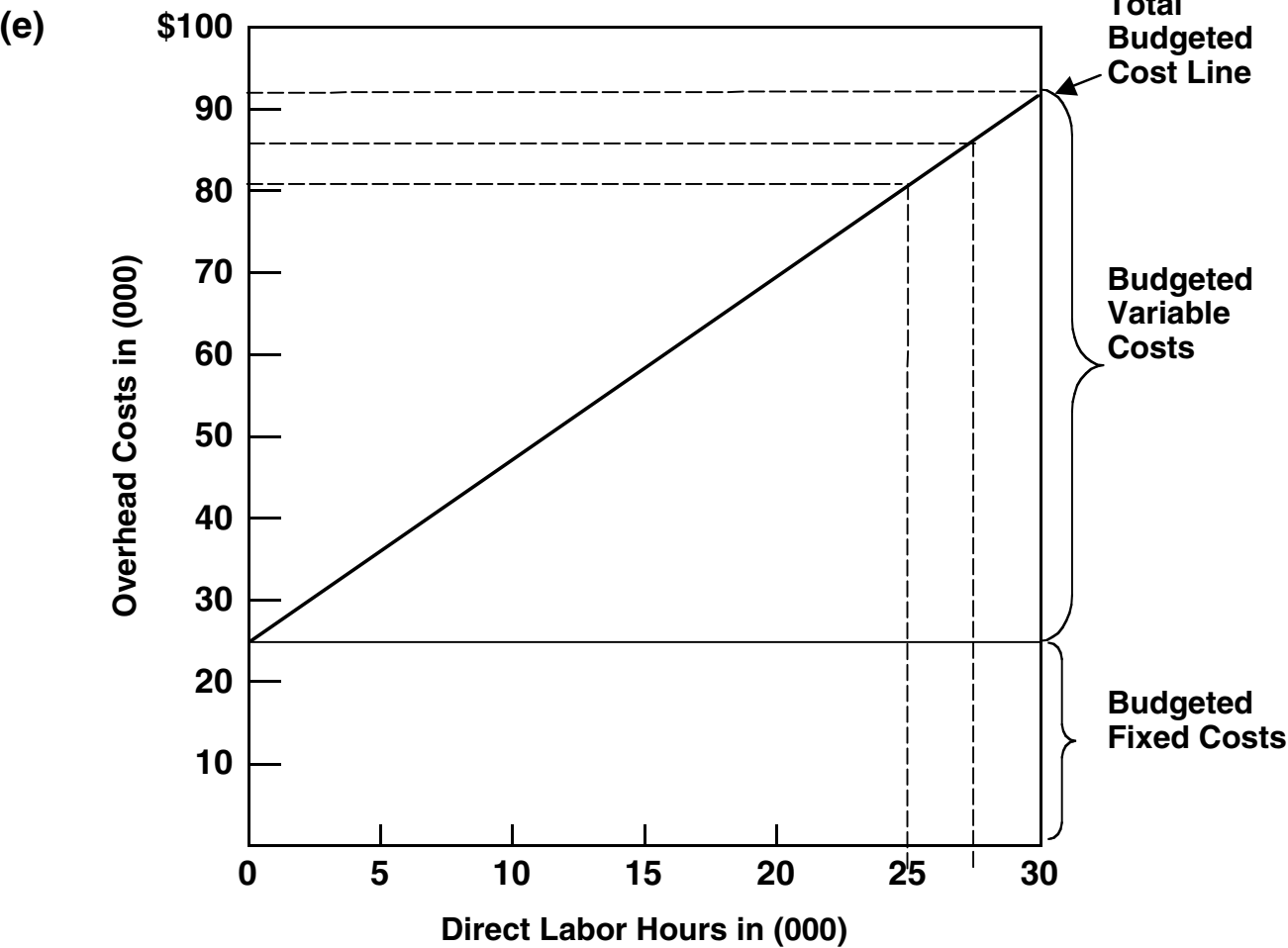
(b)

PARCELLS MANUFACTURING COMPANY
Assembly Department
Manufacturing Overhead Flexible Budget Report
For the Month Ended July 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Direct labor hours (DLH)	<u>27,500 DLH</u>	<u>27,500 DLH</u>	<u>Unfavorable U</u>
Variable costs			
Indirect labor	\$30,250	\$29,000	\$1,250 F
Indirect materials	16,500	14,000	2,500 F
Utilities	8,250	8,100	150 F
Maintenance	5,500	5,400	100 F
Total variable costs	<u>60,500</u>	<u>56,500</u>	<u>4,000 F</u>
Fixed costs			
Supervision	12,500	12,500	0
Depreciation	8,000	8,000	0
Insurance and taxes	5,000	5,000	0
Total fixed costs	<u>25,500</u>	<u>25,500</u>	<u>0</u>
Total costs	<u>\$86,000</u>	<u>\$82,000</u>	<u>\$4,000 F</u>

- (c) Based on the above budget report, control over costs was effective. For variable costs, all differences were favorable. For fixed costs, there were no differences between budgeted and actual costs.
- (d) The formula is fixed costs of \$25,500 plus total variable costs of \$2.20 per direct labor hour.

PROBLEM 24-2B (Continued)



PROBLEM 24-3B

- (a) The formula is fixed costs \$22,000 plus total variable costs of \$2.55 per unit ($\$127,500 \div 50,000$ units).

(b)

FERNETTI COMPANY
Packaging Department
Flexible Budget Report
For the Month Ended May 31, 2010

			<u>Difference</u>
	<u>Budget at</u>	<u>Actual Costs</u>	<u>Favorable F</u>
Units	<u>55,000 Units</u>	<u>55,000 Units</u>	<u>Unfavorable U</u>
Variable costs*			
Direct materials (\$.80 X 55,000)	\$ 44,000	\$ 41,000	\$3,000 F
Direct labor (\$.90 X 55,000)	49,500	47,000	2,500 F
Indirect materials (\$.30 X 55,000)	16,500	15,200	1,300 F
Indirect labor (\$.25 X 55,000)	13,750	13,000	750 F
Utilities (\$.20 X 55,000)	11,000	9,600	1,400 F
Maintenance (\$.10 X 55,000)	<u>5,500</u>	<u>5,200</u>	<u>300 F</u>
Total variable costs			
(\$2.55 X 55,000)	<u>140,250</u>	<u>131,000</u>	<u>9,250 F</u>
Fixed costs			
Rent	10,000	10,000	0
Supervision	7,000	7,000	0
Depreciation	<u>5,000</u>	<u>5,000</u>	<u>0</u>
Total fixed costs	<u>22,000</u>	<u>22,000</u>	<u>0</u>
Total costs	<u>\$162,250</u>	<u>\$153,000</u>	<u>\$9,250 F</u>

*Note that the per unit variable costs are computed by taking the budget amount at 50,000 units and dividing it by 50,000. For example, direct materials per unit is \$0.80 or $\frac{\$40,000}{50,000}$.

This report provides a better basis for evaluating performance because the budget is based on the level of activity actually achieved.

PROBLEM 24-3B (Continued)

(c)

FERNETTI COMPANY Packaging Department Flexible Budget Report For the Month Ended June 30, 2010

			Difference
Units	Budget at 40,000 Units	Actual Costs 40,000 Units	Favorable F Unfavorable U
Variable costs			
Direct materials (\$.80 X 40,000)	\$ 32,000	\$ 32,800*	\$ 800 U
Direct labor (\$.90 X 40,000)	36,000	37,600	1,600 U
Indirect materials (\$.30 X 40,000)	12,000	12,160	160 U
Indirect labor (\$.25 X 40,000)	10,000	10,400	400 U
Utilities (\$.20 X 40,000)	8,000	7,680	320 F
Maintenance (\$.10 X 40,000)	<u>4,000</u>	<u>4,160</u>	<u>160 U</u>
Total variable costs (\$2.55 X 40,000)	<u>102,000</u>	<u>104,800</u>	<u>2,800 U</u>
Fixed costs			
Rent	10,000	10,000	0
Supervision	7,000	7,000	0
Depreciation	<u>5,000</u>	<u>5,000</u>	<u>0</u>
Total fixed costs	<u>22,000</u>	<u>22,000</u>	<u>0</u>
Total costs	<u>\$124,000</u>	<u>\$126,800</u>	<u>\$2,800 U</u>

*Note that the actual variable costs in June was 20% less than the actual costs in May. Therefore to find the actual costs in June, the actual variable costs in May are multiplied by 80% as follows.

	May (actual)		June (actual)
Direct materials	\$ 41,000 X 80%	=	\$ 32,800
Direct labor	47,000 X 80%		37,600
Indirect materials	15,200 X 80%		12,160
Indirect labor	13,000 X 80%		10,400
Utilities	9,600 X 80%		7,680
Maintenance	<u>5,200 X 80%</u>		<u>4,160</u>
	<u>\$131,000</u>		<u>\$104,800</u>

PROBLEM 24-4B

(a)

WIDNET MANUFACTURING INC.
Home Appliance Division
Responsibility Report
For the Year Ended December 31, 2010

			<u>Difference</u>
	<u>Budget</u>	<u>Actual</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Sales	<u>\$2,400,000</u>	<u>\$2,300,000</u>	<u>\$100,000 U</u>
Variable costs			
Cost of goods sold	1,200,000	1,260,000	60,000 U
Selling and administrative	<u>240,000</u>	<u>232,000</u>	<u>8,000 F</u>
Total	<u>1,440,000</u>	<u>1,492,000</u>	<u>52,000 U</u>
Contribution margin	<u>960,000</u>	<u>808,000</u>	<u>152,000 U</u>
Controllable fixed costs			
Cost of goods sold	200,000	192,000	8,000 F
Selling and administrative	<u>60,000</u>	<u>64,000</u>	<u>4,000 U</u>
Total	<u>260,000</u>	<u>256,000</u>	<u>4,000 F</u>
Controllable margin	<u>\$ 700,000</u>	<u>\$ 552,000</u>	<u>\$148,000 U</u>

- (b) The manager did not effectively control revenues and costs. Contribution margin was \$152,000 unfavorable and controllable margin was \$148,000 unfavorable. Contribution margin was unfavorable primarily because sales were \$100,000 under budget and variable cost of goods sold was \$60,000 over budget. Apparently, the manager was unable to control variable cost of goods sold when sales failed to meet budget expectations.

The manager was effective in controlling fixed costs. However, the favorable difference of \$4,000 was only 2.6% of the unfavorable difference in contribution margin.

PROBLEM 24-4B (Continued)

- (c) Two costs are excluded from the report: (1) noncontrollable fixed costs and (2) indirect fixed costs. The reason is that neither cost is controllable by the Home Appliance Division Manager.**

(a)

SCHWINN MANUFACTURING COMPANY
Lawnmower Division
Responsibility Report
For the Year Ended December 31, 2010
(in thousands of dollars)

			<u>Difference</u>
	<u>Budget</u>	<u>Actual</u>	<u>Favorable F</u> <u>Unfavorable U</u>
Sales	<u>\$3,020</u>	<u>\$2,900</u>	<u>\$120 U</u>
Variable costs			
Cost of goods sold	1,310	1,400	90 U
Selling and administrative	<u>350</u>	<u>300</u>	<u>50 F</u>
Total	<u>1,660</u>	<u>1,700</u>	<u>40 U</u>
Contribution margin	<u>1,360</u>	<u>1,200</u>	<u>160 U</u>
Controllable fixed costs			
Cost of goods sold	270	270	0
Selling and administrative	<u>140</u>	<u>140</u>	<u>0</u>
Total	<u>410</u>	<u>410</u>	<u>0</u>
Controllable margin	<u>\$ 950</u>	<u>\$ 790</u>	<u>\$160 U</u>
ROI	19%	15.8%	3.2% U
	(1)	(2)	(3)
	(1) $\left(\frac{\$950}{\$5,000} \right)$	(2) $\left(\frac{\$790}{\$5,000} \right)$	(3) $\left(\frac{\$160}{\$5,000} \right)$

- (b) The performance of the manager of the Lawnmower Division was below budget expectations for the year. The item that top management would likely investigate first is the reason why sales were \$120,000 below budget. Next, inquiry would be made as to the reason variable cost of goods sold is \$90,000 unfavorable. Finally, the reasons for the favorable variable selling and administrative expenses would be discussed. It is conceivable that an inadequate selling effort contributed to the lower sales.

PROBLEM 24-5B (Continued)

- (c) (1) $[\$790,000 + (\$1,400,000 \times 15\%)] \div \$5,000,000 = 20\%$.
(2) $\$790,000 \div [\$5,000,000 - (\$5,000,000 \times 20\%)] = 19.8\%$.
(3) $(\$790,000 + \$210,000) \div \$5,000,000 = 20\%$.

- (a) (1) The primary causes of the loss in net income were the decrease in the number of boarding days and the decrease in the boarding fee. The number of boarding days decreased by 2,920 or approximately 13% ($2,920 \text{ days} \div 21,900 \text{ days}$), and the boarding fee decreased from \$25^(a) per day to \$20^(b) per day, a decrease of 20% ($\$5 \div \$25$). Together these resulted in a \$167,900 decrease in sales revenue, a decrease of approximately 31% ($\$167,900 \div \$547,500$).

^(a) $\$547,500 \div 21,900 \text{ days} = \$25 \text{ per day}$

^(b) $\$379,600 \div 18,980 \text{ days} = \$20 \text{ per day}$

- (2) Management did a poor job in controlling variable expenses. Given that boarding days declined by about 13%, variable expenses should decline by about 13%, or more precisely, variable expenses should decline by \$25,842 $\left(\$193,815 \times \frac{2,920}{21,900} \right)$. However, variable expenses only declined by \$14,335 or about 7% ($\$14,335 \div \$193,815$). Thus, management did a poor job in controlling variable expenses. Management did a better job in controlling fixed expenses. Fixed expenses were under budget by \$5,000 and this includes the additional expenses incurred in advertising and entertainment.
- (3) Management's decisions to stay competitive probably were sound. Given the decline in boarding days, the decision not to replace the worker was sound. The decision to reduce rates was probably forced by the competition. Without the additional advertising and entertainment expenses, the loss in net income might have been even greater.

(b)

G-BAR PASTURES
Income Statement
Flexible Budget Report
For the Year Ended December 31, 2010

			<u>Difference</u>
	<u>Budget at 18,980 BD</u>	<u>Actual at 18,980 BD</u>	<u>Favorable F Unfavorable U</u>
Boarding days (BD)			
Sales (\$25)	<u>\$474,500</u>	<u>\$379,600</u>	<u>\$ 94,900 U</u>
Less variable expenses			
Feed (\$5)	94,900	104,390	9,490 U
Veterinary fees (\$3)	56,940	58,838	1,898 U
Blacksmith fees (\$.30)	5,694	6,074	380 U
Supplies (\$.55)	<u>10,439</u>	<u>10,178</u>	<u>261 F</u>
Total variable expenses (\$8.85)	<u>167,973</u>	<u>179,480</u>	<u>11,507 U</u>
Contribution margin	<u>306,527</u>	<u>200,120</u>	<u>106,407 U</u>
Less fixed expenses			
Depreciation	40,000	40,000	\$ 0
Insurance	11,000	11,000	0
Utilities	14,000	12,000	2,000 F
Repairs and maintenance	11,000	10,000	1,000 F
Labor	96,000	88,000	8,000 F
Advertising	8,000	12,000	4,000 U
Entertainment	<u>5,000</u>	<u>7,000</u>	<u>2,000 U</u>
Total fixed expenses	<u>185,000</u>	<u>180,000</u>	<u>5,000 F</u>
Net income	<u>\$121,527</u>	<u>\$ 20,120</u>	<u>\$101,407 U</u>

- (c) (1) The primary causes of the decrease in net income are the decreases in boarding rates and volume. The average daily rate charged was $\$20 = (\$379,600 \div 18,980)$. This rate resulted in a decrease in sales revenue of $\$94,900$ or $20\% = (\$94,900 \div \$474,500)$.

Given that it is “an extremely competitive business,” if G-Bar Pastures had not reduced rates, boarding days almost certainly would have declined even more.

- (2) Management did a poor job of controlling variable expenses. These expenses in total were \$11,507 over budget or 7%, or $(\$11,507 \div \$167,973)$.**

Moreover, each individual variable expense was over budget, except for supplies. Management did a good job of controlling fixed expenses as noted in part (a).

- (3) As noted in part (a), management's decisions to stay competitive probably were sound.**
- (d) Given that the industry is "extremely competitive," management should consider two options. One, become the lowest cost operator. If G-Bar Pastures is the company with the lowest operating costs, it can underprice its competitors and take customers away from them (increasing its sales). Eventually, some of its competitors (those with the highest operating costs) will go out of business, and G-Bar Pastures will get their customers, or at least some of them. (Wal-Mart is an example of this strategy.)**

Option two is to offer its customers a superior product or service. If customers perceive that G-Bar Pastures is the "best" boarding stable in Kentucky, the company will take customers away from its competitors. Also, if G-Bar Pastures is perceived as the "best," many customers will be willing to pay a premium for its boarding service, and G-Bar Pastures will be able to raise its rates. (Gillette is an example of this strategy.)

- (a) **Jane Duncan—Profit Center:** Responsible for sales, inventory cost, advertising, sales personnel, printing, and travel. She is not responsible for the assets invested in her division and probably does not control the rent or depreciation costs either. As a profit center manager she might have control of the insurance, but she probably does not.

Richard Wayne—Cost Center: Responsible for inventory cost, advertising, sales personnel, printing, and travel. As a cost center manager, he might or might not have control of rent and insurance costs, but he probably does not. He does not have control of the assets invested in his department; thus, he does not have control of the depreciation.

Jose Lopez—Investment Center: Responsible for all items shown.

- (b) **Jane Duncan Budget differences:** The inventory cost is 30% ($\$45,000 \div \$150,000$) above budget and so should definitely be brought to her attention. Travel is 25% ($\$5,000 \div \$20,000$) below budget. Students may differ as to whether they believe that this should be brought to her attention. The differences in rent and depreciation should not be brought to her attention because she does not control those costs.

Richard Wayne Budget differences: The inventory cost, which is 20% ($\$20,000 \div \$100,000$) above budget, should definitely be brought to his attention. Travel costs are 33% ($\$10,000 \div \$30,000$) below budget. This should probably be brought to his attention, so that he can make sure that the purpose that was to have been served by travel is being adequately served by other means. The 67% ($\$20,000 \div \$30,000$) increase in rent and 10% ($\$10,000 \div \$100,000$) decrease in depreciation are not under his control and so should not be brought to his attention. It should probably be pointed out to students that all budget differences are monitored by someone within the company. These differences that are not the responsibility of the various managers are still within the scope of top management's responsibility.

Jose Lopez Budget differences: As manager of an investment center, Mr. Lopez is responsible for all categories of the budget. The selection in this case would be which differences merit his attention. Any decrease in a company's gross profit rate ($\text{gross profit} \div \text{sales}$) is a

cause for concern. (Remember the gross profit is sales minus cost of goods sold.) Thus, the 5% increase in cost of goods sold should be brought to his attention. Travel is below budget 25% ($\$500 \div \$2,000$), which is \$500. This is not a large percentage of total costs, nor is it a large dollar amount, so there could be an argument that this should be left out. The 20% ($\$2,000 \div \$10,000$) increase in rent is only a \$2,000 increase, so it could be included, though it might be left out as immaterial. The 50% ($\$20,000 \div \$40,000$) increase in depreciation should definitely be included.

- (a) The company's costs do not increase proportionately with the revenues increase in the third and fourth quarter because the behavior of the costs is primarily fixed.
- (b) Static budgeting seems to be most appropriate for Computer Associates because costs do not respond proportionately with changes in the activity level (revenues).

- (a) Only 17% of respondents reported that they are “very satisfied” with their financial planning process.
- (b) The top six key elements forecasted are: (1) Sales/revenue, (2) Gross profit, (3) Operating income, (4) Selling, general and administrative expenses, (5) Key balance sheet items, and (6) Cash flow.
- (c) The percent of time spent on budgeting activities.

(1) Data collection/consolidation	25%
(2) Analysis	22%
(3) Strategy/target setting	22%
(4) Review/approval	17%
(5) Report preparation	14%
- (d) 30% of firms spend more than four months to complete the budget cycle.
- (e) 33% of firms update their forecasts on a monthly basis.

- (a) Mark Farris should be able to control all the variable expenses and the fixed expenses of supervision (but not his portion) and inspection. Insurance and depreciation ordinarily are not the responsibility of the department manager.
- (b) The total variable cost per unit is \$26 ($\$52,000 \div 2,000$). The total cost during the month to manufacture 1,500 units is variable costs \$39,000 ($1,500 \times \$26$) plus fixed costs (\$36,000) or \$75,000 ($\$39,000 + \$36,000$).

(c)

EDMONDS COMPANY
Production Department
Manufacturing Overhead Flexible Budget Report
For the Month Ended _____

	<u>Budget at 1,500 units</u>	<u>Actual at 1,500 units</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Variable costs			
Indirect materials	\$18,000	\$24,200	\$ 6,200 U
Indirect labor	9,000	13,500	4,500 U
Maintenance expense	7,500	8,200	700 U
Manufacturing supplies	4,500	5,100	600 U
Total variable	<u>39,000</u>	<u>51,000</u>	<u>12,000 U</u>
Fixed costs			
Supervision	18,000	19,300	1,300 U
Inspection costs	1,000	1,200	200 U
Insurance expense	2,000	2,200	200 U
Depreciation	15,000	14,700	300 F
Total fixed	<u>36,000</u>	<u>37,400</u>	<u>1,400 U</u>
Total costs	<u>\$75,000</u>	<u>\$88,400</u>	<u>\$13,400 U</u>

- (d) A production department is a cost center. Thus, the report should include only the costs that are controllable by the production manager. This report is shown in Illustration 24-21. In this type of report, no distinction is made between variable and fixed costs.

EDMONDS COMPANY
Production Department
Responsibility Report
For the Month Ended _____

<u>Controllable Cost</u>	<u>Budget</u>	<u>Actual</u>	<u>Difference</u> <u>Favorable F</u> <u>Unfavorable U</u>
Indirect materials	\$18,000	\$24,200	\$ 6,200 U
Indirect labor	9,000	13,500	4,500 U
Maintenance expense	7,500	8,200	700 U
Manufacturing supplies	4,500	5,100	600 U
Supervision*	8,000	9,300	1,300 U
Inspection costs	<u>1,000</u>	<u>1,200</u>	<u>200 U</u>
Total	<u>\$48,000</u>	<u>\$61,500</u>	<u>\$13,500 U</u>

*\$10,000 is deducted from both budget and actual for Mr. Farris's cost.

To: Mr. Mark Farris, Production Manager

From: _____, Vice President of Production

Subject: Performance Evaluation for the Month of XXXXX

Your performance in controlling costs that are your responsibility was very disappointing in the month of XXXXX. As indicated in the accompanying responsibility report, total costs were \$13,500 over budget. On a percentage basis, costs were 28% over budget. As you can see, actual costs were over budget for every cost item. In two instances, costs were more significantly over budget (Indirect materials 34% and Indirect labor 50%).

Mark, it is imperative that you get costs under control in your department as soon as possible.

I think we need to talk about ways to implement more effective cost control measures. I would like to meet with you in my office at 9 a.m. on Wednesday to discuss possible alternatives.

- (a) The stakeholders in this ethical situation are:
- ▶ The employees and managers of each investment center.
 - ▶ The central management and chief executive officer.
 - ▶ The customers who buy the product.
 - ▶ The owners or stockholders.
- (b) Pressure to perform is a frequently identified cause for unethical conduct. Employees are more prone to engage in unethical conduct when unreasonable demands are made upon them. Rather than lose their jobs or be demoted, if given no alternatives, employees may seek to cut corners, reduce quality control, use questionable sales tactics, and bend the rules.
- (c) The company might maintain open lines of communication with its employees to better know the pressures of its managers. By “keeping in touch,” the company may avoid making unreasonable demands on its managers and employees. The company might also develop a company code of ethical conduct and enforce it. However, if dismissal or demotion continues to be the probable consequence of failure to meet objectives, some managers are likely to engage in unethical behavior in an attempt to meet the objectives.

- (a) The basic idea is to set up individual envelopes for different expense categories. Once you have used up the money in a particular envelope you can't use more. Begin by preparing a monthly budget. Identify those items that you will pay in cash. These would include things like groceries, eating out at restaurants, clothing, gasoline, car repairs, gifts, and entertainment. These are the categories for which you will have envelopes. Next, decide how often to fill the envelopes and determine the amount to put in each envelope. If you continually run out of money in a particular envelope you may need to re-evaluate your allocation. If you don't use up all the money in an envelope in one month you can carry it over to the next month.
- (b) Answers will vary by student.

CHAPTER 25

Standard Costs and Balanced Scorecard

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Distinguish between a standard and a budget.	1, 2	1	6	1		
2. Identify the advantages of standard costs.	3		4	1		
3. Describe how companies set standards.	4, 5, 6, 7, 8, 9	2, 3	4, 5	1, 2, 3, 4, 16, 18		
4. State the formulas for determining direct materials and direct labor variances.	10, 11	4, 5	8	4, 5, 6, 7, 8, 9, 12, 13, 18	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B, 6B
5. State the formula for determining the total manufacturing overhead variance.	12	6		10, 11, 18	1A, 2A, 3A, 4A, 5A, 6A	1B, 2B, 3B, 4B, 5B, 6B
6. Discuss the reporting of variances.	13, 14			9, 13, 14	3A	3B
7. Prepare an income statement for management under a standard costing system.	18			15	2A, 5A, 6A	2B, 5B, 6B
8. Describe the balanced scorecard approach to performance evaluation.	15, 16, 17	7		16		
*9. Identify the features of a standard cost accounting system.	19	8, 9		17, 18, 19	6A	6B
*10. Compute overhead controllable and volume variances.	20, 21, 22, 23	10, 11		20, 21, 22	7A, 8A, 9A, 10A	7B, 8B, 9B, 10B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Compute variances.	Simple	20–30
2A	Compute variances, and prepare income statement.	Simple	30–40
3A	Compute and identify significant variances.	Moderate	20–30
4A	Answer questions about variances.	Complex	30–40
5A	Compute variances, prepare an income statement, and explain unfavorable variances.	Moderate	30–40
*6A	Journalize and post standard cost entries, and prepare income statement.	Moderate	40–50
*7A	Compute overhead controllable and volume variances.	Simple	10–15
*8A	Compute overhead controllable and volume variances.	Simple	10–15
*9A	Compute overhead controllable and volume variances.	Moderate	10–15
*10A	Compute overhead controllable and volume variances.	Moderate	10–15
1B	Compute variances.	Simple	20–30
2B	Compute variances, and prepare income statement.	Simple	30–40
3B	Compute and identify significant variances.	Moderate	30–40
4B	Answer questions about variances.	Complex	30–40
5B	Compute variances, prepare an income statement, and explain unfavorable variances.	Moderate	30–40
*6B	Journalize and post standard cost entries, and prepare income statement.	Moderate	40–50
*7B	Compute overhead controllable and volume variances.	Simple	10–15
*8B	Compute overhead controllable and volume variances.	Simple	10–15
*9B	Compute overhead controllable and volume variances.	Moderate	10–15
*10B	Compute overhead controllable and volume variances.	Moderate	10–15

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 25
STANDARD COSTS AND BALANCED SCORECARD

Number	SO	BT	Difficulty	Time (min.)
BE1	1	AP	Simple	3–5
BE2	3	AP	Simple	4–6
BE3	3	AP	Simple	4–6
BE4	4	AP	Simple	5–7
BE5	4	AP	Simple	5–7
BE6	5	AP	Simple	3–5
BE7	8	AP	Simple	2–4
BE8	9	AP	Moderate	5–7
BE9	9	AP	Moderate	5–7
BE10	10	AP	Simple	3–5
BE11	10	AP	Simple	3–5
DI1	3	AP	Simple	4–6
DI2	4	AP	Simple	5–7
DI3	4, 5	AP	Simple	6–8
DI4	8	C	Simple	4–6
EX1	1–3	AP	Simple	8–10
EX2	3	AP	Simple	8–10
EX3	3	AP	Simple	6–8
EX4	3, 4	AP	Simple	8–10
EX5	4	AP	Simple	8–10
EX6	4	AP	Simple	8–10
EX7	4	AP	Simple	8–10
EX8	4	AN	Simple	10–12
EX9	4, 6	AP	Simple	8–10
EX10	5	AN	Simple	2–4
EX11	5	AP	Simple	6–8
EX12	4	AP	Simple	6–8
EX13	4, 6	AP	Simple	8–10
EX14	6	AP	Moderate	6–8
EX15	7	AP	Simple	6–8
EX16	3, 8	C	Simple	4–6
EX17	9	AP	Moderate	10–12

STANDARD COSTS AND BALANCED SCORECARD (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX18	4, 5, 9	AN	Moderate	5–7
EX19	9	AP	Moderate	10–12
EX20	10	AN	Moderate	8–10
EX21	10	AN	Moderate	10–12
EX22	10	AP	Simple	6–8
P1A	4, 5	AP	Simple	20–30
P2A	4, 5, 7	AP	Simple	30–40
P3A	4–6	AN	Moderate	20–30
P4A	4, 5	AN	Complex	30–40
P5A	4, 5, 7	AP	Moderate	30–40
P6A	4, 5, 7, 9	AP	Moderate	40–50
P7A	10	AP	Simple	10–15
P8A	10	AP	Simple	10–15
P9A	10	AP	Moderate	10–15
P10A	10	AP	Moderate	10–15
P1B	4, 5	AP	Simple	20–30
P2B	4, 5, 7	AP	Simple	30–40
P3B	4–6	AN	Moderate	30–40
P4B	4, 5	AN	Complex	30–40
P5B	4, 5, 7	AP	Moderate	30–40
P6B	4, 5, 7, 9	AP	Moderate	40–50
P7B	10	AP	Simple	10–15
P8B	10	AP	Simple	10–15
P9B	10	AP	Moderate	10–15
P10B	10	AP	Moderate	10–15
BYP1	3, 4	E	Moderate	20–25
BYP2	5, 10	AP	Moderate	20–25
BYP3	3, 4	E	Simple	10–15
BYP4	8	C	Simple	15–20
BYP5	3–5	C	Moderate	15–20
BYP6	4	E	Simple	10–15
BYP7	2	E	Simple	15–20

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Distinguish between a standard and a budget.		Q25-1 Q25-2	BE25-1 E25-1			
2. Identify the advantages of standard costs.	Q25-3		E25-1			
3. Describe how companies set standards.	Q25-8	Q25-4 Q25-7 E25-18 Q25-5 Q25-9 Q25-6 E25-16	BE25-2 E25-1 E25-4 BE25-3 E25-2 DI25-1 E25-3			
4. State the formulas for determining direct materials and direct labor variances.	Q25-10 Q25-11		BE25-4 E25-7 P25-6A BE25-5 E25-9 P25-1B DI25-2 E25-12 P25-2B DI25-3 E25-13 P25-5B E25-4 P25-1A P25-6B E25-5 P25-2A E25-6 P25-5A	E25-8 E25-18 P25-3A P25-4A P25-3B P25-4B		
5. State the formula for determining the total manufacturing overhead variance.		Q25-12	BE25-6 P25-1A P25-2B DI25-3 P25-2A P25-5B E25-10 P25-5A P25-6B E25-11 P25-6A E25-18 P25-1B	E25-10 P25-3B E25-11 P25-4B E25-18 P25-3A P25-4A		
6. Discuss the reporting of variances.		Q25-13 Q25-14	E25-9 E25-14 E25-13	P25-3A P25-3B		
7. Prepare an income statement for management under a standard costing system.		Q25-18	E25-15 P25-6A P25-6B P25-2A P25-2B P25-5A P25-5B			
8. Describe the balanced scorecard approach to performance evaluation.		Q25-15 Q25-16 Q25-17	DI25-4 E25-16			
*9. Identify the features of a standard cost accounting system.		Q25-19	BE25-8 E25-18 P25-6B BE25-9 E25-19 E25-17 P25-6A	E25-18		
*10. Compute overhead controllable and volume variances.		Q25-20 Q25-21 Q25-22 Q25-23	BE25-10 P25-7A P25-8B BE25-11 P25-8A P25-9B E25-20 P25-9A P25-10B E25-21 P25-10A E25-22 P25-7B	E25-20 E25-21 E25-22		
Broadening Your Perspective		Exploring the Web Communication	Managerial Analysis			Decision Making Across the Organization Real-World Focus Ethics Case All About You

ANSWERS TO QUESTIONS

1. (a) This is incorrect. Standard costs are predetermined unit costs.
(b) Agree. Examples of governmental regulations that establish standards for a business are the Fair Labor Standards Act, the Equal Employment Opportunity Act, and a multitude of environmental laws.
2. (a) Standards and budgets are similar in that both are predetermined costs and both contribute significantly to management planning and control. The two terms differ in that a standard is a unit amount and a budget is a total amount.
(b) There are important accounting differences between budgets and standards. Except in the application of manufacturing overhead to jobs and processes, budget data are not journalized in cost accounting systems. In contrast, standard costs may be incorporated into cost accounting systems. It is possible for a company to report inventories at standard costs in its financial statements, but it is not possible to report inventories at budgeted costs.
3. In addition to facilitating management planning, standard costs offer the following advantages to an organization:
 - (1) They promote greater economy by making employees more “cost-conscious.”
 - (2) They may be useful in setting selling prices.
 - (3) They contribute to management control by providing a basis for evaluating cost control.
 - (4) They are useful in highlighting variances in “management by exception.”
 - (5) They simplify the costing of inventories and reduce clerical costs.
4. The management accountant provides input to the setting of standards through the accumulation of historical cost data and knowledge of the behavior of costs in response to changes in activity levels. Management has the responsibility for setting the standards.
5. Ideal standards represent optimum levels of performance under perfect operating conditions. Normal standards represent efficient levels of performance that is attainable under expected operating conditions.
6. (a) The direct materials price standard should be based on the purchasing department’s best estimate of the cost of raw materials and an amount for related costs such as receiving, storing, and handling.
(b) The direct materials quantity standard should be based on both quality and quantity requirements plus allowances for unavoidable waste and normal spoilage.
7. Agree. The direct labor quantity standard should include allowances for rest periods, cleanup, machine setup, and machine downtime.
8. With standard costs, the predetermined overhead rate is determined by dividing budgeted overhead costs by an expected standard activity index.
9. A favorable cost variance has a positive connotation. It suggests efficiencies in incurring manufacturing costs and in using direct materials, direct labor, and manufacturing overhead. An unfavorable cost variance has a negative connotation. It suggests that too much was paid for one or more of the manufacturing cost elements or that the elements were used inefficiently.

Questions Chapter 25 (Continued)

10. (a) (1) actual price. (2) standard price.
(b) (3) actual quantity. (4) standard price.
(c) (5) standard price. (6) standard quantity.
11. $(1) - (3) = \text{total labor variance}$; $(1) - (2) = \text{labor price variance}$; and $(2) - (3) = \text{labor quantity variance}$.
12. Overhead applied = $\$8 \times 27,000 = \$216,000$.
13. Variances should be reported to appropriate levels of management as soon as possible. The principle of "management by exception" may be used with variance reports.
14. The purchasing department would be responsible for an unfavorable materials price variance when it paid more than the standard price for the materials. The purchasing department would also be responsible for an unfavorable materials quantity variance if it purchased materials of inferior quality which caused an excess use of materials.
15. The four perspectives of the balanced scorecard are: financial, customer, internal process, and learning and growth. The financial perspective employs financial measures of performance used by most firms. The customer perspective evaluates how well the company is performing from the viewpoint of those people who buy and use its product in terms of price, quality, product innovation, customer service, and other dimensions. The internal process perspective evaluates the value chain—product development, production, delivery and after-sale service—to ensure that the company is operating effectively and efficiently. The learning and growth perspective evaluates how well the company develops and retains its employees. The four perspectives are linked in that the results in one perspective influence the results in the next.
16. Tom Jones is not correct. The balanced scorecard does not replace financial measures, it instead integrates both financial and nonfinancial measures. In fact, financial measures are very critical to the balanced scorecard, since they represent the final "destination" of all the company's efforts.
17. The possibilities for nonfinancial measures are limitless. Some that were mentioned in the chapter were: capacity utilization of plants, average age of key assets, impact of strikes, brand-loyalty statistics, market profile of customer-end products, number of new products, employee stock ownership percentages, number of scientists and technicians used in R&D, customer satisfaction data, factors affecting customer product selection, number of patents and trademarks held, customer brand awareness, number of ATMs by state, number of products used by average customer, percentage of customer service calls handled by interactive voice response units, personnel cost per employee, credit card retention rates.
18. (a) Variances are reported in income statements for management below gross profit which is reported at standard costs. Each variance is identified and the total variance is shown.
(b) Standard costs may be used in costing inventories when there is no significant difference between actual costs and standard costs. When there are significant differences, actual costs must be reported.

Questions Chapter 25 (Continued)

- *19.** (a) A standard cost accounting system is a double-entry system of accounting in which standard costs are used in making entries and standard cost variances are formally recognized in the accounts.
- (b) The variance account will have: (1) a debit balance when the materials price variance is unfavorable and (2) a credit balance when the labor quantity variance is favorable.
- *20.** Overhead controllable variance = actual overhead costs (\$218,000) – overhead budgeted. Overhead budgeted is based on standard hours allowed as follows: variable costs (27,000 X \$5 = \$135,000) + fixed costs (28,000 X \$3 = \$84,000) = total budgeted (\$219,000). Thus, the controllable variance is \$1,000 favorable.
- *21.** The purpose of computing the overhead volume variance is to determine whether plant facilities were efficiently used during the period. The basic formula is fixed overhead rate X (normal capacity – standard hours allowed).
- *22.** Fixed costs remain the same at every level of activity within the relevant range. Since the predetermined overhead rate is based on normal capacity, it follows that if standard hours allowed are less than standard hours at normal capacity, fixed overhead costs will be underapplied. The reverse is true when production exceeds normal capacity.
- *23.** Nick should include the following points about overhead variances:
- (1) Standard hours allowed are used in each of the variances.
 - (2) Budgeted costs for the controllable variance are derived from the flexible budget.
 - (3) The controllable variance generally pertains to variable costs.
 - (4) The volume variance pertains solely to fixed costs.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 25-1

- (a) Standards are stated as a per unit amount. Thus, the standards are materials \$2.40 ($\$1,200,000 \div 500,000$) and labor \$3.20 ($\$1,600,000 \div 500,000$).
- (b) Budgets are stated as a total amount. Thus, the budgeted costs for the year are materials \$1,200,000 and labor \$1,600,000.

BRIEF EXERCISE 25-2

- (a) Standard materials price per gallon = \$2.50 ($\$2.20 + \$0.20 + \$0.10$).
- (b) Standard materials quantity per gallon = 3 pounds ($2.6 + .4$).
- (c) Standard materials cost per gallon = \$7.50 ($\$2.50 \times 3$).

BRIEF EXERCISE 25-3

- (a) Standard direct labor rate per hour = \$14.00 ($\$12.00 + \$0.80 + \$1.20$).
- (b) Standard direct labor hours per gallon = 1.6 hours ($1.2 + .25 + .15$).
- (c) Standard labor cost per gallon = \$22.40 ($\$14.00 \times 1.6$).

BRIEF EXERCISE 25-4

Total materials variance = \$1,160 U ($3,200 \times \$5.05^*$) – ($3,000^{**} \times \$5.00$).
Materials price variance = \$160 U ($3,200 \times \$5.05$) – ($3,200 \times \$5.00$).
Materials quantity variance = \$1,000 U ($3,200 \times \$5.00$) – ($3,000 \times \$5.00$).

*\$16,160 $\div$ 3,200

**1,500 $\times$ 2

BRIEF EXERCISE 25-5

Total labor variance = \$2,050 U ($2,100 \times \$10.50$) – ($2,000 \times \$10.00$).
Labor price variance = \$1,050 U ($2,100 \times \$10.50$) – ($2,100 \times \$10.00$).
Labor quantity variance = \$1,000 U ($2,100 \times \$10.00$) – ($2,000 \times \$10.00$).

BRIEF EXERCISE 25-6

The formula is: **Actual** **Overhead**
 Overhead – Applied = Total Overhead Variance
 \$115,000 – \$120,000* \$5,000 F

***20,000 X \$6 = \$120,000**

BRIEF EXERCISE 25-7

(1) financial.....	(c) return on assets
(2) customer.....	(d) brand recognition
(3) internal process.....	(a) plant capacity utilization
(4) learning and growth.....	(b) employee work days missed due to injury

*BRIEF EXERCISE 25-8

(a) Raw Materials Inventory.....	12,000	
Materials Price Variance.....		900
Accounts Payable.....		11,100
(b) Work in Process Inventory (5,800 X \$2*)	11,600	
Materials Quantity Variance		600
Raw Materials Inventory (5,500 X \$2).....		11,000

***\$12,000 ÷ 6,000**

*BRIEF EXERCISE 25-9

(a) Factory Labor.....	25,200	
Labor Price Variance		1,200
Wages Payable		24,000
(b) Work in Process Inventory (3,100 X \$8.40*).....	26,040	
Labor Quantity Variance		840
Factory Labor.....		25,200

***\$25,200 ÷ 3,000**

*BRIEF EXERCISE 25-10

The formula is:

$$\begin{array}{rcl} \text{Actual Overhead} & - & \text{Overhead Budgeted} = \text{Overhead Controllable Variance} \\ \$115,000 & - & \$130,000^* = \$15,000 \text{ F} \end{array}$$

$$*(20,000 \times \$4) + \$50,000 = \$130,000$$

*BRIEF EXERCISE 25-11

The formula is:

$$\begin{array}{rcl} \text{Fixed Overhead Rate} \times (\text{Normal Capacity Hours} - \text{Standard Hours Allowed}) & = & \text{Overhead Volume Variance} \end{array}$$

$$\$2.00^*/\text{hr.} \times (25,000 - 20,000) = \$10,000 \text{ U}$$

$$*(\$50,000 \div 25,000 \text{ hrs.})$$

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 25-1

<u>Manufacturing Cost Element</u>	<u>Standard Quantity</u>	<u>X</u>	<u>Standard Price</u>	<u>=</u>	<u>Standard Cost</u>
Direct materials	2 pounds		\$ 5.00		\$10.00
Direct labor	0.2 hours		14.00		2.80
Manufacturing overhead	125%		2.80		3.50
Total					<u>\$16.30</u>

DO IT! 25-2

The variances are:

$$\text{Total materials variance} = (29,000 \times \$6.20) - (30,000 \times \$6.00) = \$200 \text{ favorable}$$

$$\text{Materials price variance} = (29,000 \times \$6.20) - (29,000 \times \$6.00) = \$5,800 \text{ unfavorable}$$

$$\text{Materials quantity variance} = (29,000 \times \$6.00) - (30,000 \times \$6.00) = \$6,000 \text{ favorable}$$

DO IT! 25-3

The variances are:

Total labor variance = $(4,100 \times \$14.40) - (4,000 \times \$14.00) = \$3,040$ unfavorable

Labor price variance = $(4,100 \times \$14.40) - (4,100 \times \$14.00) = \$1,640$ unfavorable

Labor quantity variance = $(4,100 \times \$14.00) - (4,000 \times \$14.00) = \$1,400$ unfavorable

Total overhead variance = $\$81,300 - \$84,000^* = \$2,700$ favorable

*4,000 hours X \$21.00

DO IT! 25-4

1. Learning and growth perspective.
2. Financial perspective.
3. Customer perspective.
4. Internal process perspective.
5. Learning and growth perspective.
6. Customer perspective.

SOLUTIONS TO EXERCISES

EXERCISE 25-1

(a) Direct materials: $(2,000 \times 3) \times \$6 = \underline{\$36,000}$
 Direct labor: $(2,000 \times 1/2) \times \$14 = \underline{\$14,000}$
 Overhead: $\$14,000 \times 70\% = \underline{\$9,800}$

(b) Direct materials: $3 \times \$6 = \$18.00$
 Direct labor: $1/2 \times \$14 = 7.00$
 Overhead: $\$7 \times 70\% = \underline{4.90}$
 Standard cost: **\$29.90**

(c) The advantages of standard costs which are carefully established and prudently used are:

1. Management planning is facilitated.
2. Greater economy is promoted by making employees more cost-conscious.
3. Setting selling prices is facilitated.
4. Management control is enhanced by having a basis for evaluation of cost control.
5. Variances are highlighted in management by exception.
6. Costing of inventories is simplified and clerical costs are reduced.

EXERCISE 25-2

Ingredient	Amount Per Gallon	Standard Waste	Standard Usage	Standard Price	Standard Cost Per Gallon
Grape concentrate	60* oz.	4%	(a) 62.5 oz.	\$.04	\$2.50
Sugar ($54 \div 50$)	1.08 lb.	10%	(b) 1.2 lb.	.35	.42
Lemons ($60 \div 50$)	1.2	20%	(c) 1.5	.60	.90
Yeast	1 tablet	0%	1 tablet	.25	.25
Nutrient	1 tablet	0%	1 tablet	.20	.20
Water ($2,500 \div 50$)	50 oz.	0%	50 oz.	.004	.20
					<u>\$4.47</u>

* $3,000 \div 50$

- (a) $.96X = 60$ ounces; or $X = (60 \text{ ounces})/.96$.
 (b) $.90X = 1.08$ pounds; or $X = (1.08 \text{ pounds})/.90$.
 (c) $.80X = 1.2$ lemons; or $X = (1.2 \text{ lemons})/.80$.

EXERCISE 25-3

Direct materials

Cost per pound [$\$4 - (2\% \times \$4) + \$0.25$]	\$4.17	
Pounds per unit ($4.5 + 0.5$)	<u>X 5</u>	\$20.85

Direct labor

Cost per hour ($\$12 + \$3$)	\$ 15	
Hours per unit ($2 + .2$)	<u>X 2.2</u>	33.00

Manufacturing overhead

2.2 hours X \$6		<u>13.20</u>
Total standard cost per unit		<u>\$67.05</u>

EXERCISE 25-4

(a) Actual service time	1.0 hours
Setup and downtime	0.1 hours
Cleanup and rest periods	<u>0.3 hours</u>
Standard direct labor hours per oil change	<u>1.4 hours</u>

(b) Hourly wage rate	\$10.00
Payroll taxes ($\$10 \times 10\%$)	1.00
Fringe benefits ($\$10 \times 25\%$)	<u>2.50</u>
Standard direct labor hourly rate	<u>\$13.50</u>

(c) Standard direct labor cost per oil change = 1.40 hours X \$13.50 per hour
= \$18.90

(d) Direct labor quantity variance = $(1.50 \text{ hours} \times \$13.50) - (1.40 \text{ hours} \times \$13.50)$
= $\$20.25 - \$18.90$
= \$1.35 U

EXERCISE 25-5

(a) Total materials variance:

$$\begin{array}{rcl} (AQ \times AP) - (SQ \times SP) & & \\ (28,000 \times \$4.70) - (27,000 \times \$5.00) & & \\ \$131,600 - \$135,000 & = & \$3,400 \text{ F} \end{array}$$

$$*9,000 \times 3$$

Materials price variance:

$$\begin{array}{rcl} (AQ \times AP) - (AQ \times SP) & & \\ (28,000 \times \$4.70) - (28,000 \times \$5.00) & & \\ \$131,600 - \$140,000 & = & \$8,400 \text{ F} \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl} (AQ \times SP) - (SQ \times SP) & & \\ (28,000 \times \$5.00) - (27,000 \times \$5.00) & & \\ \$140,000 - \$135,000 & = & \$5,000 \text{ U} \end{array}$$

(b) Total materials variance:

$$\begin{array}{rcl} (AQ \times AP) - (SQ \times SP) & & \\ (26,200 \times \$5.20) - (27,000 \times \$5.00) & & \\ \$136,240 - \$135,000 & = & \$1,240 \text{ U} \end{array}$$

Materials price variance:

$$\begin{array}{rcl} (AQ \times AP) - (AQ \times SP) & & \\ (26,200 \times \$5.20) - (26,200 \times \$5.00) & & \\ \$136,240 - \$131,000 & = & \$5,240 \text{ U} \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl} (AQ \times SP) - (SQ \times SP) & & \\ (26,200 \times \$5.00) - (27,000 \times \$5.00) & & \\ \$131,000 - \$135,000 & = & \$4,000 \text{ F} \end{array}$$

EXERCISE 25-6

(a) Total labor variance:

$$\begin{array}{rcl} (AH \times AR) - (SH \times SR) & & \\ (40,800 \times \$12.10) - (40,000 \times \$12.00) & & \\ \$493,680 - \$480,000 & = & \$13,680 \text{ U} \end{array}$$

$$*10,000 \times 4$$

(b) Labor price variance:

$$\begin{array}{rcl} (AH \times AR) - (AH \times SR) & & \\ (40,800 \times \$12.10) - (40,800 \times \$12.00) & & \\ \$493,680 - \$489,600 & = & \$4,080 \text{ U} \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl} (AH \times SR) - (SH \times SR) & & \\ (40,800 \times \$12.00) - (40,000 \times \$12.00) & & \\ \$489,600 - \$480,000 & = & \$9,600 \text{ U} \end{array}$$

(c) Labor price variance:

$$\begin{array}{rcl} (AH \times AR) - (AH \times SR) & & \\ (40,800 \times \$12.10) - (40,800 \times \$12.25) & & \\ \$493,680 - \$499,800 & = & \$6,120 \text{ F} \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl} (AH \times SR) - (SH \times SR) & & \\ (40,800 \times \$12.25) - (42,000 \times \$12.25) & & \\ \$499,800 - \$514,500 & = & \$14,700 \text{ F} \end{array}$$

EXERCISE 25-7

Total materials variance:

$$\begin{array}{rcl} (AQ \times AP) - (SQ \times SP) & & \\ (1,900 \times \$2.60) - (1,840 \times \$2.50) & & \\ \$4,940 - \$4,600 & = & \$340 \text{ U} \end{array}$$

Materials price variance:

$$\begin{array}{rcl} (AQ \times AP) - (AQ \times SP) & & \\ (1,900 \times \$2.60) - (1,900 \times \$2.50) & & \\ \$4,940 - \$4,750 & = & \$190 \text{ U} \end{array}$$

$$*\$4,940 \div 1,900$$

$$**230 \times 8$$

EXERCISE 25-7 (Continued)

Materials quantity variance:

$$\begin{array}{rcll} (AQ \times SP) & - & (SQ \times SP) & \\ (1,900 \times \$2.50) & & (1,840 \times \$2.50) & \\ \$4,750 & - & \$4,600 & = \$150 \text{ U} \end{array}$$

Total labor variance:

$$\begin{array}{rcll} (AH \times AR) & - & (SH \times SR) & \\ (700 \times \$11.60^*) & & (690^{**} \times \$12.00) & \\ \$8,120 & - & \$8,280 & = \$160 \text{ F} \end{array}$$

$$*\$8,120 \div 700$$

$$**230 \times 3$$

Labor price variance:

$$\begin{array}{rcll} (AH \times AR) & - & (AH \times SR) & \\ (700 \times \$11.60) & & (700 \times \$12.00) & \\ \$8,120 & - & \$8,400 & = \$280 \text{ F} \end{array}$$

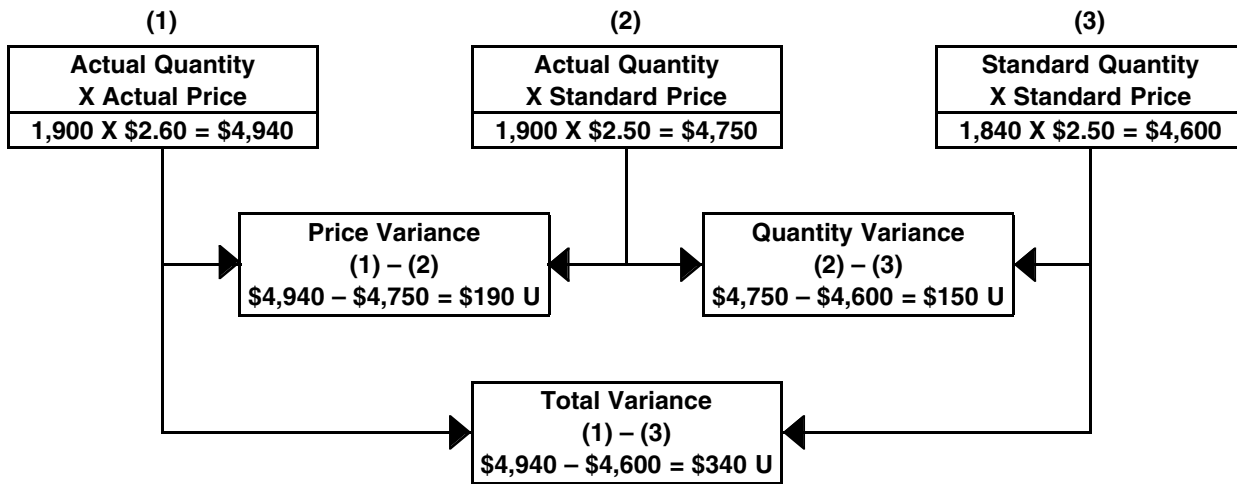
Labor quantity variance:

$$\begin{array}{rcll} (AH \times SR) & - & (SH \times SR) & \\ (700 \times \$12.00) & & (690 \times \$12.00) & \\ \$8,400 & - & \$8,280 & = \$120 \text{ U} \end{array}$$

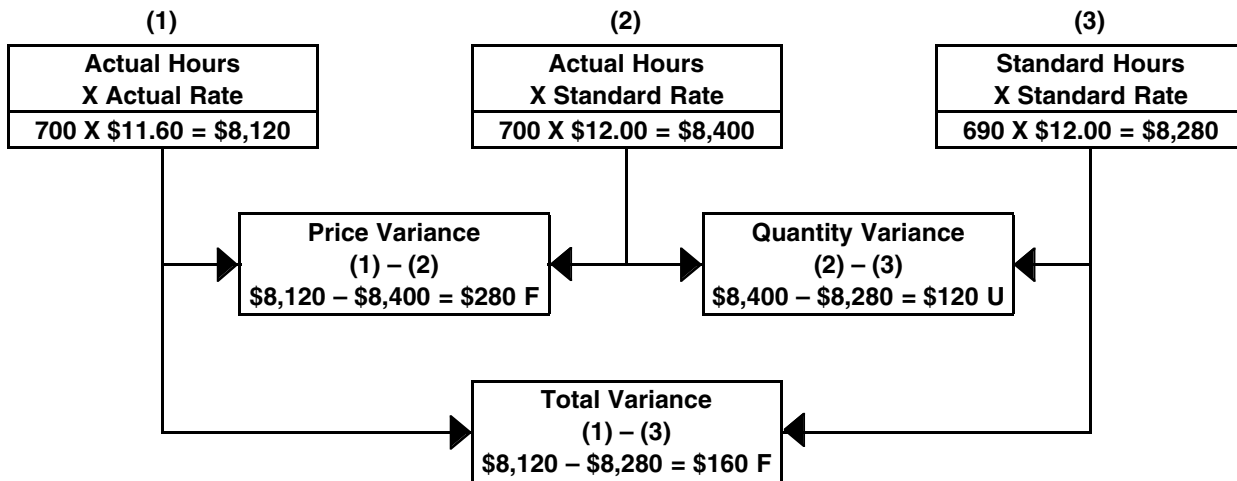
EXERCISE 25-7 (Continued)

(Not Required)

Materials Variance Matrix



Labor Variance Matrix



EXERCISE 25-8

(a) **Total materials variance:**

$$\begin{array}{rcl} (AQ \times AP) - (SQ \times SP) & & \\ (1,225 \times \$128) - (1,200 \times \$130) & & \\ \$156,800 - \$156,000 & = & \$800 \text{ U} \end{array}$$

Materials price variance:

$$\begin{array}{rcl} (AQ \times AP) - (AQ \times SP) & & \\ (1,225 \times \$128) - (1,225 \times \$130) & & \\ \$156,800 - \$159,250 & = & \$2,450 \text{ F} \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl} (AQ \times SP) - (SQ \times SP) & & \\ (1,225 \times \$130) - (1,200 \times \$130) & & \\ \$159,250 - \$156,000 & = & \$3,250 \text{ U} \end{array}$$

Total labor variance:

$$\begin{array}{rcl} (AH \times AR) - (SH \times SR) & & \\ (4,200 \times \$13) - (4,300 \times \$12) & & \\ \$54,600 - \$51,600 & = & \$3,000 \text{ U} \end{array}$$

Labor price variance:

$$\begin{array}{rcl} (AH \times AR) - (AH \times SR) & & \\ (4,200 \times \$13) - (4,200 \times \$12) & & \\ \$54,600 - \$50,400 & = & \$4,200 \text{ U} \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl} (AH \times SR) - (SH \times SR) & & \\ (4,200 \times \$12) - (4,300 \times \$12) & & \\ \$50,400 - \$51,600 & = & \$1,200 \text{ F} \end{array}$$

- (b) The unfavorable materials quantity variance may be caused by the carelessness or inefficiency of production workers. Alternatively, the excess quantities may be caused by inferior quality materials acquired by the purchasing department.

The unfavorable labor price variance may be caused by misallocation of the work force by the production department. In this case, more experienced workers may have been assigned to tasks normally done by inexperienced workers. An unfavorable labor variance may also occur when workers are paid higher wages than expected. The manager who authorized the wage increase is responsible for this variance.

EXERCISE 25-9

HINTON TOOL & DIE COMPANY Direct Labor Variance Report For the Month Ended March 31, 2010

Job No.	Actual Hours	Standard Hours	Quantity Variance ^(a)	Actual Rate ⁽¹⁾	Standard Rate ⁽²⁾	Price Variance ^(b)	Explanation
A257	220	225	\$100.00 F	\$20.00	\$20.00	\$ 0	Repeat job
A258	450	430	400.00 U	\$22.00	\$20.00	900.00 U	Rush job
A259	300	300	0	\$20.50	\$20.00	150.00 U	Replacement worker
A260	115	110	100.00 U	\$18.00	\$20.00	230.00 F	New trainee
Totals			\$ 400.00 U			\$820.00 U	

^(a) LQV = SR X (AH – SH)

⁽¹⁾ Actual costs ÷ actual hours

^(b) LPV = AH X (AR – SR)

⁽²⁾ Standard costs ÷ standard hours

EXERCISE 25-10

Total overhead variance:

Actual Overhead	–	Overhead Applied	
\$213,000	–	\$204,000	= \$9,000 U
		(51,000 X \$4)	

EXERCISE 25-11

(a)	Overhead Budget (at normal capacity)	÷	Direct Labor Hours (at normal capacity)	=	Predetermined Overhead Rate
Variable	\$200,000		100,000		\$2
Fixed	600,000		100,000		\$6

(b)	Standard Hours Allowed	X	Predetermined Overhead Rate	=	Overhead Applied
	90,000		\$8		\$720,000

(c)	Actual Overhead	–	Overhead Applied	=	Total Overhead Variance
	\$786,000	–	\$720,000	=	\$66,000 U
	(\$186,000 + \$600,000)		(90,000 X \$8)		

EXERCISE 25-12

(a) $(AQ \times AP) - (SQ \times SP) = \text{Total Materials Variance}$
 $(\$10,900) - (2,140 \times \$5) = \$200 \text{ U}$

$(AQ \times AP) - (AQ \times SP) = \text{Materials Price Variance}$
 $(\$10,900) - (2,300 \times \$5) = \$600 \text{ F}$

$(AQ \times SP) - (SQ \times SP) = \text{Materials Quantity Variance}$
 $(2,300 \times \$5) - (2,140 \times \$5) = \$800 \text{ U}$

- (b) One possible cause of an unfavorable materials quantity variance is the purchase of substandard materials. Such materials would normally be purchased at a lower price than normal, which means there would also be favorable materials price variance. Substandard materials could also cause work slowdowns and delays, causing an unfavorable labor quantity variance. Therefore, the purchase of substandard materials could cause all three variances mentioned.

EXERCISE 25-13

(a)

IMPERIAL LANDSCAPING Variance Report – Purchasing Department For the Current Month

Project	Actual Pounds Purchased	(1) Actual Price	(2) Standard Price	Price Variance ^(a)	Explanation
Ames	500	\$2.35	\$2.50	\$75 F	Purchased poor quality seeds
Korman	400	2.40	2.50	40 F	Seeds on sale
Stilles	500	2.60	2.50	50 U	Price increased
Total price variance				<u>\$65 F</u>	

^(a)MPV = AQ X (AP – SP) ⁽¹⁾Actual costs ÷ actual quantity ⁽²⁾Standard costs ÷ standard quantity.

EXERCISE 25-13 (Continued)

(b)

IMPERIAL LANDSCAPING Variance Report – Production Department For the Current Month

Project	Actual Pounds	Standard Pounds	Standard Price	Quantity Variance ^(b)	Explanation
Ames	500	460	\$2.50	\$100 U	Purchased poor quality seeds
Korman	400	410	2.50	25 F	Purchased higher quality seeds
Stilles	500	480	2.50	50 U	New employee
Total quantity variance				<u>\$125 U</u>	

^(b)MQV = SP X (AQ – SQ)

EXERCISE 25-14

ARCHANGEL CORPORATION Variance Report – Purchasing Department For Week Ended January 9, 2011

Type of Materials	Quantity Purchased	Actual Price	Standard Price	Price Variance	Explanation
Rogue11	26,000 lbs.	\$5.20	\$5.00	\$5,200 U	Price increase
Storm17	7,000 oz.	\$3.40	\$3.25	\$1,050 U	Rush order
Beast29	22,000 units.	\$0.45	\$0.47	\$ 440 F	Bought larger quantity

$26,000 = \$5,200 / (\$5.20 - \$5.00).$

$\$5,200$ U because the actual price (\$5.20) exceeds the standard price (\$5.00).

$\$1,050 / 7,000 = \$0.15$; $\$3.25 + \$0.15 = \$3.40$

$\$440 / 22,000 = \$0.02$; $\$0.45 + \$0.02 = \$0.47$

EXERCISE 25-15

CEPEDA COMPANY
Income Statement
For the Month Ended January 31, 2010

Sales (8,000 X \$8)		\$64,000
Cost of goods sold (8,000 X \$6)		<u>48,000</u>
Gross profit (at standard)		16,000
Variances		
Materials price	\$1,250	
Materials quantity	(700)	
Labor price	525	
Labor quantity	725	
Overhead	<u>800</u>	
Total variance—unfavorable		<u>2,600</u>
Gross profit (actual)		13,400
Selling and administrative expenses		<u>6,000</u>
Net income		<u>\$ 7,400</u>

EXERCISE 25-16

- (1) **Balanced scorecard—(c)** An approach that incorporates financial and nonfinancial measures in an integrated system that links performance measurement and a company's strategic goals.
- (2) **Variance—(a)** The difference between total actual costs and total standard costs.
- (3) **Learning and growth perspective—(d)** A viewpoint employed in the balanced scorecard to evaluate how well a company develops and retains its employees.

EXERCISE 25-16 (Continued)

- (4) Nonfinancial measures —(e) An evaluation tool that is not based on dollars.
- (5) Customer perspective—(f) A viewpoint employed in the balanced scorecard to evaluate the company from the perspective of those people who buy and use its products or services.
- (6) Internal process perspective—(h) A viewpoint employed in the balanced scorecard to evaluate the efficiency and effectiveness of the company's value chain.
- (7) Ideal standards—(g) An optimum level of performance under perfect operating conditions.
- (8) Normal standards—(b) An efficient level of performance that is attainable under expected operating conditions.

*EXERCISE 25-17

(1)	Raw Materials Inventory (18,000 X \$4.30).....	77,400	
	Materials Price Variance (18,000 X \$.20).....	3,600	
	Accounts Payable (18,000 X \$4.50).....		81,000
(2)	Work in Process Inventory (17,600 X \$4.30).....	75,680	
	Materials Quantity Variance (400 X \$4.30).....	1,720	
	Raw Materials Inventory (18,000 X \$4.30).....		77,400
(3)	Factory Labor (15,200 X \$5.50).....	83,600	
	Labor Price Variance (15,200 X \$.70)		10,640
	Wages Payable (15,200 X \$4.80)		72,960
(4)	Work in Process Inventory (15,400 X \$5.50).....	84,700	
	Labor Quantity Variance (200 X \$5.50)		1,100
	Factory Labor (15,200 X \$5.50).....		83,600
(5)	Work in Process Inventory (84,700 X 100%).....	84,700	
	Manufacturing Overhead.....		84,700

***EXERCISE 25-18**

- (a) \$130,000 (\$128,000 + \$2,000).
- (b) \$127,000 (\$130,000 – \$3,000).
- (c) \$141,500 (\$140,000 + \$1,500).
- (d) \$139,100 (\$140,000 – \$900).
- (e) \$166,200 (\$165,000 + \$1,200).

***EXERCISE 25-19**

Raw Materials Inventory (1,900 X \$2.50).....	4,750	
Materials Price Variance (1,900 X \$0.10)	190	
Accounts Payable (1,900 X \$2.60)		4,940
Work in Process Inventory (1,840* X \$2.50)	4,600	
Materials Quantity Variance (60 X \$2.50).....	150	
Raw Materials Inventory (1,900 X \$2.50).....		4,750

***230 X 8**

Factory Labor (700 X \$12)	8,400	
Labor Price Variance (700 X \$0.40)		280
Wages Payable (700 X \$11.60)		8,120
Work in Process Inventory (690* X \$12)	8,280	
Labor Quantity Variance (10 X \$12)	120	
Factory Labor (700 X \$12)		8,400

***230 X 3**

***EXERCISE 25-20**

(a)	Item	Amount	Hours	Rate
	Variable overhead	<u>\$33,000</u>	16,500	\$2.00
	Fixed overhead.....	<u>19,800</u>	16,500	<u>1.20</u>
	Total overhead.....	<u>\$52,800</u>	16,500	<u>\$3.20</u>

(b) Total overhead variance:

$$\begin{array}{rclcl} \text{Actual Overhead} & - & \text{Overhead Applied} & & \\ \$54,000 & - & \$51,200 & & = \$2,800 \text{ U} \\ & & (16,000 * \$3.20) & & \end{array}$$

$$*4,000 \times 4 \text{ hrs.} = 16,000 \text{ hrs.}$$

Overhead controllable variance:

$$\begin{array}{rclcl} \text{Actual Overhead} & - & \text{Overhead Budgeted} & & \\ \$54,000 & - & \$51,800 & & = \$2,200 \text{ U} \\ & & [(16,000 \times \$2) + \$19,800] & & \end{array}$$

Overhead volume variance:

$$\begin{array}{rclcl} \text{Fixed Overhead} & & \text{Normal Capacity} & & \text{Standard Hours} \\ \text{Rate} & \times & \text{Hours} & - & \text{Allowed} \\ \$1.20 & \times & [(16,500 & - & (4,000 \times 4))] = \$600 \text{ U} \end{array}$$

(c) The overhead controllable variance is generally associated with variable overhead costs. Thus, this variance indicates the production manager's inefficiency in controlling variable overhead costs.

The overhead volume variance relates to fixed overhead costs. This variance indicates whether plant facilities were efficiently used. In this case 500 (16,500 – 16,000) hours of plant capacity were not utilized.

*EXERCISE 25-21

(a) (1)

$$\begin{aligned}\text{Total actual overhead cost} &= \text{Overhead Budgeted} + \text{Overhead Controllable Variance} \\ &= (\$18,000 + \$13,200) + \$1,500 \\ &= \$32,700\end{aligned}$$

$$\begin{aligned}\text{(2) Actual variable overhead cost} &= \text{Actual Overhead} - \text{Fixed Overhead} \\ &= \$32,700 - \$13,200 \\ &= \$19,500\end{aligned}$$

$$\text{(3) Variable overhead cost applied} = 2,000 \text{ hours} \times \$9 = \$18,000$$

$$\text{(4) Fixed overhead cost applied} = 2,000 \text{ hours} \times \$6 = \$12,000$$

$$\begin{aligned}\text{(5) Overhead volume variance} &= \text{Fixed Overhead Rate} \times \left(\text{Normal Capacity Hours} - \text{Standard Hours Allowed} \right) \\ &= \$6 \times (2,200^* - 2,000) \\ &= \$1,200 \text{ U}\end{aligned}$$

$$*\$13,200 \div \$6 \text{ per hour} = 2,200 \text{ hours}$$

$$\begin{aligned}\text{(b) Number of loans processed} &= \text{Standard hours allowed} \div \text{Standard hours per application} \\ &= 2,000 \div 2 \\ &= 1,000 \text{ loans processed}\end{aligned}$$

EXERCISE 25-22

(a) (Actual) – (Applied) = Total Overhead Variance
(\$18,800) – (1,800 X \$10) = \$800 U

(Actual) – (Budgeted) = Overhead Controllable Variance
(\$18,800) – (17,600) = \$1,200 U

Fixed OH		X	⎛ Normal Capacity	–	Standard Hours Allowed	⎞	=	Overhead Volume Variance
Rate								
\$3*	(1,667**							

*(\$5,000 X 12)/20,000

**20,000/12

- (b) The cause of an unfavorable controllable variance could be higher than expected use of indirect materials, indirect labor, and factory supplies, or increases in indirect manufacturing costs, such as fuel and maintenance costs. A favorable volume variance would be caused by production of more units than what is considered normal capacity.

SOLUTIONS TO PROBLEMS

PROBLEM 25-1A

(a) Total materials variance:

$$\begin{array}{rcl} (AQ \times AP) & - & (SQ \times SP) \\ (5,100 \times \$7.30) & & (4,900 \times \$7.00) \\ \$37,230 & - & \$34,300 & = \$2,930 \text{ U} \end{array}$$

Materials price variance:

$$\begin{array}{rcl} (AQ \times AP) & - & (AQ \times SP) \\ (5,100 \times \$7.30) & & (5,100 \times \$7.00) \\ \$37,230 & - & \$35,700 & = \$1,530 \text{ U} \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl} (AQ \times SP) & - & (SQ \times SP) \\ (5,100 \times \$7.00) & & (4,900 \times \$7.00) \\ \$35,700 & - & \$34,300 & = \$1,400 \text{ U} \end{array}$$

Total labor variance:

$$\begin{array}{rcl} (AH \times AR) & - & (SH \times SR) \\ (7,000 \times \$12.50) & & (7,350^* \times \$12.00) \\ \$87,500 & - & \$88,200 & = \$700 \text{ F} \end{array}$$

$$*4,900 \times 1.5$$

Labor price variance:

$$\begin{array}{rcl} (AH \times AR) & - & (AH \times SR) \\ (7,000 \times \$12.50) & & (7,000 \times \$12.00) \\ \$87,500 & - & \$84,000 & = \$3,500 \text{ U} \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl} (AH \times SR) & - & (SH \times SR) \\ (7,000 \times \$12.00) & & (7,350 \times \$12.00) \\ \$84,000 & - & \$88,200 & = \$4,200 \text{ F} \end{array}$$

(b) Total overhead variance:

$$\begin{array}{rcl} \text{Actual Overhead} & - & \text{Overhead Applied} \\ (\$56,170 + \$19,680) & - & (7,350 \times \$10.00) \\ \$75,850 & & \$73,500 & = \$2,350 \text{ U} \end{array}$$

PROBLEM 25-2A

(a) (1) **Total materials variance:**

$$\begin{array}{rcl}
 (\text{AQ} \times \text{AP}) - (\text{SQ} \times \text{SP}) & & \\
 (10,600 \times \$2.25) - (10,000 \times \$2.00) & & \\
 \$23,850 - \$20,000 & = & \$3,850 \text{ U}
 \end{array}$$

Materials price variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{AP}) - (\text{AQ} \times \text{SP}) & & \\
 (10,600 \times \$2.25) - (10,600 \times \$2.00) & & \\
 \$23,850 - \$21,200 & = & \$2,650 \text{ U}
 \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{SP}) - (\text{SQ} \times \text{SP}) & & \\
 (10,600 \times \$2.00) - (10,000 \times \$2.00) & & \\
 \$21,200 - \$20,000 & = & \$1,200 \text{ U}
 \end{array}$$

(2) **Total labor variance:**

$$\begin{array}{rcl}
 (\text{AH} \times \text{AR}) - (\text{SH} \times \text{SR}) & & \\
 (14,400 \times \$8.50^*) - (15,000 \times \$8.00^{**}) & & \\
 \$122,400 - \$120,000 & = & \$2,400 \text{ U}
 \end{array}$$

$$\begin{array}{ll}
 *\$122,400 \div 14,400 & **\$120,000 \div 15,000
 \end{array}$$

Labor price variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{AR}) - (\text{AH} \times \text{SR}) & & \\
 (14,400 \times \$8.50) - (14,400 \times \$8.00) & & \\
 \$122,400 - \$115,200 & = & \$7,200 \text{ U}
 \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{SR}) - (\text{SH} \times \text{SR}) & & \\
 (14,400 \times \$8.00) - (15,000 \times \$8.00) & & \\
 \$115,200 - \$120,000 & = & \$4,800 \text{ F}
 \end{array}$$

(b) **Total overhead variance:**

$$\begin{array}{rcl}
 \text{Actual} & & \text{Overhead} \\
 \text{Overhead} - \text{Applied} & & \\
 \$184,500 - \$189,000 & = & \$4,500 \text{ F} \\
 & & (45,000 \times \$4.20)
 \end{array}$$

PROBLEM 25-2A (Continued)

(c) DINKEL MANUFACTURING CORPORATION
Income Statement
For the Month Ended June 30, 2010

Sales		\$400,000
Cost of goods sold (at standard)		<u>329,000*</u>
Gross profit (at standard)		71,000
Variances		
Materials price	\$ 2,650	
Materials quantity	1,200	
Labor price	7,200	
Labor quantity	(4,800)	
Overhead	<u>(4,500)</u>	
Total variance—unfavorable		<u>1,750</u>
Gross profit (actual)		69,250
Selling and administrative expenses		<u>40,000</u>
Net income		<u>\$ 29,250</u>

***Materials \$20,000 + labor \$120,000 + overhead applied \$189,000.**

PROBLEM 25-3A

(a) (1) **Total materials variance:**

$$\begin{array}{rcl}
 (AQ \times AP) - (SQ \times SP) & & \\
 (90,500 \times \$4.10) - (89,600^* \times \$4.30) & & \\
 \$371,050 - \$385,280 & = & \$14,230 \text{ F}
 \end{array}$$

*11,200 X 8

Materials price variance:

$$\begin{array}{rcl}
 (AQ \times AP) - (AQ \times SP) & & \\
 (90,500 \times \$4.10) - (90,500 \times \$4.30) & & \\
 \$371,050 - \$389,150 & = & \$18,100 \text{ F}
 \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl}
 (AQ \times SP) - (SQ \times SP) & & \\
 (90,500 \times \$4.30) - (89,600 \times \$4.30) & & \\
 \$389,150 - \$385,280 & = & \$3,870 \text{ U}
 \end{array}$$

(2) **Total labor variance:**

$$\begin{array}{rcl}
 (AH \times AR) - (SH \times SR) & & \\
 (14,300 \times \$14.10) - (13,440^* \times \$13.50) & & \\
 \$201,630 - \$181,440 & = & \$20,190 \text{ U}
 \end{array}$$

*11,200 X 1.2

Labor price variance:

$$\begin{array}{rcl}
 (AH \times AR) - (AH \times SR) & & \\
 (14,300 \times \$14.10) - (14,300 \times \$13.50) & & \\
 \$201,630 - \$193,050 & = & \$8,580 \text{ U}
 \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl}
 (AH \times SR) - (SH \times SR) & & \\
 (14,300 \times \$13.50) - (13,440 \times \$13.50) & & \\
 \$193,050 - \$181,440 & = & \$11,610 \text{ U}
 \end{array}$$

(b) **Total overhead variance:**

Actual		Overhead	
Overhead	–	Applied	
\$86,000	–	\$80,640	
(\$49,000 + \$37,000)		(13,440 X \$6)	= \$5,360 U

PROBLEM 25-3A (Continued)

- (c) The materials price variance is more than 4% from standard. The actual price for materials of \$4.10 is \$.20 below the standard price of \$4.30 or 4.7% ($\$.20 \div \$4.30$). The same result can be obtained by dividing the total price variance by the total standard price for the quantities purchased ($\$18,100 \div \$389,150$).

The labor price variance is 4.4% from standard ($\$.60 \div \$13.50$). The same result can be obtained by dividing the total price variance by the total standard price for the direct labor hours used ($\$8,580 \div \$193,050$).

The labor quantity variance is 6.4% from standard. The same result can be obtained by dividing the total quantity variance by the total standard price for the standard hours allowed ($\$11,610 \div \$181,440$).

PROBLEM 25-4A

- (a) $\$2,620 \div 131,000 = \$0.02$; $\$.92 + \$0.02 = \$.94$ standard materials price per pound. OR
 $131,000 \times \$.92 = \$120,520$; $\$120,520 + \$2,620 = \$123,140$; $\$123,140 \div 131,000 = \$.94$ per pound.
- (b) $\$4,700 \div \$.94 = 5,000$ pounds; $131,000 - 5,000 = 126,000$ standard quantity for 28,000 units or 4.5 pounds ($126,000 \div 28,000$) per unit. OR
 $\$123,140 - \$4,700 = \$118,440$; $\$118,440 \div \$.94 = 126,000$; $126,000 \div 28,000 = 4.5$ pounds per unit.
- (c) Standard hours allowed are 42,000 ($28,000 \times 1\frac{1}{2}$).
- (d) $\$7,200 \div \$12.00 = 600$ hours over standard; 42,000 standard hours + 600 hours = 42,600 actual hours worked. OR
 $42,000 \times \$12 = \$504,000$; $\$504,000 + \$7,200 = \$511,200$; $\$511,200 \div \$12 = 42,600$ actual hours worked.
- (e) $\$10,650 \div 42,600 = \$.25$; $\$12.00 - \$.25 = \$11.75$ actual rate per hour. OR
 $\$511,200 - \$10,650 = \$500,550$; $\$500,550 \div 42,600 = \$11.75$ actual rate per hour.
- (f) $\$350,000 \div 50,000 = \$7.00$ predetermined overhead rate per direct labor hour.
- (g) Direct materials 4.5 pounds $\times \$0.94 = \$4.23$; direct labor $1\frac{1}{2} \times \$12.00 = \$18.00$; manufacturing overhead $1\frac{1}{2} \times \$7.00 = \$10.50$. $\$4.23 + \$18.00 + \$10.50 = \$32.73$ standard cost per unit.
- (h) $42,000 \times \$7.00 = \$294,000$ overhead applied.
- (i) $\$32.73$ [see (g) above] $\times 28,000 = \$916,440$ or direct materials $\$118,440$ + direct labor $\$504,000$ + overhead applied $\$294,000 = \$916,440$.

PROBLEM 25-5A

(a) Materials price variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{AP}) & - & (\text{AQ} \times \text{SP}) \\
 (3,050 \times \$1.40^*) & & (3,050 \times \$1.50) \\
 \$4,270 & - & \$4,575 \\
 & & = \$305 \text{ F}
 \end{array}$$

$$*\$4,270 \div 3,050$$

Materials quantity variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{SP}) & - & (\text{SQ} \times \text{SP}) \\
 (3,050 \times \$1.50) & & (3,000^* \times \$1.50) \\
 \$4,575 & - & \$4,500 \\
 & & = \$75 \text{ U}
 \end{array}$$

$$*1,500 \times 2$$

Labor price variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{AR}) & - & (\text{AH} \times \text{SR}) \\
 (1,600 \times \$23^*) & & (1,600 \times \$25) \\
 \$36,800 & - & \$40,000 \\
 & & = \$3,200 \text{ F}
 \end{array}$$

$$*\$36,800 \div 1,600$$

Labor quantity variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{SR}) & - & (\text{SH} \times \text{SR}) \\
 (1,600 \times \$25) & & (1,500^* \times \$25) \\
 \$40,000 & - & \$37,500 \\
 & & = \$2,500 \text{ U}
 \end{array}$$

$$*1,500 \times 1 \text{ hr.}$$

(b) Total Overhead variance:

$$\begin{array}{rcl}
 \text{Actual} & & \text{Overhead} \\
 \text{Overhead} & - & \text{Applied} \\
 \$21,400 & - & \$22,500 \\
 (\$7,400 + \$14,000) & & (1,500 \times \$15) \\
 & & = \$1,100 \text{ F}
 \end{array}$$

PROBLEM 25-5A (Continued)

(c)

FARM LABS, INC.
Income Statement
For the Month Ended November 30, 2010

Service revenue		\$75,000
Cost of service provided (at standard)		
(1,500 X \$43)		<u>64,500</u>
Gross profit (at standard)		10,500
Variances		
Materials price	\$ (305)	
Materials quantity	75	
Labor price.....	(3,200)	
Labor quantity.....	2,500	
Overhead	<u>(1,100)</u>	
Total variance—favorable		<u>(2,030)</u>
Gross profit (actual).....		12,530
Selling and administrative expenses		<u>4,000</u>
Net income		<u>\$ 8,530</u>

(d) The unfavorable materials quantity variance could be caused by poor quality materials or inexperienced workers or faulty test procedures.

The unfavorable labor quantity variance could be caused by inexperienced workers, poor quality materials, or faulty test procedures.

*PROBLEM 25-6A

(a) 1.	Raw Materials Inventory (6,250 X \$1.00).....	6,250	
	Materials Price Variance [6,250 X (\$1.06 – \$1.00)]	375	
	Accounts Payable (6,250 X \$1.06)		6,625
2.	Work in Process Inventory (5,700* X \$1)	5,700	
	Materials Quantity Variance [(6,250 – 5,700) X \$1.00]	550	
	Raw Materials Inventory		6,250
	*1,900 X 3		
3.	Factory Labor (2,100 X \$8)	16,800	
	Labor Price Variance [2,100 X (\$8.00 – \$7.75)]		525
	Wages Payable (2,100 X \$7.75)		16,275
4.	Work in Process Inventory (1,900 X \$8.00)	15,200	
	Labor Quantity Variance [(2,100 – 1,900) X \$8.00]	1,600	
	Factory Labor		16,800
5.	Manufacturing Overhead	25,800	
	Accounts Payable		25,800
6.	Work in Process Inventory (3,800* X \$6.25)	23,750	
	Manufacturing Overhead		23,750
	*1,900 X 2		
7.	Finished Goods Inventory (1,900 X \$23.50)	44,650	
	Work in Process Inventory		44,650
8.	Accounts Receivable	70,000	
	Sales		70,000
	Cost of Goods Sold	44,650	
	Finished Goods Inventory		44,650

***PROBLEM 25-6A (Continued)**

9. Selling and Administrative Expenses.....	2,000	
 Accounts Payable.....		2,000

(b)	<u>Raw Materials Inventory</u>		<u>Materials Price Variance</u>		<u>Work in Process Inventory</u>					
	(1)	6,250	(2)	6,250	(1)	375	(2)	5,700	(7)	44,650
							(4)	15,200		
							(6)	23,750		
	<u>Factory Labor</u>		<u>Materials Quantity Variance</u>		<u>Finished Goods Inventory</u>					
	(3)	16,800	(4)	16,800	(2)	550	(7)	44,650	(8)	44,650
	<u>Manufacturing Overhead</u>		<u>Labor Price Variance</u>		<u>Cost of Goods Sold</u>					
	(5)	25,800	(6)	23,750		(3)	525	(8)	44,650	
					<u>Labor Quantity Variance</u>					
					(4)	1,600				

(c) Overhead Variance (\$25,800 – \$23,750)	2,050	
 Manufacturing Overhead.....		2,050

(d) ADCOCK CORPORATION
Income Statement
For the Month Ended January 31, 2010

Sales	\$70,000
Cost of goods sold (at standard)	
(1,900 X \$23.50)	<u>44,650</u>
Gross profit (at standard)	25,350
Variances	
Materials price	\$ 375
Materials quantity	550
Labor price.....	(525)
Labor quantity.....	1,600
Overhead	<u>2,050</u>
Total variance—unfavorable	4,050
Gross profit (actual).....	21,300
Selling and administrative expenses	<u>2,000</u>
Net income	<u>\$19,300</u>

***PROBLEM 25-7A**

Overhead controllable variance:

Actual		Overhead		
Overhead	–	Budgeted		
\$75,850	–	\$73,875		= \$1,975 U
		[(7,350* X \$7.50) + \$18,750]		

***(4,900 X 1.5 hours)**

Overhead volume variance:

Fixed		Normal		Standard		
Overhead X		Capacity	–	Hours		
Rate		Hours		Allowed		
\$2.50/hr. X		(7,500	–	7,350)		= \$375 U

*PROBLEM 25-8A

Overhead controllable variance:

Actual		Overhead		
Overhead	–	Budgeted		
\$184,500	–	\$186,000		= \$1,500 F
		[(45,000* X \$3.00) +		
		(42,500 X \$1.20)]		

***(15,000 X 3 hours)**

Overhead volume variance:

Fixed		Normal		Standard	
Overhead	X	Capacity	–	Hours	
Rate		Hours		Allowed	
\$1.20/hr.	X	(42,500	–	45,000)	= \$3,000 F

PROBLEM 25-9A*Overhead controllable variance:**

Actual		Overhead	
Overhead	–	Budgeted	
\$86,000	–	\$82,600	= \$3,400 U
(\$49,000 + \$37,000)		[(13,440* X \$2.50) + \$49,000]	

***(11,200 X 1.2 hours)**

Overhead volume variance:

Fixed		Normal	Standard	
Overhead	X	Capacity	–	Hours
Rate		Hours		Allowed
\$3.50/hr.	X	(14,000	–	13,440)
				= \$1,960 U

***PROBLEM 25-10A**

Overhead controllable variance:

Actual		Overhead	
Overhead	–	Budgeted	
\$21,400	–	\$21,500	= \$100 F
(\$7,400 + \$14,000)		[(1,500 X \$5) + \$14,000]	

Overhead volume variance:

Fixed		Normal	Standard	
Overhead	X	Capacity	–	Hours
Rate		Hours		Allowed
\$10	X	(1,400*	–	1,500)
				= \$1,000 F

***\$14,000 ÷ \$10**

(a) **Total materials variance:**

$$\begin{array}{rcl}
 (\text{AQ} \times \text{AP}) - (\text{SQ} \times \text{SP}) & & \\
 (20,000 \times \$4.90) - (19,400^* \times \$5.00) & & \\
 \$98,000 - \$97,000 & = & \$1,000 \text{ U}
 \end{array}$$

$$*9,700 \times 2$$

Materials price variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{AP}) - (\text{AQ} \times \text{SP}) & & \\
 (20,000 \times \$4.90) - (20,000 \times \$5.00) & & \\
 \$98,000 - \$100,000 & = & \$2,000 \text{ F}
 \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl}
 (\text{AQ} \times \text{SP}) - (\text{SQ} \times \text{SP}) & & \\
 (20,000 \times \$5.00) - (19,400 \times \$5.00) & & \\
 \$100,000 - \$97,000 & = & \$3,000 \text{ U}
 \end{array}$$

Total labor variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{AR}) - (\text{SH} \times \text{SR}) & & \\
 (19,600 \times \$12.20) - (19,400^* \times \$12.00) & & \\
 \$239,120 - \$232,800 & = & \$6,320 \text{ U}
 \end{array}$$

$$*9,700 \times 2$$

Labor price variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{AR}) - (\text{AH} \times \text{SR}) & & \\
 (19,600 \times \$12.20) - (19,600 \times \$12.00) & & \\
 \$239,120 - \$235,200 & = & \$3,920 \text{ U}
 \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl}
 (\text{AH} \times \text{SR}) - (\text{SH} \times \text{SR}) & & \\
 (19,600 \times \$12.00) - (19,400 \times \$12.00) & & \\
 \$235,200 - \$232,800 & = & \$2,400 \text{ U}
 \end{array}$$

(b) **Total overhead variance:**

$$\begin{array}{rcl}
 \text{Actual Overhead} - \text{Overhead Applied} & & \\
 (\$79,100 + \$59,000) - (19,400 \times \$7.00^*) & & \\
 \$138,100 - \$135,800 & = & \$2,300 \text{ U}
 \end{array}$$

***Standard per labor hour overhead cost (\$4 variable + \$3 fixed).**

PROBLEM 25-2B

(a) (1) Total materials variance:

$$\begin{array}{rcll} (AQ \times AP) - (SQ \times SP) & & & \\ (21,000 \times \$3.40) - (22,000 \times \$3.00) & & & \\ \$71,400 - \$66,000 & & = & \$5,400 \text{ U} \end{array}$$

Materials price variance:

$$\begin{array}{rcll} (AQ \times AP) - (AQ \times SP) & & & \\ (21,000 \times \$3.40) - (21,000 \times \$3.00) & & & \\ \$71,400 - \$63,000 & & = & \$8,400 \text{ U} \end{array}$$

Materials quantity variance:

$$\begin{array}{rcll} (AQ \times SP) - (SQ \times SP) & & & \\ (21,000 \times \$3.00) - (22,000 \times \$3.00) & & & \\ \$63,000 - \$66,000 & & = & \$3,000 \text{ F} \end{array}$$

(2) Total labor variance:

$$\begin{array}{rcll} (AH \times AR) - (SH \times SR) & & & \\ (3,450 \times \$11.80) - (3,600 \times \$12.50) & & & \\ \$40,710 - \$45,000 & & = & \$4,290 \text{ F} \end{array}$$

Labor price variance:

$$\begin{array}{rcll} (AH \times AR) - (AH \times SR) & & & \\ (3,450 \times \$11.80) - (3,450 \times \$12.50) & & & \\ \$40,710 - \$43,125 & & = & \$2,415 \text{ F} \end{array}$$

Labor quantity variance:

$$\begin{array}{rcll} (AH \times SR) - (SH \times SR) & & & \\ (3,450 \times \$12.50) - (3,600 \times \$12.50) & & & \\ \$43,125 - \$45,000 & & = & \$1,875 \text{ F} \end{array}$$

(b) Total overhead variance:

Actual		Overhead		
Overhead	–	Applied		
\$101,500	–	\$108,000		= \$6,500 F
		(3,600 X \$30*)		

*(\$20 + \$10)

PROBLEM 25-2B (Continued)

(c) SANCHEZ MANUFACTURING COMPANY
Income Statement
For the Month Ended July 31, 2010

Sales		\$280,000
Cost of goods sold (at standard)		<u>219,000</u>¹
Gross profit (at standard)		61,000
Variances		
Materials price	\$ 8,400	
Materials quantity	(3,000)	
Labor price	(2,415)	
Labor quantity	(1,875)	
Overhead controllable	<u>(6,500)</u>	
Total variance—favorable		<u>(5,390)</u>
Gross profit (actual)		66,390
Selling and administrative expenses		<u>25,000</u>
Net income		<u>\$ 41,390</u>

¹Materials \$66,000 (22,000 X \$3) + Direct labor \$45,000 (3,600 X \$12.50) + Overhead applied \$108,000.

PROBLEM 25-3B

(a) (1) Total materials variance:

$$\begin{array}{rcl}
 (AQ \times AP) & - & (SQ \times SP) \\
 (76,000 \times \$7.20) & & (78,500 \times \$6.80) \\
 \$547,200 & - & \$533,800 \\
 & & = \$13,400 \text{ U}
 \end{array}$$

$$*15,700 \times 5$$

Materials price variance:

$$\begin{array}{rcl}
 (AQ \times AP) & - & (AQ \times SP) \\
 (76,000 \times \$7.20) & & (76,000 \times \$6.80) \\
 \$547,200 & - & \$516,800 \\
 & & = \$30,400 \text{ U}
 \end{array}$$

Materials quantity variance:

$$\begin{array}{rcl}
 (AQ \times SP) & - & (SQ \times SP) \\
 (76,000 \times \$6.80) & & (78,500 \times \$6.80) \\
 \$516,800 & - & \$533,800 \\
 & & = \$17,000 \text{ F}
 \end{array}$$

(2) Total labor variance

$$\begin{array}{rcl}
 (AH \times AR) & - & (SH \times SR) \\
 (14,900 \times \$11.20) & & (15,700 \times \$11.50) \\
 \$166,880 & - & \$180,550 \\
 & & = \$13,670 \text{ F}
 \end{array}$$

Labor price variance:

$$\begin{array}{rcl}
 (AH \times AR) & - & (AH \times SR) \\
 (14,900 \times \$11.20) & & (14,900 \times \$11.50) \\
 \$166,880 & - & \$171,350 \\
 & & = \$4,470 \text{ F}
 \end{array}$$

Labor quantity variance:

$$\begin{array}{rcl}
 (AH \times SR) & - & (SH \times SR) \\
 (14,900 \times \$11.50) & & (15,700 \times \$11.50) \\
 \$171,350 & - & \$180,550 \\
 & & = \$9,200 \text{ F}
 \end{array}$$

(b) Total overhead variance:

Actual		Overhead	
Overhead	-	Applied	
\$169,000	-	\$146,010	= \$22,990 U
(\$120,000 + \$49,000)		(15,700 X \$9.30)	

PROBLEM 25-3B (Continued)

(c) The following variances are more than 5% from standard:

Materials price variance. The actual price of \$7.20 is 5.9% higher than the standard price of \$6.80.

The same result can be obtained by dividing the total variance by the total standard. For the materials price variance, the computation would be $\$30,400 \div \$516,800 = 5.9\%$.

Labor quantity variance. The actual hours of 14,900 is 5.1% under the standard hours of 15,700.

The same result can be obtained by dividing the total variance by the total standard. For example, for the labor quantity variance, the computation would be $\$9,200 \div \$180,550 = 5.1\%$.

The unfavorable materials price variance was caused by paying more than the standard cost for the materials purchased. This unfavorable variance may have been caused by price increases or the purchase of better quality materials. Since the labor quantity variance is favorable, the latter explanation is reasonable. Better quality materials may have required fewer hours of labor to construct the suits.

PROBLEM 25-4B

- (a) $\$8,000 \div 200,000 = \$0.04$; $\$1.00 - \$0.04 = \$0.96$ standard materials price per pound. OR
 $200,000 \times \$1.00 = \$200,000$; $\$200,000 - \$8,000 = \$192,000$; $\$192,000 \div 200,000 = \$0.96$.
- (b) $\$24,000 \div \$0.96 = 25,000$ pounds; $200,000 + 25,000 = 225,000$ standard quantity for 50,000 units or 4.5 pounds ($225,000 \div 50,000$) per unit. OR
 $\$192,000 + \$24,000 = \$216,000$; $\$216,000 \div \$0.96 = 225,000$; $225,000 \div 50,000 = 4.5$ pounds per unit.
- (c) Standard hours allowed are 100,000 ($50,000 \times 2$).
- (d) $\$10,800 \div \$12 = 900$ hours over standard; 100,000 standard hours + 900 hours = 100,900 actual hours worked. OR
 $100,000 \times \$12 = \$1,200,000$; $\$1,200,000 + \$10,800 = \$1,210,800$; $\$1,210,800 \div \$12 = 100,900$ actual hours worked.
- (e) $\$25,225 \div 100,900 = \$0.25$; $\$12.00 - \$0.25 = \$11.75$ actual rate per hour.
- (f) $\$792,000 \div 96,000 = \$8.25$ predetermined overhead rate per direct labor hour.
- (g) Direct materials 4.5 pounds $\times \$0.96 = \$4.32$; direct labor 2 $\times \$12.00 = \$24.00$; manufacturing overhead 2 $\times \$8.25 = \$16.50$. $\$4.32 + \$24.00 + \$16.50 = \$44.82$ standard cost per unit.
- (h) $100,000 \times \$8.25 = \$825,000$ overhead applied.
- (i) $\$44.82$ [see (g) above] $\times 50,000 = \$2,241,000$ or direct materials $\$216,000$ + direct labor $\$1,200,000$ + overhead applied $\$825,000 = \$2,241,000$.

(a) Materials price variance:

$$\begin{array}{rclcl}
 (\text{AQ} \times \text{AP}) & - & (\text{AQ} \times \text{SP}) & & \\
 (2,530 \times \$2.10^*) & & (2,530 \times \$2.00) & & \\
 \$5,313 & - & \$5,060 & & = \$253 \text{ U}
 \end{array}$$

$$*\$5,313 \div 2,530$$

Materials quantity variance:

$$\begin{array}{rclcl}
 (\text{AQ} \times \text{SP}) & - & (\text{SQ} \times \text{SP}) & & \\
 (2,530 \times \$2.00) & & (2,500 \times \$2.00) & & \\
 \$5,060 & - & \$5,000 & & = \$60 \text{ U}
 \end{array}$$

Labor price variance:

$$\begin{array}{rclcl}
 (\text{AH} \times \text{AR}) & - & (\text{AH} \times \text{SR}) & & \\
 (1,240 \times \$21^*) & & (1,240 \times \$20) & & \\
 \$26,040 & - & \$24,800 & & = \$1,240 \text{ U}
 \end{array}$$

$$*\$26,040 \div 1,240$$

Labor quantity variance:

$$\begin{array}{rclcl}
 (\text{AH} \times \text{SR}) & - & (\text{SH} \times \text{SR}) & & \\
 (1,240 \times \$20) & & (1,250^* \times \$20) & & \\
 \$24,800 & - & \$25,000 & & = \$200 \text{ F}
 \end{array}$$

$$*2,500 \times .5$$

(b) Total overhead variance:

$$\begin{array}{rclcl}
 \text{Actual Overhead} & - & \text{Overhead Applied} & & \\
 \$15,800 & - & \$15,000 & & \\
 [(\$10,100 + \$5,700) - & & (1,250 \times \$12^*) & & = \$800 \text{ U}
 \end{array}$$

$$*(\$8 + \$4)$$

(c)

MORAN LABS
Income Statement
For the Month Ended May 31, 2010

Service revenue		\$58,000
Cost of service provided (at standard)		
(\$18 X 2,500)		<u>45,000</u>
Gross profit (at standard)		13,000
Variances		
Materials price	\$ 253	
Materials quantity	60	
Labor price.....	1,240	
Labor quantity.....	(200)	
Overhead	<u>800</u>	
Total variance—unfavorable		<u>2,153</u>
Gross profit (at actual).....		10,847
Selling and administrative expenses		<u>2,000</u>
Net income		<u>\$ 8,847</u>

- (d)** The unfavorable materials price variance could be caused by price increases, using the wrong shipping method, or rising prices.

The unfavorable materials quantity variance could be caused by inexperienced workers, carelessness, poor quality material, or faulty test procedures.

The unfavorable labor price variance could be caused by rising labor costs, or assigning the wrong workers to perform the tests.

The unfavorable overhead variance could be caused by a lack of test orders or the inefficient use of direct labor hours.

***PROBLEM 25-6B**

(a)	1.	Raw Materials Inventory (8,100 X \$4.00).....	32,400	
		Materials Price Variance		
		[8,100 X (\$3.60 – \$4.00)]		3,240
		Accounts Payable (8,100 X \$3.60)		29,160
	2.	Work in Process Inventory		
		(7,700* X \$4.00)	30,800	
		Materials Quantity Variance		
		[(8,100 – 7,700) X \$4.00]	1,600	
		Raw Materials Inventory		32,400
		*5,500 X 1.4		
	3.	Factory Labor (5,100 X \$9.00)	45,900	
		Labor Price Variance		
		[5,100 X (\$9.25 – \$9.00)]	1,275	
		Wages Payable (5,100 X \$9.25)		47,175
	4.	Work in Process Inventory		
		(5,500 X \$9.00).....	49,500	
		Labor Quantity Variance		
		[(5,500 – 5,100) X \$9.00]		3,600
		Factory Labor		45,900
	5.	Manufacturing Overhead	87,650	
		Accounts Payable		87,650
	6.	Work in Process Inventory		
		(5,500 X \$15.40)	84,700	
		Manufacturing Overhead		84,700
	7.	Finished Goods Inventory		
		(5,500 X \$30.00)	165,000	
		Work in Process Inventory		165,000
	8.	Accounts Receivable	280,000	
		Sales		280,000
		Cost of Goods Sold	165,000	
		Finished Goods Inventory		165,000
	9.	Selling and Administrative Expenses	61,000	
		Accounts Payable		61,000

***PROBLEM 25-6B (Continued)**

(b)		Raw Materials Inventory		Materials Price Variance		Work in Process Inventory	
(1)	32,400	(2)	32,400	(1)	3,240	(2)	30,800
						(4)	49,500
						(6)	84,700
						(7)	165,000
		Factory Labor		Materials Quantity Variance		Finished Goods Inventory	
(3)	45,900	(4)	45,900	(2)	1,600	(7)	165,000
						(8)	165,000
		Manufacturing Overhead		Labor Price Variance		Cost of Goods Sold	
(5)	87,650	(6)	84,700	(3)	1,275	(8)	165,000
				Labor Quantity Variance			
				(4)	3,600		

(c)	Overhead Variance (1).....	2,950	
	Manufacturing Overhead.....		2,950
	(1) [\$87,650 – (5,500 X \$15.40)]		

(d) **HARTER MANUFACTURING COMPANY**
Income Statement
For the Month Ended January 31, 2010

Sales	\$280,000
Cost of goods sold (at standard)	
(5,500 X \$30).....	165,000
Gross profit (at standard)	115,000
Variances	
Materials price	\$(3,240)
Materials quantity	1,600
Labor price.....	1,275
Labor quantity.....	(3,600)
Overhead	2,950
Total variance—favorable	(1,015)
Gross profit (actual).....	116,015
Selling and administrative expenses	61,000
Net income	\$ 55,015

***PROBLEM 25-7B**

Overhead controllable variance:

Actual		Overhead	
Overhead	–	Budgeted	
(\$79,100 + \$59,000)		[(\$60,000 + (19,400 X \$4)]	
\$138,100		\$137,600	= \$500 U

Overhead volume variance:

Fixed Overhead	X	Normal		Standard	
Rate		Capacity	–	Hours	
3.00/hr.		Hours		Allowed	
X		(20,000	–	19,400)	= \$1,800 U

*PROBLEM 25-8B

Overhead controllable variance:

Actual		Overhead	
Overhead	–	Budgeted	
\$101,500	–	\$106,000	= \$4,500 F
		[(3,600 X \$20) + \$34,000*]	

***3,400 X \$10**

Overhead volume variance:

Fixed		Normal	Standard	
Overhead	X	Capacity	–	Hours
Rate		Hours	Allowed	
\$10/hr.	X	(3,400	–	3,600)
				= \$2,000 F

***PROBLEM 25-9B**

Overhead controllable variance:

Actual		Overhead	
Overhead	–	Budgeted	
\$169,000	–	\$173,100	= \$4,100 F
(\$120,000 + \$49,000)		[(15,700 X \$3) + \$126,000]	

Overhead volume variance:

Fixed Overhead	X	Normal Capacity Hours	–	Standard Hours Allowed	
Rate					
\$6.30/hr.	X	(20,000	–	15,700)	= \$27,090 U

***PROBLEM 25-10B**

Overhead controllable variance:

Actual Overhead – Overhead Budgeted

\$15,800 – \$16,000

$[(\$10,100 + \$5,700) - [(1,250 \times \$8) + \$6,000]] = \$200 \text{ F}$

Overhead volume variance:

Fixed		Normal	Standard	
Overhead	X	Capacity	Hours	
Rate		Hours	Allowed	
\$4.00	X	(1,500*	– 1,250)	= \$1,000 U

***\$6,000 ÷ \$4.00/hour**

- (a) When setting a standard for computer/labor hours usage, Colaw Professionals should consider the following factors:
- (1) A standard set conservatively high may discourage clients from purchasing the model.
 - (2) A standard set too low may encourage sales of the model, but if customers use more hours than the standard suggests, they may be upset at having been misled.
 - (3) Clients are likely to use the standard as an evaluation tool for their own employees operating the model. Standards set inappropriately may adversely affect productivity and/or morale of client employees.
- (b) Logical alternatives for the standard include:
- (1) 34 hours: The average number of hours used for one application by all five financial institutions.
 - (2) 45 hours: The conservatively high number experienced by one financial institution.
 - (3) 25 hours: The optimistic low number experienced by one financial institution.
 - (4) 30 hours: The number of hours required most frequently in the sample of five institutions.
- (c) In light of earlier factors listed, the second and third choices for the standard should be eliminated (i.e., 45 and 25 hours). The average 34 hours is probably the most representative. However, Colaw Professionals may select 30 hours, given that the company has a high incentive to sell the new model. Consequently, it may make the most sense to pick the lower of the two remaining choices (30 hours).

(d) Standard material cost for one model application:

User Manuals: $\$300 \div 20 \text{ manuals} = \underline{\underline{\$15/\text{application}}}$.

Computer Forms: $\$50 \div 250 \text{ forms} = \$.20/\text{form}$
 $\$.20/\text{form} \times 50 \text{ forms} = \underline{\underline{\$10/\text{application}}}$.

- (a) The overhead application rate is \$143,500 divided by 5,000 hours, or \$28.70 per direct labor hour.
- (b) The standard direct labor hours are used to apply overhead to production, so the calculation is $\$28.70 \times 4,500$, or \$129,150.
- (c) The overhead budgeted for 4,500 direct labor hours is computed below.

Fixed: $\$22,000 + \$13,000 + \$27,000 + \$8,000 + \$3,000 + \$1,500 + \$500 + \$300 = \underline{\$75,300}$

Variable: $(\$12,000 + \$43,000 + \$10,000 + \$2,500 + \$700) \div 5,000 = \underline{\$13.64}$

Fixed	\$ 75,300
Variable (4,500 X \$13.64)	<u>61,380</u>
	<u>\$136,680</u>

The variances are:

Controllable: Actual (\$149,000) – Budgeted (\$136,680) = \$12,320 U

Volume: $\$15.06^*/\text{hr.} \times (5,000 - 4,500) = \underline{\$7,530 \text{ U}}$

* $\$75,300 \div 5,000 \text{ hrs.}$

- (d) Both variances appear significant. The controllable variance is 9% of budgeted overhead ($\$12,320 \div \$136,680$), and the volume variance is almost 6% of applied overhead ($\$7,530 \div \$129,150$).
- (e) The controllable variance is caused by either spending more than expected on overhead items, or using more than expected of overhead items (for example, more indirect labor hours). The volume variance is caused by underutilizing factory time. To improve performance, management must spend less on overhead items, use them more efficiently, and increase production to 1,000 units.

- (a) Glassmaster is using standard costs because management states that a factor that contributed to improved margins (profit) was a favorable materials price variance.**
- (b) The materials price variance experienced should not lead to changes in the standard for the next fiscal year. Management indicates that the favorable variance is temporary and will begin to reverse itself as stronger worldwide demand for commodity products improves in tandem with the economy.**

- (a) The objectives for each perspective are:
 - Financial: Profitability, fewer planes, increased revenues
 - Customer: Flight is on-time, lowest prices, more customers
 - Internal: Fast ground turnaround
 - Learning: Ground crew alignment.
- (b) To measure achievement of the customer perspective objective of on-time flights, lowest prices and more customers the company will use FAA on time arrival ratings, customer ranking, and number of customers.
- (c) To achieve the learning perspective objective of ground crew alignment the company plans to implement an employee stock ownership plan and ground crew training.

To: Professor Standard

From: I. M. Smart

Subject: Setting Standard Costs

This memorandum covers two points as follows:

- (a) The comparative advantages and disadvantages of ideal versus normal standards.**

Ideal standards represent optimum levels of performance under perfect operating conditions. In contrast, normal standards represent efficient levels of performance that are attainable under expected operating conditions.

An advantage of ideal standards is that they stimulate the conscientious worker to ever-increasing improvement. The disadvantage of ideal standards is that because they are so difficult to meet, they discourage self-improvement and lower the morale of the entire work force.

Normal standards are rigorous but attainable. Such standards should stimulate the worker to self-improvement without discouraging him or her or lowering the morale of the work force.

- (b) Factors to be considered in setting standards for direct materials, direct labor, and manufacturing overhead.**
- 1. Direct materials. The direct materials price standard is the cost per unit of direct materials that should be incurred. This standard should be based on the purchasing department's best estimate of the cost of raw materials. The price standard should include allowances for related costs such as receiving and storing.**

The direct materials quantity standard is the quantity of direct materials that should be used per unit of finished goods. This standard is a physical measure and it should include allowances for unavoidable waste and normal spoilage.

- 2. Direct labor. The direct labor price standard is the rate per hour that should be incurred for direct labor. This standard should be based on current wage rates adjusted for expected cost of living adjustments and employer payroll taxes and fringe benefits.**

The direct labor quantity standard is the time that should be required to make one unit of product. In setting this standard, allowances should be made for rest periods, cleanup, and machine setup and downtime.

- 3. Manufacturing overhead. For this standard, a standard predetermined overhead rate is used. This rate is determined by dividing budgeted overhead costs by an expected activity index. The budgeted overhead costs should be based on a realistic estimate of overhead costs at normal capacity.**

- (a) Ron and his fellow painters in the painting department will benefit from Ron's slow action. The company and its customers are harmed. The company will incur higher costs on the product and therefore will have to set a higher selling price or suffer a smaller gross profit. Customers will have to pay a greater price for the product or stockholders will obtain less benefit from their investment.**
- (b) Deliberately falsifying and distorting the time study was unethical. If every employee in every phase of producing this new product distorted the time study, the company would not be competitive. If the company is not competitive and profitable, it will eventually go out of business and Ron will be out of a job. It is in Ron's best interest to support the development of reasonable standards and improved efficiency.**
- (c) The company might conduct several time study tests using different employees. Or the company might conduct unannounced time studies. And the standard might be changed more often than every six months by conducting monthly time studies to effect continuous improvements in efficiency. Incentives might be offered to employees who produce the most efficient effort in the time studies, thereby discouraging distorted, inefficient performance.**

- (a) The panel made recommendations regarding a number of areas of concern in higher education. For example, it suggested that new approaches should be used to control costs, and it stated that the cost of tuition should grow no faster than median family income. It made recommendations to strengthen the Pell Grant program, which is the core of the federal financial aid program. It also recommended that public universities should use standardized tests to measure student learning.
- (b) As discussed in the chapter, standards provide a mechanism for evaluating performance and, if used properly, can be used as a motivational tool. The results of standardized tests might help to evaluate the effectiveness of various approaches to education. They might also be used to “weed out” schools that are not meeting minimum expectations.
- (c) Potential disadvantages of standards are that they might reduce the willingness of instructors or institutions to experiment with new teaching approaches. In addition, in order to obtain high scores, instructors might feel compelled to “teach to the exam,” thus narrowing the breadth of exposure obtained by the student. Also, by their very nature, standardized tests have a difficult time addressing differences across various instructional settings that can cause differences in results.
- (d) Answers will vary depending on student response.

CHAPTER 26

Incremental Analysis and Capital Budgeting

ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Identify the steps in management's decision-making process.	1, 2	1	3	1		
2. Describe the concept of incremental analysis.	3, 4	2	4	1		
3. Identify the relevant costs in accepting an order at a special price.	5	3	7	2, 3	1A	1B
4. Identify the relevant costs in a make-or-buy decision.	6, 7	4	9	4	2A	2B
5. Give the decision rule for whether to sell or process materials further.	8	5	10	5, 6		
6. Identify the factors to consider in retaining or replacing equipment.	9	6		7		
7. Explain the relevant factors in whether to eliminate an unprofitable segment.	10	7		8, 9	3A	3B
8. Determine which products to make and sell when resources are limited.	11	8		10		
9. Contrast annual rate of return and cash payback in capital budgeting.	12, 13, 14, 15, 16	9, 10		11, 12, 13	4A, 5A	4B, 5B

ASSIGNMENT CLASSIFICATION TABLE (Continued)

<u>Study Objectives</u>		<u>Questions</u>	<u>Brief Exercises</u>	<u>Do It!</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
10.	Distinguish between the net present value and internal rate of return methods.	17, 18, 19, 20	11, 12, 13		12, 13, 14, 15	4A, 5A, 6A	4B, 5B, 6B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Make incremental analysis for special order, and identify nonfinancial factors in decision.	Simple	20–30
2A	Make incremental analysis related to make or buy; consider opportunity cost, and identify nonfinancial factors.	Moderate	30–40
3A	Compute contribution margin, and prepare incremental analysis concerning elimination of divisions.	Moderate	30–40
4A	Compute annual rate of return, cash payback, and net present value.	Moderate	30–40
5A	Compute annual rate of return, cash payback, and net present value.	Complex	30–40
6A	Compute net present value and internal rate of return.	Moderate	20–30
1B	Make incremental analysis for special order, and identify nonfinancial factors in decision.	Simple	20–30
2B	Make incremental analysis related to make or buy; consider opportunity cost, and identify nonfinancial factors.	Moderate	30–40
3B	Compute contribution margin, and prepare incremental analysis concerning elimination of divisions.	Moderate	30–40
4B	Compute annual rate of return, cash payback, and net present value.	Moderate	30–40
5B	Compute annual rate of return, cash payback, and net Present value.	Complex	30–40
6B	Compute net present value and internal rate of return.	Moderate	20–30

WEYGANDT ACCOUNTING PRINCIPLES 9E
CHAPTER 26
INCREMENTAL ANALYSIS AND CAPITAL BUDGETING

Number	SO	BT	Difficulty	Time (min.)
BE1	1	K	Simple	2–3
BE2	2	AN	Simple	3–5
BE3	3	AN	Simple	4–6
BE4	4	AN	Simple	5–7
BE5	5	AN	Simple	5–7
BE6	6	AN	Simple	4–6
BE7	7	AN	Simple	4–6
BE8	8	AP	Simple	3–5
BE9	9	AP	Simple	4–6
BE10	9	AP	Simple	5–7
BE11	10	AN	Simple	5–7
BE12	10	AP	Simple	4–6
BE13	10	AN	Simple	2–4
DI1	3	AN	Simple	4–6
DI2	4	AN	Simple	8–10
DI3	7	AN	Simple	6–8
DI4	9	AP	Simple	6–8
DI5	10	AN	Simple	6–8
EX1	1, 2	K	Simple	8–10
EX2	3	E	Moderate	8–10
EX3	3	E	Simple	8–10
EX4	4	E	Simple	8–10
EX5	5	E	Moderate	10–12
EX6	5	E	Simple	8–10
EX7	6	E	Simple	6–8
EX8	7	E	Simple	6–8
EX9	7	E	Simple	8–10
EX10	8	E	Simple	8–10

INCREMENTAL ANALYSIS AND CAPITAL BUDGETING (Continued)

Number	SO	BT	Difficulty	Time (min.)
EX11	9	AP	Moderate	8–10
EX12	9, 10	E	Moderate	12–15
EX13	9, 10	AP	Simple	6–8
EX14	10	E	Simple	8–10
EX15	10	E	Simple	8–10
PIA	3	E	Simple	20–30
P2A	4	E	Moderate	30–40
P3A	7	E	Moderate	30–40
P4A	9, 10	E	Moderate	30–40
P5A	9, 10	E	Complex	30–40
P6A	10	E	Moderate	20–30
P1B	3	E	Simple	20–30
P2B	4	E	Moderate	30–40
P3B	7	E	Moderate	30–40
P4B	9, 10	E	Moderate	30–40
P5B	9, 10	E	Complex	30–40
P6B	10	E	Moderate	20–30
BYP1	6, 9, 10	AP, AN	Moderate	20–25
BYP2	4	E	Moderate	10–15
BYP3	2	AN	Simple	8–12
BYP4	10	AP	Simple	10–15
BYP5	9	E	Moderate	15–20
BYP6	2, 7	E	Simple	10–15
BYP7	1, 2	S	Simple	25–30

BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the steps in management's decision-making process.	BE26-1	Q26-1 Q26-2				
2. Describe the concept of incremental analysis.		Q26-3 Q26-4		BE26-2		
3. Identify the relevant costs in accepting an order at a special price.		Q26-5		BE26-3 DI26-1		E26-2 E26-3 P26-1A P26-1B
4. Identify the relevant costs in a make-or-buy decision.		Q26-6 Q26-7		BE26-4 DI26-2		E26-4 P26-2A P26-2B
5. Give the decision rule for whether to sell or process materials further.	Q26-8			BE26-5		E26-5 E26-6
6. Identify the factors to consider in retaining or replacing equipment.		Q26-9		BE26-6		E26-7
7. Explain the relevant factors in whether to eliminate an unprofitable segment.		Q26-10		BE26-7 DI26-3		E26-8 E26-9 P26-3A P26-3B
8. Determine which products to make and sell when resources are limited.	Q26-11		BE26-8			E26-10
9. Contrast annual rate of return and cash payback in capital budgeting.	Q26-13	Q26-12 Q26-14 Q26-15	BE26-9 BE26-10 DI26-4			E26-12 P26-4A P26-5A P26-4B P26-5B
10. Distinguish between the net present value and internal rate of return methods.	Q26-18 Q26-19 Q26-20	Q26-17	BE26-12 E26-13	BE26-11 BE26-13 DI26-5		E26-12 E26-14 E26-15 P26-4A P26-6B P26-5A
Broadening Your Perspective			Exploring the Web Decision Making Across the Organization	Decision Making Across the Organization Real-World Focus	All About You Activity	Managerial Analysis Decision Making Across the Organization Communication Ethics Case

ANSWERS TO QUESTIONS

1. The following steps are frequently involved in management's decision-making process:
 - (a) Identify the problem and assign responsibility.
 - (b) Determine and evaluate possible courses of action.
 - (c) Make a decision.
 - (d) Review results of the decision.
2. Your roommate is incorrect. Accounting contributes to the decision-making process at only two points: (1) prior to the decision, accounting provides relevant revenue and cost data for each course of action, and (2) following the decision, internal reports are prepared to show the actual effect of the decision on net income.
3. Disagree. Incremental analysis involves the identification of financial data that change under alternative courses of action.
4. In incremental analysis, the important point to consider is whether costs will differ (change) between the two alternatives. As a result, (1) variable costs may change under the alternative courses of action and (2) fixed costs may not change.
5. The relevant data in deciding whether to accept an order at a special price are the incremental revenues to be obtained compared to the incremental costs of filling the special order.
6. The manufacturing costs that are relevant in the make-or-buy decision are those that will change if the parts are purchased.
7. Opportunity cost may be defined as the potential benefit that may be obtained by following an alternative course of action. Opportunity cost is relevant in a make-or-buy decision when the facilities used to make the part can be used to generate additional income.
8. The decision rule in a decision to sell a product or to process it further is: Process further as long as the incremental revenue from the additional processing exceeds the incremental processing costs.
9. A sunk cost is a cost that cannot be changed by any present or future decision. Sunk costs, therefore, are not relevant in a decision to retain or replace equipment.
10. Net income will be lower if an unprofitable product line is eliminated when the product line is producing a positive contribution margin and its fixed costs cannot be avoided or reduced.
11. Contribution margin per unit of limited resource is determined by dividing the contribution margin per unit of the product by the number of units of the limited resource required to produce one unit of the product.
12. The screening of proposed capital expenditures may be done by a capital budgeting committee which submits its findings to the officers of the company. The officers, in turn, select the projects they believe to be the most worthy of funding and submit them to the board of directors. The directors ultimately approve the capital expenditure budget for the year.

- 13.** The formula for the annual rate of return technique is: $\text{Annual net income} \div \text{average investment}$.
- 14.** Cost of capital is the rate of return that management expects to pay on all borrowed and equity funds. The decision rule is: A project is acceptable if its rate of return is greater than or equal to management's minimum rate of return (which often is its cost of capital), and the project is unacceptable when the rate of return is less than the minimum rate of return.
- 15.** Pete is not correct. The formula for the cash payback technique is: $\text{Cost of the capital investment} \div \text{net annual cash flows}$. The formula for the annual rate of return is: $\text{Expected annual net income} \div \text{average investment}$.
- 16.** The cash payback technique is relatively easy to compute and understand. However, it should not ordinarily be the only basis for the capital budgeting decision because it ignores the profitability of the investment and the time value of money.
- 17.** The two tables are:
 - (1) Table 1 is the present value of a single future amount. This table is used when a project has uneven cash flows over its useful life.
 - (2) Table 2 is the present value of a series of future cash flows. This table is used when a project has equal cash flows occurring at equal intervals of time over its useful life.
- 18.** The decision rule is: Accept the project when net present value is zero or positive; reject the project when net present value is negative.
- 19.** The steps are:
 - (a) Compute the rate of return factor by dividing Capital Investment by Net Annual Cash Flows.
 - (b) Use the factor and the present value of an annuity of 1 table to find the internal rate of return.
- 20.** Under the internal rate of return method, the objective is to find the rate that will make the present value of the expected annual cash inflows equal the present value of the proposed capital expenditure. The decision rule under the internal rate of return method is: Accept the project when the internal rate of return is equal to or greater than the required rate of return, and reject the project when the internal rate of return is less than the required rate.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 26-1

The correct order is:

1. Identify the problem and assign responsibility.
2. Determine and evaluate possible courses of action.
3. Make a decision.
4. Review results of the decision.

BRIEF EXERCISE 26-2

	<u>Alternative A</u>	<u>Alternative B</u>	<u>Net Income Increase (Decrease)</u>
Sales	\$150,000	\$180,000	\$ 30,000
Costs	<u>100,000</u>	<u>120,000</u>	<u>(20,000)</u>
Net income	<u>\$ 50,000</u>	<u>\$ 60,000</u>	<u>\$ 10,000</u>

Alternative B is better than Alternative A.

BRIEF EXERCISE 26-3

	<u>Reject Order</u>	<u>Accept Order</u>	<u>Net Income Increase (Decrease)</u>
Revenues	\$0	\$92,000	\$ 92,000
Costs—Variable manufacturing	0	80,000	(80,000)
Shipping	<u>0</u>	<u>4,000</u>	<u>(4,000)</u>
Net income	<u>\$0</u>	<u>\$ 8,000</u>	<u>\$ 8,000</u>

The special order should be accepted.

BRIEF EXERCISE 26-4

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Variable manufacturing costs	\$50,000	\$ 0	\$ 50,000
Fixed manufacturing costs	30,000	30,000	0
Purchase price		<u>53,000</u>	<u>(53,000)</u>
Total annual cost	<u>\$80,000</u>	<u>\$83,000</u>	<u>\$ (3,000)</u>

The decision should be to continue to make the part.

BRIEF EXERCISE 26-5

	<u>Sell</u>	<u>Process Further</u>	<u>Net Income Increase (Decrease)</u>
Sales per unit	<u>\$60.00</u>	<u>\$72.00</u>	<u>\$ 12.00</u>
Cost per unit			
Variable	30.00	38.00	(8.00)
Fixed	<u>10.00</u>	<u>10.00</u>	<u>0</u>
Total	<u>40.00</u>	<u>48.00</u>	<u>(8.00)</u>
Net income per unit	<u>\$20.00</u>	<u>\$24.00</u>	<u>\$ 4.00</u>

The bookcases should be processed further because the incremental revenues exceed incremental costs by \$4.00 per unit.

BRIEF EXERCISE 26-6

	<u>Retain Equipment</u>	<u>Replace Equipment</u>	<u>Net 4-Year Income Increase (Decrease)</u>
Variable manufacturing costs	\$2,400,000	\$1,760,000	\$ 640,000*
New machine cost		<u>200,000</u>	<u>(200,000)</u>
Total	<u>\$2,400,000</u>	<u>\$1,960,000</u>	<u>\$ 440,000</u>

*\$160,000 X 4

The old factory machine should be replaced.

BRIEF EXERCISE 26-7

	<u>Continue</u>	<u>Eliminate</u>	<u>Net Income Increase (Decrease)</u>
Sales	\$200,000	0	\$(200,000)
Variable expenses	<u>180,000</u>	<u>0</u>	<u>180,000</u>
Contribution margin	20,000	0	(20,000)
Fixed expenses	<u>40,000</u>	<u>\$ 34,000</u>	<u>6,000</u>
Net income	<u>\$ (20,000)</u>	<u>\$(34,000)</u>	<u>\$ (14,000)</u>

The Eagle product line should be continued because \$20,000 of contribution margin will not be realized if the line is eliminated. This sum is greater than the \$6,000 saving of fixed costs.

BRIEF EXERCISE 26-8

	<u>Product A</u>	<u>Product B</u>
Contribution margin per unit (a)	\$11	\$12
Machine hours required (b)	2	2.5
Contribution margin per unit of limited resource [(a) ÷ (b)]	\$5.50	\$4.80

BRIEF EXERCISE 26-9

$$\$300,000 \div (\$10,000 + \$30,000) = 7.5 \text{ years}$$

BRIEF EXERCISE 26-10

The annual rate of return is calculated by dividing expected annual income by the average investment. The company's expected annual income is:

$$\$130,000 - \$80,000 = \$50,000$$

Its average investment is:

$$\frac{\$490,000 + \$10,000}{2} = \$250,000$$

Therefore, its annual rate of return is:

$$\$50,000 / \$250,000 = 20\%$$

BRIEF EXERCISE 26-11

Project A

	<u>Cash Flows</u>	<u>X</u>	<u>9% Discount Factor</u>	<u>=</u>	<u>Present Value</u>
Present value of net annual cash flows	\$70,000	X	6.41766	=	\$449,236
Capital investment					<u>395,000</u>
Positive net present value					<u>\$ 54,236</u>

Project B

	<u>Cash Flows</u>	<u>X</u>	<u>9% Discount Factor</u>	<u>=</u>	<u>Present Value</u>
Present value of net annual cash flows	\$50,000	X	6.41766	=	\$320,883
Capital investment					<u>270,000</u>
Positive net present value					<u>\$ 50,883</u>

Since Project A has a higher net present value than Project B, it should be selected.

BRIEF EXERCISE 26-12

When net annual cash flows are expected to be equal, the internal rate of return can be approximated by dividing the capital investment by the net annual cash flows to determine the discount factor, and then locating this discount factor on the present value of an annuity table.

$$\$170,000 / \$33,740 = 5.03853$$

By tracing across on the 7-year row we see that the discount factor for 9% is 5.03295. Thus, the internal rate of return on this project is approximately 9%.

BRIEF EXERCISE 26-13

	<u>Present Value</u>
Net annual cash flows \$34,000 X 6.71	\$228,140
Capital investment \$225,000 X 1.00	<u>225,000</u>
Positive net present value	<u>\$ 3,140</u>

The investment should be made because net present value is positive.

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 26-1

	<u>Reject</u>	<u>Accept</u>	<u>Net Income Increase (Decrease)</u>
Revenues	\$ -0-	\$186,000	\$186,000
Costs	\$ -0-	132,000*	132,000
Net income	<u>\$ -0-</u>	<u>\$ 54,000</u>	<u>\$ 54,000</u>

*(6,000 X \$20) + (6,000 X \$2)

Given the results of the above analysis, Corn Company should accept the special order.

DO IT! 26-2

(a)

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Direct materials	\$ 30,000	\$ -0-	\$ 30,000
Direct labor	42,000	-0-	42,000
Variable manufacturing costs	45,000	-0-	45,000
Fixed manufacturing costs	60,000	40,000	20,000
Purchase price	<u>-0-</u>	<u>165,000</u>	<u>(165,000)</u>
Total cost	<u>\$177,000</u>	<u>\$205,000</u>	<u>\$ (28,000)</u>

Given the results of the above analysis, Barney Company will incur \$28,000 of additional costs if it buys the switches.

(b)

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Total Cost	\$177,000	\$205,000	\$(28,000)
Opportunity cost	30,000	-0-	30,000
Total cost	<u>\$207,000</u>	<u>\$205,000</u>	<u>\$ 2,000</u>

Yes, the answer is different: The analysis shows that net income will be increased by \$2,000 if Barney Company purchases the switches.

DO IT! 26-3

	<u>Continue</u>	<u>Eliminate</u>	<u>Net Income Increase (Decrease)</u>
Sales	\$500,000	\$ 0	\$(500,000)
Variable costs	375,000	0	375,000
Contribution margin	125,000	0	(125,000)
Fixed costs	150,000	40,000	110,000
Net income	<u>\$ (25,000)</u>	<u>\$(40,000)</u>	<u>\$ (15,000)</u>

The analysis indicates that Lion should not eliminate that gloves and mittens line because net income would decrease \$15,000.

DO IT! 26-4

- (a) Average investment = $(\$350,000 + 0) \div 2 = \$175,000$
 Annual rate of return = $\$40,000 \div \$175,000 = 22.9\%$
- (b) Net annual cash flow = $\$40,000 + \$70,000 = \$110,000$
 Cash payback period = $\$350,000 \div \$110,000 = 3.2$ years

DO IT! 26-5

(a)	Estimated annual cash inflows	\$300,000
	Estimated annual cash outflows	<u>140,000</u>
	Net annual cash flow	<u>\$160,000</u>

	<u>Cash Flow</u>	<u>9% Discount Factor</u>	<u>Present Value</u>
Present value of net annual cash flows	\$160,000	4.48592*	\$717,747
Capital investment			<u>700,000</u>
Net present value			<u>\$ 17,747</u>

*Table 4, Appendix A.

Since the net present value is greater than zero, Maranantha should accept the project.

- (b) $\$700,000 \div 160,000 = 4.375$. Using Table 2 of Appendix C and the factors that correspond with the six-period row, 4.375 is between the factors for 9% and 10% (just under 10%). Since that project has an internal rate that is close to 10% and the required rate of return is only 9%, the company should accept the project.

SOLUTIONS TO EXERCISES

EXERCISE 26-1

1. False. The first step in management's decision-making process is *"identify the problem and assign responsibility"*.
2. False. The final step in management's decision-making process is to *review the results of the decision*.
3. True.
4. False. In making business decisions, management ordinarily considers *both financial and nonfinancial* information.
5. True.
6. True.
7. False. Costs that are the same under all alternative courses of action *do not* affect the decision.
8. False. When using incremental analysis, *either costs or revenues or both* will change under alternative courses of action.
9. False. Sometimes variable costs will *not* change under alternative courses of action, but fixed costs *will*.

EXERCISE 26-2

(a)

	Reject Order	Accept Order	Net Income Increase (Decrease)
Revenues (40,000 X \$6.00)	\$0	\$240,000	\$ 240,000
Cost of goods sold	0	168,000 (1)	(168,000)
Operating expenses	0	62,000 (2)	(62,000)
Net income	<u>\$0</u>	<u>\$ 10,000</u>	<u>\$ 10,000</u>

(1) Variable cost of goods sold = \$2,400,000 X 70% = \$1,680,000.
 Variable cost of goods sold per unit = \$1,680,000 ÷ 400,000 = \$4.20.
 Variable cost of goods sold for the special order = \$4.20 X 40,000 = \$168,000.

(2) Variable operating expenses = \$900,000 X 60% = \$540,000;
 \$540,000 ÷ 400,000 = \$1.35 per unit;
 40,000 X \$1.35 = \$54,000;
 \$54,000 + \$8,000 = \$62,000.

(b) As shown in the incremental analysis, Wyco Company should accept the special order because incremental revenues exceed incremental expenses by \$10,000.

EXERCISE 26-3**(a)**

	Reject Order	Accept Order	Net Income Increase (Decrease)
Revenues	\$ -0-	\$23,750	\$23,750
Materials (\$0.50)	-0-	(2,500)	(2,500)
Labor (\$1.50)	-0-	(7,500)	(7,500)
Variable overhead (\$1.00)	-0-	(5,000)	(5,000)
Fixed overhead	-0-	(5,000)	(5,000)
Sales commissions	-0-	-0-	-0-
Net income	<u>\$ -0-</u>	<u>\$ 3,750</u>	<u>\$ 3,750</u>

- (b)** As shown in the incremental analysis, Innova should accept the special order because incremental revenue exceeds incremental expenses by \$3,750.
- (c)** It is assumed that sales of the golf disc in other markets would not be affected by this special order. If other sales were affected, Innova would have to consider the lost sales in making the decision. Second, if Innova is operating at full capacity, it is likely that the special order would be rejected.

EXERCISE 26-4**(a)**

	Make	Buy	Net Income Increase (Decrease)
Direct materials (40,000 X \$4.00)	\$160,000	\$ 0	\$ 160,000
Direct labor (40,000 X \$6.00)	240,000	0	240,000
Variable manufacturing costs ((\$240,000 X 50%))	120,000	0	120,000
Fixed manufacturing costs	40,000	40,000	0
Purchase price (40,000 X \$13.50)	0	540,000	(540,000)
Total annual cost	<u>\$560,000</u>	<u>\$580,000</u>	<u>\$ (20,000)</u>

EXERCISE 26-4 (Continued)

- (b) No, Shannon Inc. should not purchase the lamps. As indicated by the incremental analysis, it would cost the company \$20,000 more to purchase the lamps.
- (c) Yes, by purchasing the lamp shades, a total cost saving of \$15,000 will result as shown below.

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Total annual cost (above)	\$560,000	\$580,000	\$(20,000)
Opportunity cost	<u>35,000</u>	<u>0</u>	<u>35,000</u>
Total cost	<u>\$595,000</u>	<u>\$580,000</u>	<u>\$ 15,000</u>

EXERCISE 26-5

	<u>Sell (Basic Kit)</u>	<u>Process Further (Stage 2 Kit)</u>	<u>Net Income Increase (Decrease)</u>
Sales per unit	<u>\$27.00</u>	<u>\$33.00</u>	<u>\$ 6.00</u>
Costs per unit			
Direct materials	\$12.00	\$ 6.00 (1)	\$ 6.00
Direct labor	<u>0</u>	<u>9.00 (2)</u>	<u>(9.00)</u>
Total	<u>\$12.00</u>	<u>\$15.00</u>	<u>\$(3.00)</u>
Net income per unit	<u>\$15.00</u>	<u>\$18.00</u>	<u>\$ 3.00</u>

- (1) The cost of materials decreases because Stacy can make two Stage 2 Kits from the materials for a basic kit.
- (2) The total time to make the two kits is one hour at \$18 per hour or \$9 per unit.

Stacy should carry the Stage 2 Kits. The incremental revenue, \$6.00, exceeds the incremental processing costs, \$3.00. Thus, net income will increase by processing the kits further.

EXERCISE 26-6**(a)**

	<u>Sell</u>	<u>Process Further</u>	<u>Net Income Increase (Decrease)</u>
Sales per unit	<u>\$400</u>	<u>\$450</u>	<u>\$ 50</u>
Costs per unit			
Materials	150	155	(5)
Labor	70	90	(20)
Variable overhead (70%)	49	63	(14)
Fixed overhead	<u>21</u>	<u>21</u>	<u>-0-</u>
Total	<u>\$290</u>	<u>329</u>	<u>(39)</u>
Net income per unit	<u>\$110</u>	<u>\$121</u>	<u>\$ 11</u>

- (b)** As shown in the incremental analysis, Donkey Bikes should process further (rather than sell unassembled) because incremental revenue exceeds incremental expenses by \$11 per unit.

EXERCISE 26-7

	<u>Retain Machine</u>	<u>Replace Machine</u>	<u>Net Income Increase (Decrease)</u>
Operating costs	\$120,000 (1)	\$100,000 (2)	\$ 20,000
New machine cost (Depr.)	0	21,000	(21,000)
Salvage value (old)	<u>0</u>	<u>(5,000)</u>	<u>5,000</u>
Total	<u>\$120,000</u>	<u>\$116,000</u>	<u>\$ 4,000</u>

(1) \$24,000 X 5.

(2) \$20,000 X 5.

The current machine should be replaced. The incremental analysis shows that net income for the five-year period will be \$4,000 higher by replacing the current machine.

EXERCISE 26-8

	<u>Continue</u>	<u>Eliminate</u>	<u>Net Income Increase (Decrease)</u>
Sales	<u>\$ 98,200</u>	<u>\$ 0</u>	<u>\$(98,200)</u>
Variable expenses			
Cost of goods sold	56,000	0	56,000
Operating expenses	<u>12,000</u>	<u>0</u>	<u>12,000</u>
Total variable	<u>68,000</u>	<u>0</u>	<u>68,000</u>
Contribution margin	<u>30,200</u>	<u>0</u>	<u>(30,200)</u>
Fixed expenses			
Cost of goods sold	20,470	20,470	0
Operating expenses	<u>26,600</u>	<u>26,600</u>	<u>0</u>
Total fixed	<u>47,070</u>	<u>47,070</u>	<u>0</u>
Net income (loss)	<u>\$(16,870)</u>	<u>\$(47,070)</u>	<u>\$(30,200)</u>

Judy is incorrect. The incremental analysis shows that net income will be \$30,200 less if the Ketchum Division is eliminated. This amount equals the contribution margin that would be lost by discontinuing the division.

EXERCISE 26-9

(a) $\$30,000 + \$75,000 - \$30,000 = \$75,000$

(b)	<u>Stunner</u>	<u>Double-Set</u>	<u>Total</u>
Sales	\$300,000	\$500,000	\$800,000
Variable expenses	<u>150,000</u>	<u>200,000</u>	<u>350,000</u>
Contribution margin	150,000	300,000	450,000
Fixed expenses	<u>142,500*</u>	<u>262,500**</u>	<u>405,000</u>
Net income	<u>\$ 7,500</u>	<u>\$ 37,500</u>	<u>\$ 45,000</u>

* $\$30,000 + [(\$300,000 \div \$800,000) \times \$300,000]$

** $\$75,000 + [(\$500,000 \div \$800,000) \times \$300,000]$

- (c) As shown in the analysis above, Shatner should not eliminate the Mega-Power product line. Elimination of the line would cause net income to drop from \$75,000 to \$45,000. The reason for this decrease in net income is that elimination of the product line would result in the loss of \$60,000 of contribution margin while saving only \$30,000 of fixed expenses.

EXERCISE 26-10

(a)

	Product		
	A	B	C
Contribution margin per unit (a)	\$7	\$4	\$6
Machine hours required (b)	2	1	2
Contribution margin per unit of limited resource (a) ÷ (b)	\$3.50	\$4	\$3

(b) Product B should be manufactured because it results in the highest contribution margin per machine hour.

(c) (1)

	Product		
	A	B	C
Machine hours (a) (3,000 ÷ 3)	1,000	1,000	1,000
Contribution margin per unit of limited resource (b)	\$ 3.50	\$ 4	\$ 3
Total contribution margin [(a) X (b)]	<u>\$3,500</u>	<u>\$4,000</u>	<u>\$3,000</u>

The total contribution margin is \$10,500 (\$3,500 + \$4,000 + \$3,000).

(2)

	Product B
Machine hours (a)	3,000
Contribution margin per unit of limited resource (b)	\$ 4
Total contribution margin [(a) X (b)]	<u>\$12,000</u>

EXERCISE 26-11

(a) Cost of hoist: \$15,000 + \$2,900 + \$820 = \$18,720.

Net annual cash flow:

Number of extra mufflers: 4 X 52 weeks	(a)	208
Contribution margin per muffler (\$65 – \$35 – \$10)	(b)	\$ 20
Total net annual cash flow (a) X (b)		<u>\$4,160</u>

Cash payback = \$18,720 ÷ \$4,160 = 4.5 years.

EXERCISE 26-11 (Continued)

- (b) Average investment: $(\$18,720 + \$1,080) \div 2 = \$9,900$.
Annual depreciation: $(\$18,720 - \$1,080) \div 5 = \$3,528$.
Annual net income: $\$4,160 - \$3,528 = \$632$.
Average annual rate of return = $\$632 \div \$9,900 = \underline{6.4\%}$ (rounded).

EXERCISE 26-12

(a)

Year	AA	Cumulative Net Cash Flow
	Annual Net Cash Flow	
1	\$ 7,000	\$ 7,000
2	9,000	16,000
3	15,000	31,000

Cash payback 2.40 years (2 + .4*)

* $\$22,000 - \$16,000 = \$6,000$;

$\$6,000 \div \$15,000 = .4$

BB
 $22,000 \div (28,500 \div 3) = 2.32$ years

Year	CC	Cumulative Net Cash Flow
	Annual Net Cash Flow	
1	\$13,000	\$13,000
2	10,000	23,000
3	9,000	32,000

Cash payback 1.9 years (1 + .9*)

* $\$22,000 - 13,000 = \$9,000$;

$\$9,000 \div \$10,000 = .9$

The most desirable project is CC because it has the shortest payback period. The least desirable project is AA because it has the longest payback period. As indicated, only CC is acceptable because its cash payback is 1.9 years.

EXERCISE 26-12 (Continued)

(b)

Year	12% Discount Factor	AA		BB		CC	
		Net Annual Cash Flow	Present Value	Net Annual Cash Flow	Present Value	Net Cash Flow	Present Value
1	.89286	\$ 7,000	\$ 6,250	\$9,500	\$ 8,482	\$13,000	\$ 11,607
2	.79719	9,000	7,175	9,500	7,573	10,000	7,972
3	.71178	15,000	10,677	9,500	6,762	9,000	6,406
Total present value			24,102	22,817(1)		25,985	
Investment			22,000	22,000		22,000	
Net present value			\$ 2,102	\$ 817		\$ 3,985	

- (1) This total may also be obtained from Table 2: $\$9,500 \times 2.40183 = \$22,817$. Project CC is still the most desirable project. Also, on the basis of net present values, all of the projects are acceptable. Project BB is the least desirable.

EXERCISE 26-13

- (a) (1) Annual rate of return: $\$18,000 \div [(\$150,000 + \$0) \div 2] = 24\%$.

- (2) Cash payback: $\$150,000 \div \$48,000 = 3.13$ years.

(b)

Item	Amount	Years	PV Factor	Present Value
Net annual cash flows	\$ 48,000	1-5	3.60478	\$173,029
Capital investment	\$150,000	Now	1.00000	150,000
Positive net present value				<u>\$ 23,029</u>

EXERCISE 26-14

(a)

Project	Investment	÷	(Income + Depreciation)	=	Internal Rate of Return Factor	Closest Discount Factor	Internal Rate of Return
22A	\$240,000	÷	(\$13,300 + \$40,000)	=	4.503	4.48592	9%
23A	\$270,000	÷	(\$21,000 + \$30,000)	=	5.294	5.32825	12%
24A	\$288,000	÷	(\$20,000 + \$36,000)	=	5.143	5.14612	11%

- (b) The acceptable projects are 23A and 24A because their rates of return are equal to or greater than the 11% minimum required rate of return.

EXERCISE 26-15

(a) Project A: $(\$50,000 \times 3.79079) - \$200,000 = \underline{\underline{\$(10,461)}}$

Project B: $(\$65,000 \times 4.86842) - \$300,000 = \underline{\underline{\$16,447}}$

(b) Vasquez should invest in Project B only. Project B is acceptable because it has a positive net present value. Project A is unacceptable because it has a negative net present value.

(c) Project A (adjusted): $(\$60,000 \times 3.79079) - \$220,000 = \underline{\underline{\$7,447}}$. Vasquez' decision would change. Now both projects are acceptable.

SOLUTIONS TO PROBLEMS

PROBLEM 26-1A

- (a) Production capacity = 20,000 units ($16,000 \div 80\%$).
Units for special order = 4,000 ($20,000 - 16,000$).

Current selling price = \$20 ($\$320,000 \div 16,000$).
Special order price = \$15 ($\$20 \times 75\%$).

(b)	Variable manufacturing cost per unit	\$ 8.00
	Fixed manufacturing cost per unit ($\$56,000 \div 16,000$)	<u>3.50</u>
	Total manufacturing cost per unit.....	<u>\$11.50</u>

(c)		Reject Order	Accept Order	Net Income (Increase (Decrease)
	Revenues (4,000 X \$15)	<u>\$0</u>	<u>\$60,000</u>	<u>\$ 60,000</u>
	Costs			
	Variable manufacturing (4,000 X \$8.00)	0	32,000	(32,000)
	Sales commission	0	3,500	(3,500)
	Shipping (4,000 X \$2.00)	0	8,000	(8,000)
	Stamping machine	0	2,500	(2,500)
	Total costs	<u>0</u>	<u>46,000</u>	<u>(46,000)</u>
	Net income	<u>\$0</u>	<u>\$14,000</u>	<u>\$ 14,000</u>

Korte Company should accept the special order because it will produce \$14,000 of incremental net income.

- (d) The cost of the special order = $\$46,000 \div 4,000 = \$11.50$. Thus, the minimum selling price to produce net income of \$1.20 per unit is \$12.70.
- (e) Nonfinancial factors to be considered are: (1) possible effects on domestic sales, (2) possible alternative uses of the unused plant capacity, and (3) ability to meet customer's schedule for delivery without increasing costs.

PROBLEM 26-2A

(a)

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Direct material (36,000 X \$2.00)	\$ 72,000	\$ 0	\$ 72,000
Direct labor (2,000 X 3 X \$11.00)	66,000	0	66,000
Manufacturing overhead costs			
Indirect labor	5,500	0	5,500
Utilities	1,300	0	1,300
Depreciation	1,600	0	1,600
Property taxes & insurance	1,000	0	1,000
Cost of goods purchased	0	140,400	(140,400)
(36,000 X \$3.90)			
Receiving	0	8,500	(8,500)
Freight (36,000 X \$.30)	0	10,800	(10,800)
Storage (6,000 X \$.60)	3,600	0	3,600
Total annual cost	<u>\$151,000</u>	<u>\$159,700</u>	<u>\$ (8,700)</u>

Decision: Continue to make the part. The cost to make the part and rent storage space for the finished product is \$151,000, while the cost to buy the part and use the excess space for storage is \$159,700. Hence, continuing to make the part will result in an annual cost savings of \$8,700.

(b)

	<u>Make</u>	<u>Buy</u>	<u>Net Income Increase (Decrease)</u>
Total annual cost	\$151,000	\$159,700	\$ (8,700)
Opportunity cost	10,000	0	10,000
Total cost	<u>\$161,000</u>	<u>\$159,700</u>	<u>\$ 1,300</u>

Decision: Buy the part.

- (c) Nonfinancial factors include: (1) the adverse effect on employees if the part is purchased, (2) how long the supplier will be able to satisfy the Martinez Manufacturing Company's quality control standards at the quoted price per unit, and (3) will the supplier deliver the units when they are needed?

PROBLEM 26-3A

(a)	<u>Denver</u>	<u>Tacoma</u>
Sales	<u>\$455,000</u>	<u>\$515,000</u>
Variable expenses		
Cost of goods sold	361,000	387,000
Selling and administrative	<u>96,000</u>	<u>72,000</u>
Total variable expenses	<u>457,000</u>	<u>459,000</u>
Contribution margin	<u>\$ (2,000)</u>	<u>\$ 56,000</u>

(b) (1)			Net Income Increase (Decrease)
<u>Denver Division</u>	<u>Continue</u>	<u>Eliminate</u>	
Contribution margin (above)	<u>\$ (2,000)</u>	<u>\$ 0</u>	<u>\$ 2,000</u>
Fixed expenses			
Cost of goods sold	19,000	7,600	11,400
Selling and administrative	<u>24,000</u>	<u>9,600</u>	<u>14,400</u>
Total fixed expenses	<u>43,000</u>	<u>17,200</u>	<u>25,800</u>
Income (loss) from operations	<u>\$(45,000)</u>	<u>\$(17,200)</u>	<u>\$27,800</u>

(2)				Net Income Increase (Decrease)
	<u>Tacoma Division</u>	<u>Continue</u>	<u>Eliminate</u>	
Contribution margin (above)		<u>\$ 56,000</u>	<u>\$ 0</u>	<u>\$(56,000)</u>
Fixed expenses				
Cost of goods sold		43,000	17,200	25,800
Selling and administrative		<u>48,000</u>	<u>19,200</u>	<u>28,800</u>
Total fixed expenses		<u>91,000</u>	<u>36,400</u>	<u>54,600</u>
Income (loss) from operations		<u>\$(35,000)</u>	<u>\$(36,400)</u>	<u>\$ (1,400)</u>

The Denver Division should be eliminated because it is producing negative contribution margin (\$2,000). Income from operations will increase \$27,800 if the division is discontinued.

The Tacoma Division should be continued as its contribution margin, \$56,000, is greater than the savings in fixed costs (\$91,000 – \$36,400 = \$54,600) that would result from elimination. Therefore, income from operations would decrease \$1,400 if the Tacoma Division were eliminated.

**(c) DESKINS MANUFACTURING COMPANY
CVP Income Statement
For the Quarter Ended March 31, 2010**

	Divisions			
	<u>Miami</u>	<u>San Diego</u>	<u>Tacoma</u>	<u>Total</u>
Sales	<u>\$730,000</u>	<u>\$920,000</u>	<u>\$515,000</u>	<u>\$2,165,000</u>
Variable expenses				
Cost of goods sold	384,000	518,400	387,000	1,289,400
Selling and administrative	<u>124,200</u>	<u>172,200</u>	<u>72,000</u>	<u>368,400</u>
Total variable expenses	<u>508,200</u>	<u>690,600</u>	<u>459,000</u>	<u>1,657,800</u>
Contribution margin	<u>221,800</u>	<u>229,400</u>	<u>56,000</u>	<u>507,200</u>
Fixed expenses				
Cost of goods sold (1)	98,280	61,400	44,520	204,200
Selling and administrative (2)	<u>85,680</u>	<u>78,600</u>	<u>49,920</u>	<u>214,200</u>
Total fixed expenses	<u>183,960</u>	<u>140,000</u>	<u>94,440</u>	<u>418,400</u>
Income (loss) from operations	<u>\$ 37,840</u>	<u>\$ 89,400</u>	<u>\$ (38,440)</u>	<u>\$ 88,800</u>

(1) Division's own fixed costs plus its share of Denver's unavoidable fixed costs of \$7,600. (Miami \$2,280, San Diego \$3,800, and Tacoma \$1,520).

(2) Division's own fixed costs plus its share of Denver's unavoidable fixed costs of \$9,600. (Miami \$2,880, San Diego \$4,800, and Tacoma \$1,920).

(d) Total income from operations with the Denver Division is \$61,000 (given). Without the Denver Division, income from operations is \$88,800. The difference of \$27,800 (\$88,800 – \$61,000) is the incremental income that is gained through elimination of the Denver Division.

PROBLEM 26-4A

- (a) **Project Brown** = $\$14,400 \div [(\$190,000 + \$0) \div 2] = 15.2\%$.
Project Red = $\$20,000 \div [(\$220,000 + \$0) \div 2] = 18.2\%$.
Project Yellow = $\$22,000 \div [(\$250,000 + \$0) \div 2] = 17.6\%$.

(b) **Project Brown**

<u>Year</u>	<u>Net Annual Cash Flow</u>	<u>Cumulative Net Cash Flow</u>
1	\$63,000 (\$25,000 + \$38,000)	\$ 63,000
2	\$54,000 (\$16,000 + \$38,000)	\$117,000
3	\$51,000 (\$13,000 + \$38,000)	\$168,000
4	\$48,000 (\$10,000 + \$38,000)	\$216,000
5	\$46,000 (\$ 8,000 + \$38,000)	\$262,000

Cash Payback 3.46 years (3 + .46*)

*\$190,000 – \$168,000 = \$22,000;

\$22,000 ÷ \$48,000 = .46

Project Red = $\$220,000 \div [(\$20,000 + \$44,000)] = 3.44$ years

Project Yellow

<u>Year</u>	<u>Net Annual Cash Flow</u>	<u>Cumulative Net Cash Flow</u>
1	\$76,000 (\$26,000 + \$50,000)	\$ 76,000
2	\$74,000 (\$24,000 + \$50,000)	\$150,000
3	\$73,000 (\$23,000 + \$50,000)	\$223,000
4	\$67,000 (\$17,000 + \$50,000)	\$290,000
5	\$70,000 (\$20,000 + \$50,000)	\$360,000

Cash payback 3.40 years (3 + .40*)

*\$250,000 – \$223,000 = \$27,000;

\$27,000 ÷ \$67,000 = .40

(c) **Project Red**

<u>Item</u>	<u>Amount</u>	<u>Years</u>	<u>PV Factor</u>	<u>Present Value</u>
Net Annual cash flows	\$64,000	1–5	3.60478	\$230,706
Capital investment				<u>220,000</u>
Positive net present value				<u>\$ 10,706</u>

PROBLEM 26-4A (Continued)

		Project			
		Brown		Yellow	
Year	12% Discount Factor	Net Annual Cash Flow	PV	Net Annual Cash Flow	PV
1	.89286	\$ 63,000	\$ 56,250	\$ 76,000	\$ 67,857
2	.79719	54,000	43,048	74,000	58,992
3	.71178	51,000	36,301	73,000	51,960
4	.63552	48,000	30,505	67,000	42,580
5	.56743	46,000	26,102	70,000	39,720
Total		<u>\$262,000</u>	192,206	<u>\$360,000</u>	261,109
Capital investment			190,000		250,000
Net present value			<u>\$ 2,206</u>		<u>\$ 11,109</u>

(d)

Project	Annual Rate of Return	Cash Payback	Net Present Value
Brown	3	3	3
Red	1	2	2
Yellow	2	1	1

The best project is Yellow.

PROBLEM 26-5A

- (a)
- | | (1)
Annual
Net Income | (2)
Annual
Cash Flow |
|-------------------------------|-----------------------------|----------------------------|
| Fee revenue (12 X \$200 X 52) | <u>\$124,800</u> | <u>\$124,800</u> |
| Expenses | | |
| Salaries | 103,800 | 103,800 |
| Food and supplies | 14,000 | 14,000 |
| Depreciation (\$25,000 ÷ 5) | <u>5,000</u> | <u>0</u> |
| Total expenses | <u>122,800</u> | <u>117,800</u> |
| Net income | <u>\$ 2,000</u> | |
| Net annual cash flow | | <u>\$ 7,000</u> |
- (b) (1) Annual rate of return = $\$2,000 \div \frac{(\$25,000 + 0)}{2} = 16\%$.
- (2) Cash payback period = $\$25,000 \div \$7,000 = 3.57$ years.
- (c) Present value of net annual cash flows ($\$7,000 \times 3.79079$) = \$ 26,536
Present value of investment ($\$25,000 \times 1.00000$) = (25,000)
Positive net present value \$ 1,536
- (d) The computations show that the proposed day care center is a good investment. The annual rate of return is good and the net present value is positive. A minor negative factor is that the cash payback period is 71% ($3.57 \div 5$) of the useful life of the equipment.

PROBLEM 26-6A

(a)

(1) Option A

	<u>Cash Flows</u>	X	<u>9% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$ 20,000	X	5.53482	=	\$110,696
Present value of cost to rebuild	(26,500)	X	.64993	=	(17,223)
Present value of salvage value	0	X	.50187	=	0
					<u>93,473</u>
Capital investment					<u>90,000</u>
Net present value					<u>\$ 3,473</u>

(2) The internal rate of return can be approximated by finding the discount rate that results in a net present value of approximately zero. This is accomplished with a 10% discount rate.

	<u>Cash Flows</u>	X	<u>10% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$ 20,000	X	5.33493	=	\$106,699
Present value of cost to rebuild	(26,500)	X	.62092	=	(16,454)
Present value of salvage value	0	X	.46651	=	0
					<u>90,245</u>
Capital investment					<u>90,000</u>
Net present value					<u>\$ 245</u>

(1) Option B

	<u>Cash Flows</u>	X	<u>9% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$32,000	X	5.53482	=	\$177,114
Present value of cost to rebuild	0	X	.64993	=	0
Present value of salvage value	27,500	X	.50187	=	13,801
					<u>190,915</u>
Capital investment					<u>170,000</u>
Net present value					<u>\$ 20,915</u>

PROBLEM 26-6A (Continued)

(2) Internal rate of return on Option B is 12%, as calculated below:

	<u>Cash Flows</u>	X	<u>12% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$32,000	X	4.96764	=	\$158,964
Present value of cost to rebuild	0	X	.56743	=	0
Present value of salvage value	27,500	X	.40388	=	<u>11,107</u>
					170,071
Capital investment					<u>170,000</u>
Net present value					<u>\$ 71</u>

(b) Option A has a lower net present value than Option B, and also a lower internal rate of return. Therefore, Option B is the preferred project.

PROBLEM 26-1B

(a)

	<u>Reject Order</u>	<u>Accept Order</u>	<u>Net Income Increase (Decrease)</u>
Revenues (9,000 X \$32)	\$0	\$288,000	\$ 288,000
Cost of goods sold	0	225,000 (1)	(225,000)
Selling and administrative expenses	<u>0</u>	<u>27,000 (2)</u>	<u>(27,000)</u>
Net income	<u>\$0</u>	<u>\$ 36,000</u>	<u>\$ 36,000</u>

(1) Variable costs = \$3,150,000 – \$900,000 = \$2,250,000;
 $\$2,250,000 \div 90,000 \text{ units} = \$25 \text{ per unit};$
 $9,000 \times \$25 = \$225,000.$

(2) Variable costs = \$360,000 – \$135,000 = \$225,000;
 $\$225,000 \div 90,000 \text{ units} = \$2.50 \text{ per unit};$
 $9,000 \times (\$2.50 + \$0.50) = \$27,000.$

- (b) Yes, the special order should be accepted because net income will be increased by \$36,000.
- (c) Unit selling price = \$25 (variable manufacturing costs) + \$3.00 (variable selling and administrative expenses) + \$5.00 (net income) = \$33.00.
- (d) Nonquantitative factors to be considered are: (1) possible effect on domestic sales, (2) possible alternative uses of the unused plant capacity, and (3) ability to meet customer's schedule for delivery without increasing costs.

PROBLEM 26-2B

(a)

	<u>Make BIZBE</u>	<u>Buy BIZBE</u>	<u>Net Income Increase (Decrease)</u>
Direct materials (6,000 X \$4.75)	\$28,500	\$ 0	\$ 28,500
Direct labor (6,000 X \$4.60)	27,600	0	27,600
Indirect labor (6,000 X \$.45)	2,700	0	2,700
Utilities (6,000 X \$.35)	2,100	0	2,100
Depreciation	2,000	900	1,100
Property taxes	700	200	500
Insurance	1,500	600	900
Purchase price	0	66,000	(66,000)
Freight and inspection (6,000 X \$.30)	0	1,800	(1,800)
Receiving costs	<u>0</u>	<u>750</u>	<u>(750)</u>
Total annual cost	<u>\$65,100</u>	<u>\$70,250</u>	<u>\$ (5,150)</u>

(b) The company should continue to make BIZBE because net income would be \$5,150 less if BIZBE were purchased from the supplier.

(c) The decision would be different. Because of the opportunity cost of \$6,000, net income will be \$850 higher if BIZBE is purchased as shown below:

	<u>Make BIZBE</u>	<u>Buy BIZBE</u>	<u>Net Income Increase (Decrease)</u>
Total annual cost	\$65,100	\$70,250	\$(5,150)
Opportunity cost	<u>6,000</u>	<u>0</u>	<u>6,000</u>
Total cost	<u>\$71,100</u>	<u>\$70,250</u>	<u>\$ 850</u>

(d) Nonquantitative factors include: (1) the adverse effect on employees if BIZBE is purchased, (2) how long the supplier will be able to satisfy the Finnigan Manufacturing Company's quality control standards at the quoted price per unit, and (3) will the supplier deliver the units when they are needed by Finnigan?

PROBLEM 26-3B

	Division III	Division IV
Sales	<u>\$310,000</u>	<u>\$170,000</u>
Variable expenses		
Cost of goods sold	202,500	135,000
Selling and administrative	<u>39,000</u>	<u>49,000</u>
Total variable expenses	<u>241,500</u>	<u>184,000</u>
Contribution margin	<u>\$ 68,500</u>	<u>\$ (14,000)</u>

	Division III	Continue	Eliminate	Net Income Increase (Decrease)
Contribution margin (above)		<u>\$ 68,500</u>	<u>\$ 0</u>	<u>\$(68,500)</u>
Fixed expenses				
Cost of goods sold		67,500	33,750	33,750
Selling and administrative		<u>26,000</u>	<u>13,000</u>	<u>13,000</u>
Total fixed expenses		<u>93,500</u>	<u>46,750</u>	<u>46,750</u>
Income (loss) from operations		<u>\$(25,000)</u>	<u>\$(46,750)</u>	<u>\$(21,750)</u>

	Division IV	Continue	Eliminate	Net Income Increase (Decrease)
Contribution margin (above)		<u>\$(14,000)</u>	<u>\$ 0</u>	<u>\$14,000</u>
Fixed expenses				
Cost of goods sold		15,000	7,500	7,500
Selling and administrative		<u>21,000</u>	<u>10,500</u>	<u>10,500</u>
Total fixed expenses		<u>36,000</u>	<u>18,000</u>	<u>18,000</u>
Income (loss) from operations		<u>\$(50,000)</u>	<u>\$(18,000)</u>	<u>\$32,000</u>

Division III should be continued as contribution margin (\$68,500) is greater than the savings in fixed costs (\$46,750) that would result from elimination. Therefore, income from operations would decrease \$21,750 if Division III is eliminated.

Division IV should be eliminated because it is producing negative contribution margin (\$14,000). Income from operations will increase \$32,000 by discontinuing this division.

PROBLEM 26-3B (Continued)

(c) TRYON MANUFACTURING COMPANY
CVP Income Statement
For the Quarter Ended March 31, 2011

	Divisions			
	I	II	III	Total
Sales	<u>\$510,000</u>	<u>\$390,000</u>	<u>\$310,000</u>	<u>\$1,210,000</u>
Variable expenses				
Cost of goods sold	210,000	200,000	202,500	612,500
Selling and administrative	<u>24,000</u>	<u>40,000</u>	<u>39,000</u>	<u>103,000</u>
Total variable expenses	<u>234,000</u>	<u>240,000</u>	<u>241,500</u>	<u>715,500</u>
Contribution margin	<u>276,000</u>	<u>150,000</u>	<u>68,500</u>	<u>494,500</u>
Fixed expenses				
Cost of goods sold (1)	92,500	52,500	70,000	215,000
Selling and administrative (2)	<u>39,500</u>	<u>43,500</u>	<u>29,500</u>	<u>112,500</u>
Total fixed expenses	<u>132,000</u>	<u>96,000</u>	<u>99,500</u>	<u>327,500</u>
Income (loss) from operations	<u>\$144,000</u>	<u>\$ 54,000</u>	<u>\$ (31,000)</u>	<u>\$ 167,000</u>

(1) Division's fixed cost of goods sold plus 1/3 of Division IV's unavoidable fixed cost of goods sold [$\$150,000 \times (100\% - 90\%) \times 50\% = \$7,500$]. Each division's share is \$2,500.

(2) Division's fixed selling and administrative expenses plus 1/3 of Division IV's unavoidable fixed selling and administrative expenses [$\$70,000 \times (100\% - 70\%) \times 50\% = \$10,500$]. Each division's share is \$3,500.

(d) Income from operations with Division IV of \$135,000 (given) plus incremental income of \$32,000 from eliminating Division IV = \$167,000 income from operations without Division IV.

PROBLEM 26-4B

- (a) **Project Ric** = $\$13,000 \div [(\$140,000 + \$0) \div 2] = 18.6\%$.
Project Rac = $\$13,800 \div [(\$150,000 + \$0) \div 2] = 18.4\%$.
Project Roe = $\$18,000 \div [(\$180,000 + \$0) \div 2] = 20\%$.

- (b) **Project Ric** $\$140,000 \div [(\$13,000 + \$28,000)] = 3.41$ years

Project Rac

Net Annual Cash Flow	Cumulative Net Cash Flow
\$48,000 (\$18,000 + \$30,000)	\$ 48,000
\$47,000 (\$17,000 + \$30,000)	\$ 95,000
\$43,000 (\$13,000 + \$30,000)	\$138,000
\$42,000 (\$12,000 + \$30,000)	\$180,000
\$39,000 (\$9,000 + \$30,000)	\$219,000

Cash payback 3.29 years (3 + .29*)

* $\$150,000 - \$138,000 = \$12,000$;

$\$12,000 \div \$42,000 = .29$

Project Roe

Year	Net Annual Cash Flow	Cumulative Net Cash Flow
1	\$63,000 (\$27,000 + \$36,000)	\$ 63,000
2	\$58,000 (\$22,000 + \$36,000)	\$121,000
3	\$52,000 (\$16,000 + \$36,000)	\$173,000
4	\$49,000 (\$13,000 + \$36,000)	\$222,000
5	\$48,000 (\$12,000 + \$36,000)	\$270,000

Cash payback 3.14 years (3 + .14*)

* $\$180,000 - \$173,000 = \$7,000$;

$\$7,000 \div \$49,000 = .14$

PROBLEM 26-4B (Continued)

(c)

Project Ric				
<u>Item</u>	<u>Amount</u>	<u>Years</u>	<u>PV Factor</u>	<u>Present Value</u>
Net Annual cash flows	\$41,000	1–5	3.35216	\$137,439
Capital investment				<u>140,000</u>
Negative net present value				<u>\$ (2,561)</u>

<u>Year</u>	<u>15% Discount Factor</u>	<u>Project Rac</u>		<u>Project Roe</u>	
		<u>Net Annual Cash Inflow</u>	<u>PV</u>	<u>Net Annual Cash Inflow</u>	<u>PV</u>
1	.86957	\$ 48,000	\$ 41,739	\$ 63,000	\$ 54,783
2	.75614	47,000	35,539	58,000	43,856
3	.65752	43,000	28,273	52,000	34,191
4	.57175	42,000	24,014	49,000	28,016
5	.49718	<u>39,000</u>	<u>19,390</u>	<u>48,000</u>	<u>23,865</u>
Total		<u>\$219,000</u>	<u>148,955</u>	<u>\$270,000</u>	<u>184,711</u>
Capital investment			<u>150,000</u>		<u>180,000</u>
Positive (negative) net present value			<u>\$ (1,045)</u>		<u>\$ 4,711</u>

(d)

<u>Project</u>	<u>Annual Rate of Return</u>	<u>Cash Payback</u>	<u>Net Present Value</u>
Ric	2	3	3
Rac	3	2	2
Roe	1	1	1

The best project is Roe since it has the highest annual rate of return, the shortest cash payback, and the only positive net present value.

PROBLEM 26-5B

(a)	(1) Annual Net Income	(2) Annual Cash Flow
Sales	<u>\$144,000*</u>	<u>\$ 144,000</u>
Expenses		
Drivers' salaries	70,000	70,000
Out-of-pocket expenses	39,000	39,000
Depreciation	<u>32,000</u>	<u>0</u>
Total expenses	<u>141,000</u>	<u>109,000</u>
Net income	<u>\$ 3,000</u>	
Net annual cash flow		<u>\$ 35,000</u>

***6 vans X 10 trips X 5 students X 30 weeks X \$16.00 = \$144,000.**

(b) (1) Annual rate of return = $\$3,000 \div \frac{(\$96,000 + 0)}{2} = 6.25\%$.

(2) Cash payback period = $\$96,000 \div \$35,000 = 2.74$ years.

(c) Present value of net annual cash flows ($\\$35,000 \times 2.48685^*$)	= \$87,040
Present value of investment ($\\$96,000 \times 1.00000$)	= <u>96,000</u>
Negative net present value	<u>\$ (8,960)</u>

***3 years at 10%, PV of ordinary annuity.**

- (d) The computations show that the commuter service is not a wise investment for these reasons: (1) annual net income will only be \$3,000, (2) the annual rate of return (6.25%) is less than the cost of capital (10%), (3) the cash payback period is 91% ($2.74 \div 3$) of the useful life of the vans, and (4) net present value is negative.**

PROBLEM 26-6B

(a)

(1) Option A

	<u>Cash Flows</u>	X	<u>8% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$ 31,000	X	5.74664	=	\$178,146
Present value of cost to rebuild	(50,000)	X	.73503	=	(36,752)
Present value of salvage value	0	X	.54027	=	0
					<u>\$141,394</u>
Capital investment					<u>135,000</u>
Net present value					<u>\$ 6,394</u>

- (2) The internal rate of return can be approximated by finding the discount rate that results in a net present value of approximately zero. This is accomplished with a 9% discount rate.

	<u>Cash Flows</u>	X	<u>9% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$ 31,000	X	5.53482	=	\$171,579
Present value of cost to rebuild	(50,000)	X	.70843	=	(35,422)
Present value of salvage value	0	X	.50187	=	0
					<u>\$136,157</u>
Capital investment					<u>135,000</u>
Net present value					<u>\$ 1,157</u>

(1) Option B

	<u>Cash Flows</u>	X	<u>8% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$40,000	X	5.74664	=	\$229,866
Present value of cost to rebuild	0	X	.73503	=	0
Present value of salvage value	10,000	X	.54027	=	5,403
					<u>\$235,269</u>
Capital investment					<u>203,000</u>
Net present value					<u>\$ 32,269</u>

PROBLEM 26-6B (Continued)

(2) Internal rate of return on Option B is 12%, as calculated below:

	<u>Cash Flows</u>	X	<u>12% Discount Factor</u>	=	<u>Present Value</u>
Present value of net annual cash flows	\$40,000	X	4.96764	=	\$198,706
Present value of cost to rebuild	0	X	.63552	=	0
Present value of salvage value	10,000	X	.40388	=	4,039
					<u>\$202,745</u>
Capital investment					<u>203,000</u>
Net present value					<u>\$ (255)</u>

(b) Option A has a lower net present value than Option B, and also a lower internal rate of return. Therefore, Option B is the preferred project.

Note to instructor: Solutions will vary by student. This is an extensive, comprehensive problem whose solution will depend on the assumptions and computations in previous parts. While the variety of assumptions that may be made by students are valuable in themselves, requiring students to project information as required in a real-life scenario, you may wish to assist students (and reduce grading requirements) by providing students with sufficient data from the suggested solution to ensure consistency of responses (see data provided in parts (b), (c), (e), (j), (l), and (n)).

You may also wish to consider assigning one or more selected parts of this problem, depending on time available. One suggested solution follows:

(a), (b), and (c)

Item	Product Costs			Period Costs
	Direct Materials	Direct Labor	Manufacturing Overhead	
Rent on production equipment			\$ 6,000	
Insurance on building			1,500	
Raw materials (plastics, polystyrene, etc.)	\$70,000			
Utility costs			900	
Office supplies				\$ 300
Wages		\$70,000		
Depreciation on office equipment				800
Miscellaneous			1,000	
Administrative salaries				15,500
Property taxes on building			400	
Advertising for helmets				11,000
Sales commissions				40,000
Depreciation on building			1,500	
Professional fees				500
Research and development				10,000
Totals	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$11,300</u>	<u>\$78,100</u>

COMPREHENSIVE PROBLEM (Continued)

(d) Assume first month of operations is December 2010.

BICYCLE HELMET COMPANY Cost of Goods Manufactured Schedule For the Month Ended December 31, 2010

Work in process, December 1		\$	0
Direct materials			
Raw materials inventory (Dec. 1)	\$	0	
Raw materials purchased		<u>70,000</u>	
Total raw materials available for use		70,000	
Less: Raw materials inventory (Dec. 31)		<u>0</u>	
Direct materials used			\$70,000
Direct labor			70,000
Manufacturing overhead			
Rent on production equipment	\$	6,000	
Insurance on building		1,500	
Utility costs		900	
Miscellaneous		1,000	
Property taxes on building		400	
Depreciation on building		<u>1,500</u>	
			<u>11,300</u>
Total manufacturing costs			<u>151,300</u>
Total cost of work in process			151,300
Less: Work in process (Dec. 31)			<u>0</u>
Cost of goods manufactured			<u>\$151,300</u>

(e) Assume 10,000 helmets will be produced the first month of operations.

Production cost per helmet = \$151,300 [from (d)] ÷ 10,000 = \$15.13.

(f) The Bicycle Helmet Company likely will use a process cost system. Process costing is used when large volumes of a homogenous product are produced on a continuous basis. The Bicycle Helmet Company would

COMPREHENSIVE PROBLEM (Continued)

find it useful, using a process costing system, to identify the cost of each production batch of helmets. If the Bicycle Helmet Company moves to produce additional helmets (e.g., baseball, hockey, football, etc., or different models of bicycle helmets), it may find it useful to move to a job order costing system.

- (g) In a process cost system, manufacturing costs (direct materials, direct labor, and manufacturing overhead) are assigned to Work in Process accounts for each department or process. As helmets are completed, the cost of the work in process is transferred out to Finished Goods Inventory using an inventory allocation method such as FIFO. Later, when the helmets are sold, their cost is transferred to Cost of Goods Sold.

(h)	Item	Variable Costs	Fixed Costs	Total Costs
	Rent on production equipment		\$ 6,000	\$ 6,000
	Insurance on building		1,500	1,500
	Raw materials (plastics, polystyrene, etc.)	\$ 70,000		70,000
	Utility costs		900	900
	Office supplies		300	300
	Wages	70,000		70,000
	Depreciation on office equipment		800	800
	Miscellaneous	1,000		1,000
	Administrative salaries		15,500	15,500
	Property taxes on building		400	400
	Advertising for helmets		11,000	11,000
	Sales commissions	40,000		40,000
	Depreciation on building		1,500	1,500
	Professional fees		500	500
	Research and development		10,000	10,000
	Total	<u>\$181,000</u>	<u>\$48,400</u>	<u>\$229,400</u>

- (i) Unit variable cost = $\$181,000 \div 10,000$ helmets
= \$18.10 per helmet

COMPREHENSIVE PROBLEM (Continued)

- (j) Estimated number of helmets sold in December 2010 = 8,000 helmets (good Christmas sales!)

Projected wholesale selling price = \$40 per helmet

$$\begin{aligned}\text{Contribution margin per unit} &= \text{Unit selling Price} - \text{Unit variable costs} \\ &= \$40.00 - \$18.10 \\ &= \$21.90\end{aligned}$$

$$\begin{aligned}\text{Contribution margin ratio} &= \text{Contribution margin per unit} \div \text{Unit selling price} \\ &= \$21.90 \div \$40.00 \\ &= 54.75\%\end{aligned}$$

- (k) Breakeven point in dollars: Sales dollars at the breakeven point = Variable costs as a percentage of unit selling price X Sales dollars at the breakeven point) + Total fixed costs

$$\begin{aligned}X &= 0.4525X + \$48,400 \\ 0.5475X &= \$48,400 \\ X &= \$88,402\end{aligned}$$

*\$18.10 ÷ \$40.00 = 0.4525 variable costs as a percentage of unit selling price

Breakeven point in units: Unit selling price X Sales volume = (Variable cost per unit X Sales volume) + Total fixed costs

$$\begin{aligned}\$40X &= \$18.10X + \$48,400 \\ \$21.90X &= \$48,400 \\ X &= 2,210 \text{ helmets}\end{aligned}$$

- (l) **BICYCLE HELMET COMPANY**
Sales Budget
For the Month Ended December 31, 2010

Expected unit sales	8,000
Unit selling price	X \$40
Total sales	<u>\$320,000</u>

COMPREHENSIVE PROBLEM (Continued)

BICYCLE HELMET COMPANY Production Budget For the Month Ended December 31, 2010

Expected unit sales.....	8,000
Add: Desired ending finished goods units.....	<u>2,000</u>
Total required units.....	10,000
Less: Beginning finished goods units	<u>0</u>
Required production units	<u>10,000</u>

BICYCLE HELMET COMPANY Direct Materials Budget For the Month Ended December 31, 2010

Units to be produced	10,000
Direct materials per unit.....	<u>X 1kg</u>
Total kilograms needed for production.....	10,000
Add: Desired ending direct materials (kilograms)	<u>0</u>
Total materials required	10,000
Less: Beginning direct materials (kilograms).....	<u>0</u>
Direct materials purchases	10,000
Cost per kilogram	<u>X \$7</u>
Total cost of direct materials purchases	<u>\$70,000</u>

BICYCLE HELMET COMPANY Direct Labor Budget For the Month Ended December 31, 2010

Units to be produced	10,000
Direct labor time (hours) per unit.....	<u>X 0.35</u>
Total required direct labor hours	3,500
Direct labor cost per hour.....	<u>X \$20</u>
Total direct labor cost	<u>\$70,000</u>

COMPREHENSIVE PROBLEM (Continued)

BICYCLE HELMET COMPANY
Selling and Administrative Expense Budget
For the Month Ended December 31, 2010

Variable (sales commissions).....	\$40,000
Fixed	
(\$300 + \$800 + \$15,500 + \$11,000 + \$500 + \$10,000)	<u>38,100</u>
Total	
[Note: Equals total of period costs from part (b)].....	<u>\$78,100</u>

BICYCLE HELMET COMPANY
Budgeted Income Statement
For the Month Ended December 31, 2010

Sales (8,000 X \$40).....	\$320,000
Cost of goods sold [8,000 X \$15.13 (from part (e))]	<u>121,040</u>
Gross profit	198,960
Selling and administrative expenses	<u>78,100</u>
Income from operations.....	120,860
Income tax expense (45%)	<u>54,387</u>
Net income.....	<u>\$ 66,473</u>

(m)

BICYCLE HELMET COMPANY
Cash Budget
For the Month Ended December 31, 2010

Beginning cash balance	\$ 0
Add: Receipts	
Collections from customers	
(75% of sales, \$320,000).....	<u>240,000</u>
Total receipts.....	<u>240,000</u>
Total available cash.....	<u>240,000</u>

COMPREHENSIVE PROBLEM (Continued)

BICYCLE HELMET COMPANY
Cash Budget (Continued)
For the Month Ended December 31, 2010

Less: Disbursements	
Direct materials	52,500
(75% of direct materials purchases, \$70,000)	
Direct labor	70,000
Manufacturing overhead	9,800
(\$11,300 from part (d) – \$1,500 depreciation)	
Selling and administrative expenses	
(\$78,100 from part (I) – \$800 depreciation).....	77,300
Total disbursements.....	<u>209,600</u>
Excess (deficiency) of available cash over	
disbursements	30,400
Financing: Borrowings	<u>0</u>
Ending cash balance	<u>\$ 30,400</u>

(n) **BICYCLE HELMET COMPANY**
Monthly Flexible Manufacturing Costs Budget
For the Month Ended December 31, 2010

Activity level			
Production in units	<u>8,000</u>	<u>9,000</u>	<u>10,000</u>
Variable costs			
Raw materials (\$7)	\$ 56,000	\$ 63,000	\$ 70,000
Wages (\$7)	56,000	63,000	70,000
Miscellaneous (\$0.10)	<u>800</u>	<u>900</u>	<u>1,000</u>
Total variable (\$14.10)	112,800	126,900	141,000
Fixed costs			
Total fixed costs [as per (b)]	<u>10,300*</u>	<u>10,300</u>	<u>10,300</u>
Total costs	<u>\$123,100</u>	<u>\$137,200</u>	<u>\$151,300</u>

*\$11,300 [from (b)] – \$1,000 miscellaneous (variable cost).

COMPREHENSIVE PROBLEM (Continued)

- (o) Potential causes of a materials variance: price paid for plastics or any other raw materials included in helmet; new employees; faulty equipment**

Potential causes of a direct labor variance: change in pay rates; inexperienced employees; faulty equipment

Potential causes of a manufacturing overhead variance: change in use of supplies; increase in indirect costs such as fuel, heat, etc.

- (p) Cash payback period: Cost of capital investment ÷ Annual cash inflow**

$\$720,000 \div [\$30,400 \text{ (from part (m))} \times 12 \text{ months}] = 2 \text{ years (1.97 years).}$

- (q) Relevant nonquantitative factors: availability of skilled workforce; location, including cost of shipping to market(s); availability of investment incentives; market surveys; ease of entry; and laws and regulations.**

(a)

	Retain Old Machine		Purchase New Machine		Net Income Increase (Decrease)
Sales	<u>\$4,000,000</u>	(1)	<u>\$4,800,000</u>	(2)	<u>\$ 800,000</u>
Costs and expenses					
Cost of goods sold	3,000,000	(3)	3,456,000	(4)	(456,000)
Selling expenses	540,000		594,000		(54,000)
Admin. expenses	400,000		452,000		(52,000)
Depreciation	<u>36,000</u>		<u>180,000</u>	(5)	<u>(144,000)</u>
Total costs and expenses	<u>3,976,000</u>		<u>4,682,000</u>		<u>(706,000)</u>
Net income	<u>\$ 24,000</u>		<u>\$ 118,000</u>		<u>\$ 94,000</u>

(1) $10,000 \times \$100 \times 4 \text{ years} = \$4,000,000$.(2) $\$4,000,000 \times 120\% = \$4,800,000$.(3) $\$4,000,000 \times (100\% - 25\%) = \$3,000,000$.(4) $\$4,800,000 \times (100\% - 28\%) = \$3,456,000$.(5) $\$170,000 + \$4,000 + \$6,000 = \$180,000$.(b) Annual rate of return = 32.78%; $(\$118,000 \div 4) \div [(\$180,000 + \$0) \div 2]$ (c) Cash payback period = 2.42 yrs.; $\$180,000 \div [(\$118,000 + \$180,000) \div 4]$

(d) Net present value =

	Amount	15% Discount Factor	Present Value
Net annual cash flows	\$ 74,500*	2.85498	\$212,696
Capital investment	\$180,000	1.00000	180,000
Positive net present value			<u>\$ 32,696</u>

* $(\$118,000 + \$180,000) \div 4$

(e) The new machine should be purchased. The incremental analysis shows that net income will increase from \$24,000 to \$118,000 over the four years with the new machine, which results in a 32.78% annual rate of return. The payback period of 2.42 years meets management's minimum requirement of three years. In addition, net present value is \$32,696 positive, which indicates that the investment meets the required minimum rate of return of 15%.

(a)

	<u>Make</u>	<u>Buy— Silver Star</u>	<u>Buy— Sigma</u>
<i>Sales Revenue</i>	<u>\$ 13.00</u>	<u>\$ 13.00</u>	<u>\$ 13.00</u>
<i>Variable Manufacturing Cost:</i>			
Circuit Board	\$ 1.00	\$ 0	\$ 0
Plastic Case	0.50	0	0
Alarms	0.60	0	0
Labor	3.00	0	0
Overhead	0.40	0	0
<i>Purchase Cost</i>	0	9.00	5.00
<i>Fixed Manufacturing Cost*:</i>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
Total Manufacturing Cost	<u>\$ 6.50</u>	<u>\$ 10.00</u>	<u>\$ 6.00</u>
Profit per Unit	<u>\$ 6.50</u>	<u>\$ 3.00</u>	<u>\$ 7.00</u>
Total Profit	\$32,500	\$15,000	\$35,000

*The \$5,000 cost that will continue to be incurred, even if the product is not manufactured, divided by the 5,000 units.

The company will make the most profit if the clocks are purchased from Sigma Company. The company will make \$2,500 less if the clocks are manufactured by Barone. The company will make \$20,000 less if the clocks are purchased from Silver Star.

- (b) There are several important nonfinancial factors described in the case. Other factors might be identified as well. The factors described are: The company is having serious difficulty manufacturing the clocks. Therefore, it would probably be willing to have someone else manufacture the clocks, even if it cost more to do so. The most promising company appears to be Sigma; however, there is a serious question about Sigma's ability to remain in business. However, the company could purchase just this one order from Sigma, and then continue to search for another manufacturer, or stop manufacturing the clocks. Silver Star's stringent requirements for preferred customer status, in the form of large sales requirements, appear to limit the possibilities for Barone to use it as a supplier. However, if Barone does desire to continue to offer the clocks because of their popularity, then perhaps Silver Star could be used in the future.

- (c) Many answers are possible, depending upon each group's assessment of the seriousness of the issues mentioned in (b). One answer would be: The company should use Sigma to manufacture the Kmart order. After that the company should not offer the clocks any longer. Especially since the clocks are no longer profitable, it does not seem like a good idea to keep spending money to modify the process.**

- (a) Before building the special-order new ceiling fans, company management must consider the effect of the new lines on current production capacity, existing and available avenues of distribution, the effect on manufacturing efficiency, the effect on sales of current lines of product, and the supply of materials and labor.**
- (b) Incremental analysis would provide a financial comparison of income with the special-order new ceiling fans to income without the new line of fans.**

Answers to this problem will vary depending on the year chosen by the student. The following solution is provided for the year ended July 29, 2007.

- (a) The company reported purchases of plant assets of \$334 million in 2007, and \$309 million in 2006.
- (b) The company reported interest rates on long-term debt ranging from a low of 4.88% to a high of 8.88%.
- (c) The internal rate of return is calculated as:

$(\$334,000,000 / \$45,000,000) = 7.42$. Using table 2 in Appendix C, a PV factor of 7.42 translates to a return of approximately 6%.

To: Angie Baden, Supervisor

From: _____, Assistant Chief Accountant

Subject: Retain or Replace Equipment

The quantitative analysis pertaining to this management decision is as follows:

Cost of hoist: $\$15,000 + \$2,900 + \$820 = \$18,720$.

Net annual cash flow:

Number of extra mufflers: 4×52 weeks

(a) 208

Contribution margin per muffler ($\$65 - \$35 - \$10$)

(b) \$ 20

Net annual cash flow (a) $\times$ (b)

\$4,160

Cash payback = $\$18,720 \div \$4,160 = 4.5$ years.

Average investment: $(\$18,720 + \$1,080) \div 2 = \$9,900$.

Annual depreciation: $(\$18,720 - \$1,080) \div 5 = \$3,528$.

Annual net income: \$ 4,160 – \$3,528 = \$632.

Average annual rate of return: $\$632 \div \$9,900 = 6.4\%$ (rounded).

These data indicate that the cash payback period is 90% of the new asset's useful life. As you know, management prefers for the payback period to be less than 50% of the asset's useful life.

The data also show a 6.4% annual rate of return. This is a marginally acceptable return even though it is below management's minimum rate of return of 10%.

I believe the workers will be pleased to have the new equipment. It should make their work much easier. In addition, the new equipment is not a threat to a reduction in the present work force.

BYP 26-5 (Continued)

I believe it also will be possible to feature the hoist as the latest in modern technology in our advertising. This could bring in more customers.

It is my recommendation that management buy the new hoist.

(a) The stakeholders are:

- ▶ **Yourself.**
- ▶ **Your wife and children.**
- ▶ **Employees of Devito Company.**
- ▶ **Citizens of the town where the company is presently located.**
- ▶ **The stockholders of Devito Company.**

(b) The ethical issue is:

- ▶ **An employee's personal interests and those of his co-workers and the town versus the best interests of the company and its stockholders.**

(c) The student should recognize a conflict of interest. The company should hire an outside consultant to study and evaluate such a move rather than place one of its employees in this dilemma.

You should rise above the conflict of interest and perform an objective economic evaluation, but also be prepared to remind management, should they be so oblivious, of the consequences to the employees and the town. Knowingly preparing a biased or false report is unethical.

- (a) Chronic homelessness is defined as being on the streets for a year or more.**
- (b) Homelessness costs cities money because the chronic homeless have frequent jail time, shelter costs, emergency room visits and hospital stays. Some costs per city per homeless person are: New York \$40,000; Dallas \$50,000; San Diego \$150,000.**
- (c) The first step is to try to identify the size of the problem by doing street counts. From this count, benchmarks can be set, enabling a reward system for meeting goals. Next is to identify what the homeless people want. What do they think they need to help them address their problem? They typically want adequate housing with some privacy.**
- (d) It has been estimated that in New York this approach costs about \$22,000 per year. New York has documented a 88% success rate (defined as not returning to the streets for five years).**
- (e) In terms of incremental analysis, two alternatives are to either continue with the current situation, with the costs presented in part (b) or to implement the approach outlined in part (d). From a purely financial perspective the approach in (d) appears to have significant merit also (d) does not even take into account the intangible benefits of improving the quality of life for this segment of the population.**

SOLUTIONS TO CAMPUS CYCLE SHOP A BUSINESS PAPERS PRACTICE SET

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50

[illegible]

PURCHASES JOURNAL

20xx Date		Account Credited	Invoice #	Terms	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.
1	Sept 4	Terry Cycling Apparel	230	2/10, n/30	✓	4 5 0
2	8	Gita Bicycles & Frames	993	n/30	✓	2 2 6 0
3	9	Tandems USA	1108	1/15, n/30	✓	4 5 0 0
4	17	Tuffy Bicycle Company	1417	2/10, n/30	✓	3 4 0 0
5	18	Bicycle Transit Authority	837	2/10, n/30	✓	2 2 0 0
6	22	Gita Bicycles & Frames	1023	n/30	✓	6 5 6 0
7	23	Bicycle Transit Authority	898	2/10, n/30	✓	8 2 5
8	24	Tandems USA	1132	1/15, n/30	✓	9 5 0
9	24	Tuffy Bicycle Company	1511	2/10, n/30	✓	1 3 0 0
10	28	Avanti Racers, Inc.	910	2/10, n/30	✓	2 0 0 0
11	28	Terry Cycling Apparel	309	2/10, n/30	✓	7 4 0
12						2 5 1 8 5
13						(120) / (201)
14						
15						
16						
17						
18						
19						
20						

CASH RECEIPTS JOURNAL

CR4

Date 20xx		Account Credited	Ref.	Cash Dr.			
1	Sept	1	Repair Service Revenue	420	9	5	4
2		2	Billy's Bike and Skate Rental	✓	2	3	0
3		3	Evergreen Parks and Recreation	✓	2	7	4
4		3	Twin Cities Bicycle Tours	✓	3	9	2
5		8	Repair Service Revenue	420	2	4	8
6		8	Evergreen Parks and Recreation	✓	3	3	2
7		9	Billy's Bike and Skate Rental	✓	2	1	5
8		10	State University Cycling Club	✓	3	5	7
9		10	Twin Cities Bicycle Tours	✓	4	1	1
10		15	Repair Service Revenue	420	7	4	8
11		16	State University Cycling Club	✓	2	0	5
12		17	Normal Park District	✓	8	0	0
13		21	Bicycle Rental Revenue	805	3	0	0
14		22	Repair Service Revenue	420	3	8	2
15		24	Normal Park District	✓	1	9	6
16		28	Twin Cities Bicycle Tours	✓	2	2	5
17		28	Evergreen Parks and Recreation	✓	3	9	2
18		30	Repair Service Revenue	420	4	4	4
19					6	1	2
20					0	7	
21					(101)		
22							
23							
24							
25							
26							
27							
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42							
43							

CASH RECEIPTS JOURNAL

CR4

	Sales Discounts Debit			Accounts Receivable Credit			Sales Credit			Other Accounts Credit			Cost of Goods Sold Dr. Merchandise Inventory Cr.				
1							8	5	4	0	1	0	0	5	9	7	8
2			4	7		2	3	5	0								
3			5	6		2	8	0	0								
4			8	0		4	0	0	0								
5										1	5	0	0	9	8	0	1
6			6	8		3	4	0	0								0
7			4	4		2	2	0	0								5
8			7	3		3	6	5	0								0
9			8	4		4	2	0	0								5
10										5	8	8	0	1	6	0	4
11			4	2		2	1	0	0								1
12						8	0	0									1
13											3	0	0				6
14										3	2	0	0	6	2	5	2
15			4	0		2	0	0	0								4
16			4	6		2	3	0	0								1
17			8	0		4	0	0	0								6
18										4	1	7	0	2	7	2	2
19			6	6	0	3	3	8	0	0	2	3	2	4	7	7	9
20			(414)			(112)			(401)			(X)			(505/120)		
21																	
22																	
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CASH PAYMENTS JOURNAL

CP9

20xx Date	Check No.	Payee	Account Debited
1			
2			
3			
4			
5			
6			
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8			
9			
10			
11			
12			
13			
14			
15			
16			
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44			
45			

CASH PAYMENTS JOURNAL

CP9

Ref.	Other Accounts Dr.	Office Salaries Expense Dr.	Store Salaries Expense Dr.	Accounts Payable Dr.	Merchandise Inventory Cr.	Cash Cr.	
✓				6 2 0 0		6 2 0 0	1
✓				3 0 0 0	6 0	2 9 4 0	2
✓				2 0 0 0	4 0	1 9 6 0	3
✓				8 0 0	1 6	7 8 4	4
212	5 0 0	3 0 0	6 0 0			1 4 0 0	5
306	1 2 0 0					1 2 0 0	6
✓				2 8 0 0	5 6	2 7 4 4	7
✓				1 2 0 0	1 2	1 1 8 8	8
✓				1 6 0 0	3 2	1 5 6 8	9
		3 0 0	7 0 0			1 0 0 0	10
127	2 4 8					2 4 8	11
✓				4 5 0	9	4 4 1	12
610	1 2 5					1 2 5	13
		3 0 0	8 0 0			1 1 0 0	14
120	1 1 0					1 1 0	15
306	3 0 0 0					3 0 0 0	16
623	4 3 0					4 3 0	17
✓				4 5 0 0	4 5	4 4 5 5	18
✓				3 4 0 0	6 8	3 3 3 2	19
125	1 6 5					1 6 5	20
		3 0 0	9 0 0			1 2 0 0	21
✓				1 0 0 0		1 0 0 0	22
✓				2 2 0 0	4 4	2 1 5 6	23
120	3 0 0					3 0 0	24
732	1 3 5					1 3 5	25
729	2 0 0 0					2 0 0 0	26
732	1 0 0					1 0 0	27
	8 3 1 3	1 2 0 0	3 0 0 0	2 9 1 5 0	3 8 2	4 1 2 8 1	28
	(X)	(727)	(626)	(201)	(120)	(101)	29
							30
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							44
							45

GENERAL JOURNAL

J5

Date 20xx	Account Titles and Explanation	Ref.	Debit			Credit		
1	Sept 4							1
2							3 0 0	2
3								3
4								4
5								5
6	15							6
7							2 5 0	7
8								8
9								9
10								10
11	24						2 0 0	11
12								12
13							2 0 0	13
14								14
15							1 4 0	15
16								16
17								17
18	30						1 0	18
19								19
20								20
21								21
22								22
23								23
24								24
25								25
26								26
27								27
28								28
29								29
30								30
31								31
32								32
33								33
34								34
35								35
36								36
37								37
38								38
39								39
40								40

GENERAL JOURNAL

J6

Date 20xx	Account Titles and Explanation	Ref.	Debit			Credit		
1	Sept 30	-ADJUSTING ENTRIES-						1
2								2
3	(a)	Office Supplies Expense			6 1 5			3
4		Office Supplies					6 1 5	4
5		(To record office supplies used in September)						5
6								6
7	(b)	Store Supplies Expense			7 9 3			7
8		Store Supplies					7 9 3	8
9		(To record store supplies used in September)						9
10								10
11	(c)	Insurance Expense			2 0 0			11
12		Prepaid Insurance					2 0 0	12
13		(To record insurance expense for September)						13
14								14
15	(d)	Office Salaries Expense			1 8 0			15
16		Store Salaries Expense			5 5 0			16
17		Salaries Payable					7 3 0	17
18		(To accrue salaries earned in September)						18
19								19
20	(e)	Depreciation Expense -- Store Equipment			4 0 0			20
21		Accumulated Depreciation -- Store Equipment					4 0 0	21
22		(To record September depreciation expense)						22
23								23
24	(f)	Depreciation Expense -- Delivery Van			3 0 0			24
25		Accumulated Depreciation -- Delivery Van					3 0 0	25
26		(To record September depreciation expense)						26
27								27
28								28
29	(g)	Interest Expense			1 2 0			29
30		Interest Payable					1 2 0	30
31		(To accrue interest on Notes Payable at 6% for one month)						31
32								32
33	(h)	Cost of Goods Sold			2 5 0			33
34		Merchandise Inventory					2 5 0	34
35		(To adjust to merchandise inventory on hand)						35
36								36
37								37
38								38
39								39
40								40

GENERAL JOURNAL

J7

Date 20xx	Account Titles and Explanation	Ref.	Debit			Credit		
1 Sept	--- CLOSING ENTRIES ---							1
2 30	Sales	401	5	1	5	2	0	2
3	Repair Service Revenue	420	4	4	7	7		3
4	Bicycle Rental Revenue	805	3	0	0			4
5	Income Summary	350				5	6	5
6	(To close credit accounts to Income Summary)					2	9	7
7								6
8 30	Income Summary	350	4	7	4	9	2	7
9	Sales Returns and Allowances	412						8
10	Sales Discounts	414						9
11	Cost of Goods Sold	505				3	6	10
12	Advertising Expense	610				1	2	11
13	Depreciation Expense---Store Equipment	615				5		12
14	Depreciation Expense---Delivery Van	616				4	0	13
15	Repairs and Maintenance---Delivery Van	623				3	0	14
16	Store Salaries Expense	626				4	3	15
17	Store Supplies Expense	629				5	0	16
18	Insurance Expense	722				7	9	17
19	Office Salaries Expense	727				3		18
20	Office Supplies Expense	728				2	0	19
21	Rent Expense	729				0	0	20
22	Utilities Expense	732				2	3	21
23	Bank Service Charge	746				5		22
24	Interest Expense	905				1	0	23
25	(To close debit accounts to Income Summary)					2	0	24
26								25
27 30	Income Summary	350	8	8	0	5		26
28	Greg Jordan, Capital	301						27
29	(To close Income Summary account and transfer profit to owner's capital)					8	8	28
30						0	5	29
31								30
32 30	Greg Jordan, Capital	301	4	2	0	0		31
33	Greg Jordan, Drawing	306						32
34	(To close drawing account to owner's capital)					4	2	33
35						0	0	34
36								35
37								36
38								37
39								38
40								39
								40

GENERAL LEDGER

Cash ACCOUNT NO. 101

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 1	Balance	✓					8 3 0 0	
30		CR4	6 1 2 0 7				6 9 5 0 7	
30		CP9			4 1 2 8 1		2 8 2 2 6	
30		J5			1 0		2 8 2 1 6	

Accounts Receivable ACCOUNT NO. 112

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 1	Balance	✓					2 3 7 0 0	
4		J5			3 0 0		2 3 4 0 0	
24		J5			2 0 0		2 3 2 0 0	
30		S5	2 8 2 3 0				5 1 4 3 0	
30		CR4			3 3 8 0 0		1 7 6 3 0	

Merchandise Inventory ACCOUNT NO. 120

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 1	Balance	✓					3 2 9 9 0	
15		J5			2 5 0		3 2 7 4 0	
18		CP9	1 1 0				3 2 8 5 0	
24		J5	1 4 0				3 2 9 9 0	
29		CP9	3 0 0				3 3 2 9 0	
30		P8	2 5 1 8 5				5 8 4 7 5	
30		S5			1 9 7 6 1		3 8 7 1 4	
30		CP9			3 8 2		3 8 3 3 2	
30		CR4			1 6 3 0 3		2 2 0 2 9	
30		J6			2 5 0		2 1 7 7 9	

Office Supplies ACCOUNT NO. 125

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 1	Balance	✓					9 5 0	
24		CP9	1 6 5				1 1 1 5	
30		J6			6 1 5		5 0 0	

Store Supplies ACCOUNT NO. 127

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 1	Balance	✓					9 7 0	
11		CP9	2 4 8				1 2 1 8	
30		J6			7 9 3		4 2 5	

GENERAL LEDGER

Prepaid Insurance

ACCOUNT NO. 130

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 1	Balance	✓			3 6 0 0
30		J6		2 0 0	3 4 0 0

Store Equipment

ACCOUNT NO. 153

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 1	Balance	✓			3 8 4 0 0

Accumulated Depreciation -- Store Equipment

ACCOUNT NO. 154

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
Sept 1	Balance	✓			2 2 4 0 0
30		J6		4 0 0	2 2 8 0 0

Delivery Van

ACCOUNT NO. 165

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 1	Balance	✓			2 1 6 0 0

Accumulated Depreciation -- Delivery Van

ACCOUNT NO. 166

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
Sept 1	Balance	✓			1 3 2 0 0
30		J6		3 0 0	1 3 5 0 0

Accounts Payable

ACCOUNT NO. 201

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
Sept 1	Balance	✓			1 7 6 0 0
15		J5	2 5 0		1 7 3 5 0
30		P8		2 5 1 8 5	4 2 5 3 5
30		CP9	2 9 1 5 0		1 3 3 8 5

GENERAL LEDGER

Salaries Payable

ACCOUNT NO. 212

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 1	Balance	✓					5	0
3		CP9		5	0	0		0
30		J6				7	3	0

Interest Payable

ACCOUNT NO. 230

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 1	Balance	✓					4	0
30		J6			1	2	0	5

Notes Payable

ACCOUNT NO. 265

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 1	Balance	✓					2	4
							0	0
							0	0

Greg Jordan, Capital

ACCOUNT NO. 301

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 1	Balance	✓					5	2
30		J7			8	8	0	6
30		J7	4	2	0	0	5	7
							0	1

Greg Jordan, Drawing

ACCOUNT NO. 306

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 4		CP9	1	2	0	0	1	2
18		CP9	3	0	0	0	4	2
30		J7			4	2	0	0

Income Summary

ACCOUNT NO. 350

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 30		J7			5	6	2	9
30		J7	4	7	4	9	2	5
30		J7	8	8	0	5	0	

GENERAL LEDGER

Sales							ACCOUNT NO. 401	
20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 30		S5			28	230	28	230
30		CR4			23	290	51	520
30		J7	51	520				0

Sales Returns and Allowances							ACCOUNT NO. 412	
20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 4		J5	3	00			3	00
24		J5	2	00			5	00
30		J7			5	00		0

Sales Discounts							ACCOUNT NO. 414	
20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 30		CR4	6	60			6	60
30		J7				6	60	0

Repair Service Revenue							ACCOUNT NO. 420	
20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
Sept 1		CR4			1	000	1	000
8		CR4			9	80	1	980
15		CR4			1	600	3	580
22		CR4			6	25	4	205
30		CR4			2	72	4	477
30		J7	4	477				0

Cost of Goods Sold							ACCOUNT NO. 505	
20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 24		J5			1	40	(	140)
30		S5	1	9761			1	9621
30		CR4	1	6303			3	5924
30		J6	2	50			3	6174
30		J7			3	6174		0

GENERAL LEDGER

Advertising Expense

ACCOUNT NO. 610

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 14		CP9	1	2 5			1	2 5
30		J7			1	2 5		0

Depreciation Expense -- Store Equipment

ACCOUNT NO. 615

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 30		J6	4	0 0			4	0 0
30		J7			4	0 0		0

Depreciation Expense -- Delivery Van

ACCOUNT NO. 616

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 30		J6	3	0 0			3	0 0
30		J7			3	0 0		0

Repairs and Maintenance -- Delivery Van

ACCOUNT NO. 623

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 21		CP9	4	3 0			4	3 0
30		J7			4	3 0		0

Store Salaries Expense

ACCOUNT NO. 626

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 30		CP9	3	0 0 0			3	0 0 0
30		J6	5	5 0			3	5 5 0
30		J7			3	5 5 0		0

Store Supplies Expense

ACCOUNT NO. 629

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
Sept 30		J6	7	9 3			7	9 3
30		J7			7	9 3		0

GENERAL LEDGER

Insurance Expense

ACCOUNT NO. 722

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 30		J6	2 0 0		2 0 0
30		J7		2 0 0	0

Office Salaries Expense

ACCOUNT NO. 727

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 30		CP9	1 2 0 0		1 2 0 0
30		J6	1 8 0		1 3 8 0
30		J7		1 3 8 0	0

Office Supplies Expense

ACCOUNT NO. 728

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 30		J6	6 1 5		6 1 5
30		J7		6 1 5	0

Rent Expense

ACCOUNT NO. 729

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 29		CP9	2 0 0 0		2 0 0 0
30		J7		2 0 0 0	0

Utilities Expense

ACCOUNT NO. 732

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 29		CP9	1 3 5		1 3 5
30		CP9	1 0 0		2 3 5
30		J7		2 3 5	0

Bank Service Charge

ACCOUNT NO. 746

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
Sept 30		J5	1 0		1 0
30		J7		1 0	0

GENERAL LEDGER

Bicycle Rental Revenue

ACCOUNT NO. 805

20xx Date	Item	Ref.	Debit			Credit			Balance Credit			
Sept 21		CR4				3	0	0		3	0	0
30		J7										0

Interest Expense

ACCOUNT NO. 905

20xx Date	Item	Ref.	Debit			Credit			Balance Debit		
Sept 30		J6	1	2	0				1	2	0
30		J7				1	2	0			0

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

NAME		Avanti Racers, Inc.											
ADDRESS		323 West Seventh St., San Pedro, CA 90731											
20xx Date		Item		Ref.		Debit			Credit			Balance	
Aug 24		Invoice 815		P7						2 0 0 0			2 0 0 0
31		Invoice 898		P7						1 6 0 0			3 6 0 0
Sept 2				CP9				2 0 0 0					1 6 0 0
9				CP9				1 6 0 0					0
28		Invoice 910		P8						2 0 0 0			2 0 0 0

NAME		Bicycle Transit Authority	
ADDRESS		418 S. Varney St., Seattle, WA 98124	

20xx Date	Item	Ref.	Debit	Credit	Balance
Aug 31	Invoice 741	P7		2 8 0 0	2 8 0 0
Sept 4		CP9	2 8 0 0		0
18	Invoice 837	P8		2 2 0 0	2 2 0 0
23	Invoice 898	P8		8 2 5	3 0 2 5
28		CP9	2 2 0 0		8 2 5

NAME		Gita Bicycles & Frames	
ADDRESS		500 Third Ave., Claremont, CA 91711	

20xx Date	Item	Ref.	Debit	Credit	Balance
Aug 5	Invoice 811	P7		6 2 0 0	6 2 0 0
Sept 1		CP9	6 2 0 0		0
8	Invoice 993	P8		2 2 6 0	2 2 6 0
15		J5	2 5 0		2 0 1 0
22	invoice 1023	P8		6 5 6 0	8 5 7 0
28		CP9	1 0 0 0		7 5 7 0

NAME		Tandems USA	
ADDRESS		331 Somerville Ave., Somerville, MA 02143	

20xx Date	Item	Ref.	Debit	Credit	Balance
Aug 25	Invoice 1021	P7		1 2 0 0	1 2 0 0
Sept 4		CP9	1 2 0 0		0
9	Invoice 1108	P8		4 5 0 0	4 5 0 0
24	Invoice 1132	P8		9 5 0	5 4 5 0
22		CP9	4 5 0 0		9 5 0

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

NAME Terry Cycling Apparel

ADDRESS 1264 E. Walnut St., Gardena, CA 90248

20xx Date	Item	Ref.	Debit			Credit			Balance				
Aug 28	Invoice 214	P7					8	0	0		8	0	0
Sept 3		CP9				8	0	0					0
4	Invoice 230	P8							4	5	0		4 5 0
14		CP9				4	5	0					0
28	Invoice 309	P8							7	4	0		7 4 0

NAME Tuffy Bicycle Company

ADDRESS 102 LaGrange St., Greenville, IN 84329

20xx Date	Item	Ref.	Debit			Credit			Balance		
Aug 28	Invoice 1312	P7						3 0 0 0			3 0 0 0
Sept 2		CP9									0
17	Invoice 1417	P8		3 0 0 0				3 4 0 0			3 4 0 0
24	Invoice 1511	P8						1 3 0 0			4 7 0 0
23		CP9									1 3 0 0
				3 4 0 0							

Bank Reconciliation

September 30, 20xx

[illegible][illegible]

CAMPUS CYCLE SHOP

Worksheet

For the Month Ended September 30, 20xx

	Acct. No.	Account Title	Trial Balance			
			Debit		Credit	
1	101	Cash		28216		1
2	112	Accounts Receivable		17630		2
3	120	Merchandise Inventory		22029		3
4	125	Office Supplies		11115		4
5	127	Store Supplies		1218		5
6	130	Prepaid Insurance		3600		6
7	153	Store Equipment		38400		7
8	154	Accumulated Depreciation -- Store Equipment			22400	8
9	165	Delivery Van		21600		9
10	166	Accumulated Depreciation -- Delivery Van			13200	10
11	201	Accounts Payable			13385	11
12	212	Salaries Payable				12
13	230	Interest Payable			400	13
14	265	Notes Payable			24000	14
15	301	Greg Jordan, Capital			52410	15
16	306	Greg Jordan, Drawing		4200		16
17	401	Sales			51520	17
18	412	Sales Returns and Allowances		500		18
19	414	Sales Discounts		660		19
20	420	Repair Service Revenue			4477	20
21	505	Cost of Goods Sold		35924		21
22	610	Advertising Expense		125		22
23	615	Depreciation Expense -- Store Equipment				23
24	616	Depreciation Expense -- Delivery Van				24
25	623	Repairs and Maintenance -- Delivery Van		430		25
26	626	Store Salaries Expense		3000		26
27	629	Store Supplies Expense				27
28	722	Insurance Expense				28
29	727	Office Salaries Expense		1200		29
30	728	Office Supplies Expense				30
31	729	Rent Expense		2000		31
32	732	Utilities Expense		235		32
33	746	Bank Service Charge		10		33
34	805	Bicycle Rental Revenue			300	34
35	905	Interest Expense				35
36				182092	182092	36
37		Net Income				37
38						38
39						39
40						40

Adjustments				Adjusted Trial Balance		Income Statement		Balance Sheet	
Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
1				28216				28216	
2				17630				17630	
3	h	250		21779				21779	
4	a	615		500				500	
5	b	793		425				425	
6	c	200		3400				3400	
7				38400				38400	
8	e	400			22800				22800
9				21600				21600	
10	f	300			13500				13500
11					13385				13385
12	d	730			730				730
13	g	120			520				520
14					24000				24000
15					52410				52410
16				4200				4200	
17					51520		51520		
18				500		500			
19				660		660			
20					4477		4477		
21	h	250		36174		36174			
22				125		125			
23	e	400		400		400			
24	f	300		300		300			
25				430		430			
26	d	550		3550		3550			
27	b	793		793		793			
28	c	200		200		200			
29	d	180		1380		1380			
30	a	615		615		615			
31				2000		2000			
32				235		235			
33				10		10			
34					300		300		
35	g	120		120		120			
36	3408		3408	183642	183642	47492	56297	136150	127345
37						8805			8805
38						56297	56297	136150	136150
39									
40									

Schedule of Accounts Receivable

September 30, 20xx

[illegible]

Schedule of Accounts Payable

September 30, 20xx

[illegible]

Income Statement

[illegible]

Campus Cycle Shop

Owner's Equity Statement

For the Month Ended September 30, 20xx

1	Greg Jordan, Capital, September 1											\$	5	2	4	1	0
2	Add: Net Income for September												8	8	0	5	
3													6	1	2	1	5
4																	
5	Less: Drawings												4	2	0	0	
6	Greg Jordan, Capital, September 30											\$	5	7	0	1	5
7																	
8																	
9																	
10																	
11																	
12																	
13																	
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36																	
37																	
38																	
39																	
40																	

Campus Cycle Shop

Balance Sheet

September 30, 20xx

Assets																									
1																									
2	Current Assets																								
3	Cash																						\$ 2 8 2 1 6		
4	Accounts Receivable																						1 7 6 3 0		
5	Merchandise Inventory																						2 1 7 7 9		
6	Office Supplies																						5 0 0		
7	Store supplies																						4 2 5		
8	Prepaid Insurance																						3 4 0 0		
9	Total Current Assets																						7 1 9 5 0		
10																									
11	Property, Plant and Equipment																								
12	Store Equipment																								
13	Less: Accumulated Depreciation - Store Equipment																								
14																									
15	Delivery Van																								
16	Less: Accumulated Depreciation - Delivery Van																								
17	Total Property , Plant and Equipment																								
18																									
19	Total Assets																								
20																									
21	Liabilities and Owner's Equity																								
22																									
23	Current Liabilities																								
24	Accounts Payable																								
25	Salaries Payable																								
26	Interest Payable																								
27	Total Current Liabilities																								
28																									
29	Long-Term Liabilities																								
30	Notes Payable																								
31	Total Liabilities																								
32																									
33	Owner's Equity																								
34	Greg Jordan, Capital																								
35	Total Liabilities and Owner's Equity																								
36																									
37																									
38																									
39																									

Post-Closing Trial Balance

[illegible]

SOLUTIONS TO HERITAGE HOME FURNITURE A NARRATIVE PRACTICE SET

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SALES JOURNAL

S9

20xx Date	Account Debited	Inv. No.	Ref.	Accts. Rec. Dr. Sales Cr.			Cost of Goods Sold Dr. Merchandise Inventory Cr.		
1	May 7	Willington Hotels	✓	9	1	0	0	6	3
2	10	Carthage Community College	✓	5	5	0	0	3	8
3	13	Salem Hotel	✓	1	2	0	0	8	4
4	20	Wallton Apartments, Inc.	✓	2	8	3	5	1	9
5	21	Tollson Motel	✓	1	1	0	0	7	7
6	23	Carthage Community College	✓	1	7	5	0	1	2
7	28	Wallton Apartments, Inc.	✓	9	8	0	0	6	8
8	28	Willington Hotels	✓	2	5	0	0	1	7
9	31	Salem Hotel	✓	3	9	4	5	2	7
10				15	7	0	0	11	0
11				(112/401)			(505/120)		
12									
13									
14									
15									

PURCHASES JOURNAL

P 12

20xx Date	Account Credited	Terms	Ref.	Merchandise Inventory Dr. Accounts Payable Cr.		
1	May 7	Lexis Fine Furniture	✓	2	2	0
2	20	Lexis Fine Furniture	✓	1	9	0
3	21	Georgia Carpet Mills	✓	1	5	8
4	24	American Mattress Co.	✓	1	0	8
5	28	Cabbot Recliners, Inc.	✓	1	1	5
6	28	Austin Cabinet Makers	✓	6	0	0
7				8	5	3
8				(120)/(201)		
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

CASH RECEIPTS JOURNAL

CR 10

Date 20xx			Ref.	Bank Deposit				Cash Dr.			
1	May 1	Walton Apartments, Inc.	✓					8	8	2	0
2	3	Cash sales						5	1	2	0
3	3	Bank Deposit		6	0	0	2	0			
4	6	Bell and Gateway, CPAs	✓					1	4	7	0
5	6	Tollson Motel	✓					5	0	9	6
6	6	Carthage Community College	✓					2	0	0	9
7	8	Willington Hotels	✓					9	0	1	6
8	9	Bell and Gateway, CPAs	✓					1	9	6	0
9	10	Cash Sales						3	1	0	0
10	10	Bank Deposit		5	0	5	5	1			
11	13	Walton Apartments, Inc.	✓					4	4	0	0
12	14	Brent Davis Capital	301					5	0	0	0
13	16	Willington Hotels	✓					8	9	1	8
14	17	Cash Sales						2	1	7	5
15	17	Bank Deposit		4	0	0	6	8			
16	20	Carthage Community College	✓					5	3	9	0
17	23	Salem Hotel	✓					1	1	7	6
18	24	Cash Sales						3	5	2	0
19	24	Bank Deposit		5	2	3	5	0			
20	29	Other Receivables (Truck Sale)	119					4	5	0	0
21	30	Dorothy Knight	✓					6	5	0	
22	31	Cash Sales						2	1	8	0
23	31	Bank Deposit		2	6	9	5	0			
24				22	9	9	3	9			
25				(x)				(101)			
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											

CASH RECEIPTS JOURNAL

CR 10

	Sales Discounts Dr.			Accounts Receivable Cr.			Sales Cr.			Maxicard Sales Cr.			Other Accounts Cr.			Cost of Goods Sold Dr. Merchandise Inventory Cr.							
1		1	8	0		9	0	0	0									1					
2									4	3	2	0	0			8	0	0	2				
3																			3				
4			3	0				1	5	0	0								4				
5			1	0	4			5	2	0	0								5				
6				4	1			2	0	5	0								6				
7			1	8	4			9	2	0	0								7				
8				4	0			2	0	0	0								8				
9												2	7	5	0	0	3	5	0	9			
10																			10				
11								4	4	0	0								11				
12														5	0	0	0		12				
13			1	8	2			9	1	0	0								13				
14												1	4	7	5	0	7	0	0	14			
15																			15				
16			1	1	0			5	5	0	0								16				
17			2	4	0		1	2	0	0	0								17				
18												3	0	0	0	0	5	2	0	18			
19																			19				
20																4	5	0	0	20			
21								6	5	0									21				
22											1	4	6	0	0	7	2	0	0	22			
23																			23				
24			1	1	1	1		6	0	6	0	0	13	0	0	5	0	3	0	9	0	0	24
25			(414)			(112)			(401)			(401)			(X)			(505/120)			25		
26																				26			
27																				27			
28																				28			
29																				29			
30																				30			
31																				31			
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CASH PAYMENTS JOURNAL

CP 11

20xx Date	Check No.	Payee	Account Debited
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CASH PAYMENTS JOURNAL

CP 11

Ref.	Other Accounts Dr.			Advertising Expense Dr.			Salaries Payable Dr.			Accounts Payable Dr.			Merchandise Inventory Cr.			Cash Cr.		
✓										4 0 0 0						4 0 0 0		1
624		5 5 0														5 5 0		2
✓										5 0 0						5 0 0		3
120		2 9 0 0														2 9 0 0		4
✓										1 6 7 0 0			3 3 4			1 6 3 6 6		5
✓										8 3 5 0			1 6 7			8 1 8 3		6
							2 4 3 0 9									2 4 3 0 9		7
214		1 1 9 0 0																8
216		1 6 1 0 0																9
✓										6 8 0 0						6 8 0 0		10
✓										4 8 0 0			9 6			4 7 0 4		11
				1 5 0 0												1 5 0 0		12
✓										2 2 2 0 0			2 2 2			2 1 9 7 8		13
✓										1 9 1 0 0			3 8 2			1 8 7 1 8		14
120		2 2 0 0														2 2 0 0		15
624		8 2 0														8 2 0		16
				3 5 0 0												3 5 0 0		17
306		1 0 0 0 0														1 0 0 0 0		18
105		1 0 0																19
125		7 5																20
127		8 0		2 5												2 8 0		21
905		9 0 0																22
275		1 1 0 0														2 0 0 0		23
732		1 3 7 5														1 3 7 5		24
							2 1 1 8 8									2 1 1 8 8		25
		4 8 1 0 0		5 0 2 5			4 5 4 9 7			8 2 4 5 0			1 2 0 1			1 7 9 8 7 1		26
		(X)		(610)			(212)			(201)			(120)			(101)		27
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J 12

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GENERAL JOURNAL

J 13

Date 20xx	Account Titles and Explanation	Ref.	Debit	Credit
May 29	Depreciation Expense - Delivery Trucks	617	3 0 0	
	Accumulated Depreciation-Delivery Trucks	164		3 0 0
	Record depreciation on truck			
29	Other Receivables	119	4 5 0 0	
	Accumulated Depreciation-Delivery Trucks	164	1 4 9 0 0	
	Delivery Trucks	163		1 7 5 0 0
	Gain on Disposal of Truck	812		1 9 0 0
	Record sale of truck			
30	Accounts Receivable/Dorothy Knight	112 ✓	6 5 0	
	Allowance for Doubtful Accounts	113		6 5 0
	Reinstate account written off			
31	Store Salaries Expense	626	1 7 7 5 0	
	Office Salaries Expense	727	1 1 4 0 0	
	FICA Taxes Payable	214		2 3 3 2
	Federal Income Tax Withholding Payable	216		5 6 3 0
	Salaries Payable	212		2 1 1 8 8
	Accrue salaries			
31	Payroll Taxes Expense	730	3 4 1 1	
	FICA Taxes Payable	214		2 3 3 2
	Federal Unemployment Tax Payable	224		2 0 4
	State Unemployment Tax Payable	226		8 7 5
	Accrue payroll taxes			

GENERAL JOURNAL

J 14

Date 20xx	Account Titles and Explanation	Ref.	Debit	Credit
May	Adjusting Entries:			
(a)	Credit Card Expense	613	1 2 3 6	
	Maxicard Payable	240		1 2 3 6
	To accrue credit card fees (\$30,900 x 4%)			
(b)	Maxicard Payable	240	1 5 3 0	
	Miscellaneous Expense	735	1 2 0	
	Cash	101		1 6 5 0
	Bank Reconciliation			

GENERAL JOURNAL

J 15

Date 20xx	Account Titles and Explanation	Ref.	Debit		Credit	
1 May						1
2 (c) 31	Bad Debt Expense	612	1 4 5 3			2
3	Allowance For Doubtful Accounts	113			1 4 5 3	3
4	To accrue bad debt expense $(\$135,100 \times 3\%) - \$2,600$					4
5						5
6 (d) 31	Interest Receivable	118	2 1			6
7	Interest Revenue	820			2 1	7
8	To accrue interest on note $(\$6,000 \times 6\% \times 21/360)$					8
9						9
10 (e) 31	Cost of Goods Sold	505	2 1 1 9			10
11	Merchandise Inventory	120			2 1 1 9	11
12	Inventory adjustment $(\$158,044 - \$155,925)$					12
13						13
14 (f) 31	Office Supplies Expense	728	2 2 2 5			14
15	Office Supplies	125			2 2 2 5	15
16	Office Supplies used $(\$4,275 - \$2,050)$					16
17						17
18	Store Supplies Expense	629	1 5 0 5			18
19	Store Supplies	127			1 5 0 5	19
20	Store Supplies used $(\$2,580 - \$1,075)$					20
21						21
22 (g) 31	Insurance Expense	722	5 1 0			22
23	Prepaid Insurance	130			5 1 0	23
24	Record expired insurance					24
25						25
26 (h) 31	Depreciation Expense - Buildings	713	1 5 0 0			26
27	Depreciation Expense - Office Equipment	715	6 0 0			27
28	Depreciation Expense - Delivery Trucks	617	1 7 5 0			28
29	Accumulated Depreciation - Buildings	146			1 5 0 0	29
30	Accumulated Depreciation - Office Equipment	152			6 0 0	30
31	Accumulated Depreciation - Delivery Trucks	164			1 7 5 0	31
32	Record depreciation					32
33						33
34 (i) 31	Interest Expense	905	5 0			34
35	Interest Payable	230			5 0	35
36	Accrue interest on note $(\$15,000 \times 4\% \times 1/12)$					36
37						37
38						38
39						39
40						40

GENERAL JOURNAL

J 16

Date 20xx	Account Titles and Explanation	Ref.	Debit			Credit		
1 May	Closing Entries:							
2 31	Sales	401	31	8	5	0		
3	Gain on Disposal of Truck	812	1	9	0	0		
4	Interest Revenue	820			2	1		
5	Income Summary	350					32	0 5 7 1
6	To close credit balances							
7								
8 May 31	Income Summary	350	31	6	0	5	3	
9	Sales Returns & Allowances	412						1 0 0 0
10	Sales Discounts	414						1 1 1 1
11	Cost of Goods Sold	505					22	4 4 7 4
12	Advertising Expense	610						5 0 2 5
13	Bad Debt Expense	612						1 4 5 3
14	Credit Card Expense	613						1 2 3 6
15	Depreciation Expense - Delivery Trucks	617						2 0 5 0
16	Repairs and Maintenance - Delivery Trucks	624						1 3 7 0
17	Store Salaries Expense	626					4	2 7 5 0
18	Store Supplies Expense	629						1 5 0 5
19	Depreciation Expense - Buildings	713						1 5 0 0
20	Depreciation Expense - Office Equipment	715						6 0 0
21	Insurance Expense	722						5 1 0
22	Office Salaries Expense	727					1	9 5 0 0
23	Office Supplies Expense	728						2 2 5
24	Payroll Taxes Expense	730						7 2 9 9
25	Utilities Expense	732						1 3 7 5
26	Miscellaneous Expense	735						1 2 0
27	Interest Expense	905						9 5 0
28	To close debit balances							
29								
30 May 31	Income Summary	350			4	5	1	8
31	Brent Davis, Capital	301						4 5 1 8
32	To close Income Summary							
33								
34 May 31	Brent Davis, Capital	301			1	0	0	0
35	Brent Davis, Drawing	306						1 0 0 0
36	To close Drawing							
37								
38								
39								
40								

GENERAL LEDGER

Cash

ACCOUNT NO. 101

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					26940	
31		CR10	229939				256879	
31		CP11			179871		77008	
31		J14			1650		75358	

Petty Cash

ACCOUNT NO. 105

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					200	
30		CP11		100				300

Accounts Receivable

ACCOUNT NO. 112

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					45000	
10		J12			6000		39000	
23		J12			1000		38000	
24		J12			650		37350	
30		J13		650			38000	
31		S9	157700				195700	
31		CR10			60600		135100	

Allowance for Doubtful Accounts

ACCOUNT NO. 113

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					2600	
24		J12		650			1950	
30		J13			650		2600	
31		J15			1453		4053	

Notes Receivable

ACCOUNT NO. 115

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					15000	
10		J12	6000				21000	

GENERAL LEDGER

Interest Receivable

ACCOUNT NO. 118

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					1 0 0	
31		J15		2 1			1 2 1	

Other Receivables

ACCOUNT NO. 119

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 29		J13	4 5 0 0				4 5 0 0	
29		CR10			4 5 0 0			0

Merchandise Inventory

ACCOUNT NO. 120

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					29 1 2 0 0	
31		P12	8 5 3 0 0				37 6 5 0 0	
31		S9			11 0 3 9 0		26 6 1 1 0	
31		CR10			11 2 6 6 5		15 3 4 4 5	
31		CP11			1 2 0 1		15 2 2 4 4	
10		CP11	2 9 0 0				15 5 1 4 4	
21		CP11	2 2 0 0				15 7 3 4 4	
23		J12	7 0 0				15 8 0 4 4	
31		J15			2 1 1 9		15 5 9 2 5	

Office Supplies

ACCOUNT NO. 125

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					4 2 0 0	
30		CP11	7 5				4 2 7 5	
31		J15			2 2 2 5		2 0 5 0	

Store Supplies

ACCOUNT NO. 127

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					2 5 0 0	
30		CP11	8 0				2 5 8 0	
31		J15			1 5 0 5		1 0 7 5	

GENERAL LEDGER

Prepaid Insurance

ACCOUNT NO. 130

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 1	Balance	✓			5 2 0 0
31		J15		5 1 0	4 6 9 0

Land

ACCOUNT NO. 140

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 1	Balance	✓			8 5 9 0 0

Buildings

ACCOUNT NO. 145

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 1	Balance	✓			35 0 0 0 0

Accumulated Depreciation - Buildings

ACCOUNT NO. 146

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			20 0 0 0 0
31		J15		1 5 0 0	20 1 5 0 0

Office Equipment

ACCOUNT NO. 151

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 1	Balance	✓			5 5 0 0 0

Accumulated Depreciation - Office Equipment

ACCOUNT NO. 152

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			3 2 0 0 0
31		J15		6 0 0	3 2 6 0 0

GENERAL LEDGER

Delivery Trucks

ACCOUNT NO. 163

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 1	Balance	✓					53500	0
2		J12	42000				95500	0
2		J12			36000		59500	0
29		J13			17500		42000	0

Accumulated Depreciation - Delivery Trucks

ACCOUNT NO. 164

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					23600	0
2		J12	9000				14600	0
29		J13			300		14900	0
29		J13	14900					0
31		J15			1750		1750	0

Notes Payable

ACCOUNT NO. 200

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 2	Balance	J12			15000		15000	0

Accounts Payable

ACCOUNT NO. 201

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					60250	0
31		P12			85300		145550	0
31		CP11	82450				63100	0

Salaries Payable

ACCOUNT NO. 212

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 15		J12			24309		24309	0
31		J13			21188		45497	0
31		CP11	45497					0

GENERAL LEDGER

FICA Taxes Payable

ACCOUNT NO. 214

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			11 900
15		J12		2 681	14 581
15		J12		2 681	17 262
31		J13		2 332	19 594
31		J13		2 332	21 926
15		CP11	1 1900		10 026

Federal Income Tax Withholding Payable

ACCOUNT NO. 216

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			16 100
15		J12		6 110	22 210
31		J13		5 630	27 840
15		CP11	1 6100		11 740

Federal Unemployment Tax Payable

ACCOUNT NO. 224

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			620
15		J12		1 66	786
31		J13		204	990

State Unemployment Tax Payable

ACCOUNT NO. 226

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			1 900
15		J12		1 041	2 941
31		J13		875	3 816

Interest Payable

ACCOUNT NO. 230

20xx Date	Item	Ref.	Debit	Credit	Balance Credit
May 1	Balance	✓			800
31		J15		50	850

GENERAL LEDGER

Maxicard Payable

ACCOUNT NO. 240

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					4	0 0
31		J14			1	2 3 6	1	6 3 6
31		J14	1	5 3 0			1	0 6

Mortgage Payable

ACCOUNT NO. 275

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					20	0 0 0 0
30		CP11	1	1 0 0			19	8 9 0 0

Brent Davis, Capital

ACCOUNT NO. 301

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 1	Balance	✓					38	4 5 7 0
14		CR10			5	0 0 0	38	9 5 7 0
31		J16			4	5 1 8	39	4 0 8 8
31		J16	1	0 0 0 0			38	4 0 8 8

Brent Davis, Drawing

ACCOUNT NO. 306

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 29		CP11	1	0 0 0 0			1	0 0 0 0
31		J16			1	0 0 0 0		0

Income Summary

ACCOUNT NO. 350

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 31		J16			32	0 5 7 1	32	0 5 7 1
31		J16	31	6 0 5 3			4	5 1 8
31		J16	4	5 1 8				0

GENERAL LEDGER

Sales

ACCOUNT NO. 401

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 31		S9			15	7 7 0 0	15	7 7 0 0
31		CR10			13	0 0 5 0	28	7 7 5 0
31		CR10			3	0 9 0 0	31	8 6 5 0
31		J16	31	8 6 5 0				0

Sales Returns and Allowances

ACCOUNT NO. 412

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 23		J12	1	0 0 0			1	0 0 0
31		J16			1	0 0 0		0

Sales Discounts

ACCOUNT NO. 414

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		CR10	1	1 1 1			1	1 1 1
31		J16			1	1 1 1		0

Cost of Goods Sold

ACCOUNT NO. 505

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 23		J12			7	0 0	(	7 0 0)
31		S9	11	0 3 9 0			10	9 6 9 0
31		CR10	11	2 6 6 5			22	2 3 5 5
31		J15	2	1 1 9			22	4 4 7 4
31		J16			22	4 4 7 4		0

Advertising Expense

ACCOUNT NO. 610

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		CP11	5	0 2 5			5	0 2 5
31		J16			5	0 2 5		0

Bad Debt Expense

ACCOUNT NO. 612

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		J15	1	4 5 3			1	4 5 3
31		J16			1	4 5 3		0

GENERAL LEDGER

Credit Card Expense

ACCOUNT NO. 613

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		J14	1	2 3 6			1	2 3 6
		J16			1	2 3 6		0

Depreciation Expense - Delivery Trucks

ACCOUNT NO. 617

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 29		J13	3	0 0			3	0 0
		J15	1	7 5 0			2	0 5 0
		J16			2	0 5 0		0

Repairs and Maintenance - Delivery Trucks

ACCOUNT NO. 624

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 6		CP11	5	5 0			5	5 0
		CP11	8	2 0			1	3 7 0
		J16			1	3 7 0		0

Store Salaries Expense

ACCOUNT NO. 626

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 15		J12	2	5 0 0 0			2	5 0 0 0
		J13	1	7 5 0			4	2 7 5 0
		J16			4	2 7 5 0		0

Store Supplies Expense

ACCOUNT NO. 629

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		J15	1	5 0 5			1	5 0 5
		J16			1	5 0 5		0

Depreciation Expense - Buildings

ACCOUNT NO. 713

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		J15	1	5 0 0			1	5 0 0
		J16			1	5 0 0		0

GENERAL LEDGER

Depreciation Expense - Office Equipment

ACCOUNT NO. 715

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 31		J15	6 0 0		6 0 0
		J16		6 0 0	0

Insurance Expense

ACCOUNT NO. 722

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 31		J15	5 1 0		5 1 0
		J16		5 1 0	0

Office Salaries Expense

ACCOUNT NO. 727

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 15		J12	8 1 0 0		8 1 0 0
		J13	1 1 4 0 0		1 9 5 0 0
		J16		1 9 5 0 0	0

Office Supplies Expense

ACCOUNT NO. 728

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 31		J15	2 2 2 5		2 2 2 5
		J16		2 2 2 5	0

Payroll Taxes Expense

ACCOUNT NO. 730

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 15		J12	3 8 8 8		3 8 8 8
		J13	3 4 1 1		7 2 9 9
		J16		7 2 9 9	0

Utilities Expense

ACCOUNT NO. 732

20xx Date	Item	Ref.	Debit	Credit	Balance Debit
May 30		CP11	1 3 7 5		1 3 7 5
		J16		1 3 7 5	0

GENERAL LEDGER

Miscellaneous Expense

ACCOUNT NO. 735

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 31		J14	1	2 0			1	2 0
		J16			1	2 0		0

Gain on Disposal of Truck

ACCOUNT NO. 812

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 29		J13			1	9 0 0	1	9 0 0
		J16	1	9 0 0				0

Interest Revenue

ACCOUNT NO. 820

20xx Date	Item	Ref.	Debit		Credit		Balance Credit	
May 31		J15			2	1	2	1
		J16		2	1			0

Interest Expense

ACCOUNT NO. 905

20xx Date	Item	Ref.	Debit		Credit		Balance Debit	
May 30		CP11	9	0 0			9	0 0
		J15		5 0				9 5 0
		J16			9	5 0		0

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

NAME

Bell and Gateway, CPAs

109 Westview Dr. Belmont, OH 45830

[illegible]

NAME Carthage Community College

ADDRESS
1927 Herbert Street, Streetor, OH 45831

[illegible]NAME
Dorothy Knight

ADDRESS 9007 Neely Rd., Fulton, OH 45849

[illegible]

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

NAME
Jake Lansing

ADDRESS 291 Hightower, Oxford, OH 45861

[illegible]NAME
Salem Hotel

ADDRESS 1412 St. Louis Street, Oxford, OH 45861

[illegible]NAME
Tollson Motel

ADDRESS
1943 Ester Place, Riding, OH 45863

[illegible]

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

NAME	Wallton Apartments, Inc.
ADDRESS	304 Colter Ave., Oxford, OH 45861

[illegible]

NAME	Willington Hotels
ADDRESS	1200 Hovey, Oxford, OH 45861

[illegible]

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

NAME		American Mattress Co.											
ADDRESS		1212 Northgate Street, St.Louis, MO 60662											
20xx		Item		Ref.		Debit			Credit			Balance	
Date													
Apr 18		n/30		P11					6 8 0 0			6 8 0 0	
May 17				CP11		6 8 0 0						- 0 -	
24		n/30		P12					1 0 8 0 0			1 0 8 0 0	

NAME		Austin Cabinet Makers		
ADDRESS		231 Deerner Ave., Austin, TX 70808		

20xx Date	Item	Ref.	Debit	Credit	Balance
Apr 22	2/30, n/60	P11		1 9 1 0 0	1 9 1 0 0
May 20		CP11	1 9 1 0 0		- 0 -
28	2/30, n/60	P12		6 0 0 0	6 0 0 0

NAME		Cabbot Recliners, Inc.		
ADDRESS		111 Third Street, New York, NY 10016		

20xx Date	Item	Ref.	Debit	Credit	Balance
Apr 19	n/30	P11		4 0 0 0	4 0 0 0
May 3		CP11	4 0 0 0		- 0 -
28	1/15, n/30	P12		1 1 5 0 0	1 1 5 0 0

NAME		Georgia Carpet Mills		
ADDRESS		333 State Street, Atlanta, GA 43210		

20xx Date	Item	Ref.	Debit	Credit	Balance
Apr 18	2/30, n/60	P11		4 8 0 0	4 8 0 0
May 20		CP11	4 8 0 0		- 0 -
21	2/10, n/60	P12		1 5 8 0 0	1 5 8 0 0

ACCOUNTS PAYABLE SUBSIDIARY LEDGER

NAME		Lexis Fine Furniture									
ADDRESS		310 Eastland Drive, Salem, NC 19432									
20xx Date		Item		Ref.		Debit		Credit		Balance	
Apr 14		2/30, n/60		P11				1 6 7 0 0		1 6 7 0 0	
May 7		1/15, n/30		P12				2 2 2 0 0		3 8 9 0 0	
13				CP11		1 6 7 0 0				2 2 2 0 0	
20				CP11		2 2 2 0 0				- 0 -	
20		3/15, n/30		P12				1 9 0 0 0		1 9 0 0 0	

NAME		Old Hickory Furniture, Inc.	
ADDRESS		117 East Ave., Bellmore, MA 38402	

20xx Date	Item	Ref.	Debit	Credit	Balance
Apr 30	2/15, n/30	P11		8 3 5 0	8 3 5 0
May 14		CP11	8 3 5 0		- 0 -

NAME		Wallace Office Superstore	
ADDRESS		Vetmore Ave., Baton Rouge, LA 70212	

20xx Date	Item	Ref.	Debit	Credit	Balance
Apr 28	n/15	P11		5 0 0	5 0 0
May 8		CP11	5 0 0		- 0 -

Accounts Receivable Schedule

May 31, 20xx						
1	Carthage Community College		1	7	5	0
2	Salem Hotel		4	4	4	5
3	Tollson Motel		1	0	0	0
4	Wallton Apartments, Inc.		3	8	1	5
5	Willington Hotels		2	5	0	0
6						
7	Total Accounts Receivable		1	3	5	1
8						
9						
10						
11						
12						
13						

Accounts Payable Schedule

[illegible]

HERITAGE HOME FURNITURE

Worksheet

For the Month Ended May 31, 20xx

	Acct. No.	Account Title.	Trial Balance	
			Debit	Credit
1	101	Cash	77008	
2	105	Petty Cash	300	
3	112	Accounts Receivable	135100	
4	113	Allowance for Doubtful Accounts		2600
5	115	Notes Receivable	21000	
6	118	Interest Receivable	100	
7	119	Other Receivables		
8	120	Merchandise Inventory	158044	
9	125	Office Supplies	4275	
10	127	Store Supplies	2580	
11	130	Prepaid Insurance	5200	
12	140	Land	85900	
13	145	Buildings	350000	
14	146	Accumulated Depreciation—Buildings		200000
15	151	Office Equipment	55000	
16	152	Accumulated Depreciation—Office Equipment		32000
17	163	Delivery Trucks	42000	
18	164	Accumulated Depreciation—Delivery Trucks		
19	200	Notes Payable		15000
20	201	Accounts Payable		63100
21	212	Salaries Payable		
22	214	FICA Taxes Payable		10026
23	216	Federal Income Tax Withholding Payable		11740
24	224	Federal Unemployment Tax Payable		990
25	226	State Unemployment Tax Payable		3816
26	230	Interest Payable		800
27	240	Maxicard Payable		400
28	275	Mortgage Payable		198900
29	301	Brent Davis, Capital		389570
30	306	Brent Davis, Drawing	10000	
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

Adjustments				Adjusted Trial Balance		Income Statement		Balance Sheet	
Debit		Credit		Debit	Credit	Debit	Credit	Debit	Credit
1		b	1650	75358				75358	
2				300				300	
3				135100				135100	
4		c	1453		4053				4053
5				21000				21000	
6	d	21		121				121	
7									
8		e	2119	155925				155925	
9		f	2225	2050				2050	
10		f	1505	1075				1075	
11		g	510	4690				4690	
12				85900				85900	
13				350000				350000	
14		h	1500		201500				201500
15				55000				55000	
16		h	600		32600				32600
17				42000				42000	
18		h	1750		1750				1750
19					15000				15000
20					63100				63100
21									
22					10026				10026
23					11740				11740
24					990				990
25					3816				3816
26		i	50		850				850
27	b	1530	a	1236	106				106
28					198900				198900
29					389570				389570
30				10000				10000	
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									

HERITAGE HOME FURNITURE

Worksheet

For the Month Ended May 31, 20xx

Acct. No.	Account Title.	Trial Balance				
		Debit		Credit		
1	401 Sales			318650		1
2	412 Sales Returns and Allowances	1000				2
3	414 Sales Discounts	1111				3
4	505 Cost of Goods Sold	222355				4
5	610 Advertising Expense	5025				5
6	612 Bad Debt Expense					6
7	613 Credit Card Expense					7
8	617 Depreciation Expense - Delivery Trucks	300				8
9	624 Repairs and Maintenance - Delivery Trucks	1370				9
10	626 Store Salaries Expense	42750				10
11	629 Store Supplies Expense					11
12	713 Depreciation Expense - Buildings					12
13	715 Depreciation Expense - Office Equipment					13
14	722 Insurance Expense					14
15	727 Office Salaries Expense	19500				15
16	728 Office Supplies Expense					16
17	730 Payroll Taxes Expense	7299				17
18	732 Utilities Expense	1375				18
19	735 Miscellaneous Expense					19
20	812 Gain on Disposal of Truck		1900			20
21	820 Interest Revenue					21
22	905 Interest Expense	900				22
23		1 249492	1 249492			23
24	Net Income					24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40

Bank Reconciliation

[illegible]

HERITAGE HOME FURNITURE
Depreciation Schedule for Delivery Trucks

Item:	Delivery Truck	Acquisition Date:	May 2, 20xx
Cost:	\$42,000	Estimated Salvage:	\$4,000
Estimated Life:	4 years	Depreciation Method:	Declining balance, double the straight-line rate
<u>Year</u>	<u>Beginning Book Value</u>	<u>x Depreciation Rate</u>	<u>= Annual Depreciation</u>
(20xx) 1	\$ 42,000	50%	\$21,000
2	21,000	50%	10,500
3	10,500	50%	5,250
4	5,250	50%	1,250 (limit)

Depreciation for the month of May: Year 1 Depreciation x 1 / 12
 $\$21,000 \times 1 / 12 = \$1,750$

Owner's Equity Statement

For the Month Ended May 31, 20xx

[illegible]

May 31, 20xx

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May 31, 20xx

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HERITAGE HOME FURNITURE

Post-Closing Trial Balance

May 31, 20xx

Acct. No.	Account Title	Debit				Credit			
		7	5	3	5	8			
1	101 Cash								1
2	105 Petty Cash					3	0	0	2
3	112 Accounts Receivable					13	5	1	3
4	113 Allowance for Doubtful Accounts								4
5	115 Notes Receivable					2	1	0	5
6	118 Interest Receivable					1	2	1	6
7	120 Merchandise Inventory					15	5	9	7
8	125 Office Supplies					2	0	5	8
9	127 Store Supplies					1	0	7	9
10	130 Prepaid Insurance					4	6	9	10
11	140 Land					8	5	9	11
12	145 Buildings					35	0	0	12
13	146 Accumulated Depreciation—Buildings								13
14	151 Office Equipment					5	5	0	14
15	152 Accumulated Depreciation—Office Equipment								15
16	163 Delivery Trucks					4	2	0	16
17	164 Accumulated Depreciation—Delivery Trucks								17
18	200 Notes Payable								18
19	201 Accounts Payable								19
20	214 FICA Taxes Payable								20
21	216 Federal Income Tax Withholding Payable								21
22	224 Federal Unemployment Tax Payable								22
23	226 State Unemployment Tax Payable								23
24	230 Interest Payable								24
25	240 Maxicard Payable								25
26	275 Mortgage Payable								26
27	301 Brent Davis, Capital								27
28						92	8	5	28
29						1	9		29
30									30
31									31
32									32
33									33
34									34
35									35
36									36
37									37
38									38
39									39
40									40
41									41
42									42
43									43
44									44
45									45
46									46
47									47
48									48