

FRANK WOOD'S BUSINESS ACCOUNTING

HONG KONG EDITION

SECOND EDITION

SOLUTIONS MANUAL

2



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Business accounting 2

Question 1–2A

(a) *Kam's Books*

Bills Payable							
20X7			\$	20X7			\$
Apr	21	Bank	4,160	Jan	21	C Bellamy & Co	4,160
"	21	T Victor Ltd: Bill dishonoured	2,900	"	21	T Victor Ltd	2,900
			<u>7,060</u>				<u>7,060</u>

Bank							
				20X7			\$
				Apr	21	Bills payable	4,160

C Bellamy & Co							
20X7			\$	20X7			\$
Jan	21	Bills payable	4,160	Jan	21	Purchases	4,160
			<u>4,160</u>				<u>4,160</u>

T Victor Ltd							
20X7			\$	20X7			\$
Jan	21	Bills payable	2,900	Jan	21	Purchases	2,900
			<u>2,900</u>				<u>2,900</u>
				Apr	21	Bills payable	2,900
				"	28	Noting charges	10

Noting Charges							
20X7			\$				
Apr	28	T Victor Ltd	10				

(b) *Victor's Books*

Bills Receivable							
20X7			\$	20X7			\$
Jan	21	P Kam	2,900	Jan	29	Bank	2,900
			<u>2,900</u>				<u>2,900</u>

Bank							
20X7			\$	20X7			\$
Jan	29	Bills receivable	2,900	Jan	29	Discounting charges	110
				Apr	21	P Kam: Dishonoured bill	2,900
				"	28	P Kam: Noting charges	10

1-2A con't

P Kam							
20X7			\$	20X7			\$
Jan	21	Sales	<u>2,900</u>	Jan	21	Bills receivable	<u>2,900</u>
Apr	21	Bank: Dishonoured bill	2,900				
"	28	Bank: Noting charges	10				

Discounting Charges							
20X7			\$				
Jan	29	Bank	110				

(c) Bellamy's Books

Bills Receivable							
20X7			\$	20X7			\$
Jan	21	P Kam	<u>4,160</u>	Apr	21	Bank	<u>4,160</u>

Bank							
20X7			\$				
Apr	21	Bills receivable	4,160				

P Kam							
20X7			\$	20X7			\$
Jan	21	Sales	<u>4,160</u>	Jan	21	Bills receivable	<u>4,160</u>

Question 1-3A

(a) Ng:Accounts			Dr	Cr
			\$	\$
Jan	1	Purchases	420	
		Kwok		420
		Kwok	420	
		Bills payable		420
Feb	29	Goods destroyed	3,600	
		Cost of goods sold		3,600
Apr	1	Insurance company	3,000	
		Goods destroyed		3,000
Apr	4	Bills payable	420	
		Kwok		420
Apr	4	Kwok	420	
		Interest charges	10	
		Bills payable		430
Apr	9	Bank	3,000	
		Insurance Co		3,000
May	7	Bills payable	430	
		Bank		430

(b) <i>Kwok:Accounts</i>				<i>Dr</i>	<i>Cr</i>
				\$	\$
Jan	1	Ng		420	
		Sales			420
Jan	1	Bills receivable		420	
		Ng			420
Jan	1	Bank		412	
		Discounting charges		8	
		Bills receivable			420
Apr	4	Ng		420	
		Bank			420
Apr	4	Bills receivable		430	
		Ng			420
		Interest receivable			10
May	7	Bank		430	
		Bills receivable			430

Question 1-4a

R So's books

				P Tong	
20X0				\$	\$
Jan	5	Sales		320	
Apr	8	Kowloon Discount Co		323	
"	14	Interest receivable		10	
				333	333

				Bills Receivable	
20X0				\$	\$
Jan	5	P Tong		320	
Apr	14	P Tong		333	
Jan	6	Kowloon Discount Co			320
May	18	Bank			333

				Kowloon Discount Co	
20X0				\$	\$
Jan	6	Bills receivable		320	
Jan	6	Bank			304
"	6	Discounting charges			16
				323	323

Note: It is assumed that the \$3 expenses are chargeable to Tong.

Question 1-5A

X's books

Y							
20X2			\$	20X2			\$
Jun	6	Bills receivable	150	Jun	1	Purchases	860
"	20	Bills payable	720	"	20	Interest Expenses	10
Sep	17	Bank	150	Sep	17	Bills receivable	150
			<u>1,020</u>				<u>1,020</u>

Z							
20X2			\$	20X2			\$
Jun	1	Sales	570	Jun	1	Bills receivable	400
Sep	17	Bills receivable	150	"	14	Bills receivable	150
				Sep	20	Bank	85

Bills Receivable							
20X2			\$	20X2			\$
Jun	1	Z	400	Jun	16	Y	150
"	14	Z	150	Sep	4	Bank	400
Sep	17	Y	150	"	17	Z	150
			<u>700</u>				<u>700</u>

Bills Payable							
20X2			\$	20X2			\$
Sep	23	Bank	720	Jun	20	Y	720

Interest Expenses							
20X2			\$				
Jun	20	Y	10				

Bank							
20X2			\$	20X2			\$
Sep	4	Bills receivable	400	Sep	17	Y	150
"	20	Z	85	"	23	Bills payable	720

Question 2-2A

(a) Per text.

Sale is a sale of goods direct to a customer who will have to pay for the goods, either immediately or at a future date.

Consignment is where goods are sent to an agent for him to sell on behalf of the consignor.

(b) (i)

Interim Account Sales of X Ltd From Y Ltd

	\$	\$
Sales of 80 cases \times 63		5,040
Less Storage	180	
Selling expenses	100	
Commission 5%	252	(532)
		<u>4,508</u>

(ii) *Books of X Ltd*

Consignment to Y Ltd

	\$		\$
Goods sent on consignment	3,500	Y: Sales	5,040
Bank: Delivery expenses	100	Unsold inventory at valuation	
Insurance	20	(see below) c/d	760
Y Ltd: Storage	180		
Selling expenses	100		
Commission (\$5,040 \times 5%)	252		
Profit to profit and loss	1,648		
	<u>5,800</u>		<u>5,800</u>
Unsold inventory b/d	760		

	\$	\$
Inventory valuation:		
Goods 20 cases \times \$35		700
Proportion of expenses relating to unsold goods:		
Delivery expenses $\frac{20}{100} \times \$100$	20	
Insurance $\frac{20}{100} \times \$20$	4	
Storage $\frac{20}{100} \times \$180$	36	60
		<u>760</u>

Selling expenses and commission do **not** relate to unsold goods.

Question 2-4A

(a)(i) *Books of Good Win Limited*

Goods sent on consignment account

20X9	\$	20X8	\$
Sep 30 Trading account	<u>200,000</u>	Oct 1 Consignment account	<u>200,000</u>

2-4A con't

(ii) Consignment to Advent Company account							
20X8			\$	20X9			\$
Oct	1	Goods sent on consignment	200,000	Jan	1	Bank:	
"	1	Bank (carriage, freight and insurance)	5,000			insurance compensation	1,200
20X9				Sep	30	Advent Company	285,000
Sep	30	Advent Company:		"	30	Closing stock (see working)	8,200
		Distribution expenses	9,500				
		Import charges	1,900				
		Commission	14,250				
"	30	Profit and loss account	63,750				
			<u>294,400</u>				<u>294,400</u>

(iii) Advent Company current account							
20X9			\$	20X9			\$
Sep	30	Consignment to Advent Company	285,000	Aug	31	Bank	150,000
				Sep	30	Consignment to Advent Company:	
						Distribution expenses	9,500
						Import charges	1,900
						Commission	14,250
				"	30	Balance c/d	109,350
			<u>285,000</u>				<u>285,000</u>

Workings:	\$
Craft products, cost per unit	100.00
Add Attributable cost per unit	
Carriage, freight and insurance costs paid by Good Win Limited (\$5,000/2,000)	2.50
Total unit cost	<u>102.50</u>
Closing stock (2,000 – 20 – 1,900) units × \$102.50	<u>8,200.00</u>

- (b) (i) Consignment means goods sold through an agent who takes on the responsibility to sell goods, collect debts and store goods on behalf of the owner (i.e. consignor). In return, the agent earns commission. Consignment of goods to an agent (i.e. consignee) does not constitute a sale by the consignor, merely a transfer of location of the goods concerned. Goods on consignment never belongs to the consignee, they are owned by the consignor until sold.
- (ii) Goods on sale or return means goods transferred from the supplier to the purchaser; they belong to the supplier until they are sold. In other words, the purchaser can return any unsold goods to the supplier at their discretion. This means that the unsold goods do not belong to the purchaser but to the supplier. Therefore, unsold goods kept by the purchaser should not be included in his closing stock.
- (c) In a consignment sale, the consignor usually bears the risk of bad debts. However, if both the consignor and the consignee agree, the consignor can shift the bad debt risk to the consignee by paying extra commission to the consignee. This extra commission is known as *del credere* commission.

Question 3-2A

(a)

North Ltd
Profit and Loss Account for the year ended 31 December 20X7

	<i>Head Office</i>	<i>Branch</i>	<i>Combined</i>
	\$	\$	\$
Sales to third party	300,000	200,000	500,000
Sales to branch	100,000		
	<u>400,000</u>		
Opening stock	30,000	6,000	34,500
Purchases from third parties	325,000	—	325,000
Purchases from head office	—	94,000	—
	<u>355,000</u>	<u>100,000</u>	<u>359,500</u>
<i>Less</i> Closing stock	(36,000)	(8,000)	(46,500)
Cost of sales	<u>319,000</u>	<u>92,000</u>	<u>313,000</u>
Gross profit	81,000	108,000	187,000
Salaries	(32,000)	(14,000)	(46,000)
Overhead	(8,000)	(4,000)	(12,000)
Depreciation	(25,000)	(7,500)	(32,500)
Provision for unrealised profit	(2,000)	—	—
Net profit before bonus	<u>14,000</u>	<u>82,500</u>	<u>96,500</u>
Manager bonus	—	(2,475)	(2,475)
Net profit	<u>14,000</u>	<u>80,025</u>	<u>94,025</u>
Retained profit b/f	21,200	—	21,200
Retained profit c/f	<u>35,200</u>	<u>80,025</u>	<u>115,225</u>

(b)

In Head Office's books

Branch Current Account

	\$		\$
Balance b/f	23,700	Stock-in-transit	6,000
Overhead allocation ($\$12,000 \times \frac{1}{3}$)	4,000	Cash-in-transit	1,000
Profit and loss account	80,025	Balance c/f	100,725
	<u>107,725</u>		<u>107,725</u>

In Branch's books

Head Office Current Account

	\$		\$
Balance c/f	100,725	Balance b/f	16,700
		Overhead allocation	4,000
		Profit and loss account	80,025
	<u>100,725</u>		<u>100,725</u>

3-2A con't

Provision for Unrealised Profit Account

	\$		\$
Balance c/d:		Balance b/f ($\$6,000 \times \frac{1}{4}$)	1,500
from branch closing stock ($\$8,000 \times \frac{1}{4}$)	2,000	Profit and loss (Head Office)	
from stock-in-transit ($\$6,000 \times \frac{1}{4}$)	1,500	— balancing figure	2,000
	<u>3,500</u>		<u>3,500</u>
		Balance b/d	3,500
(c)		<i>Head Office</i>	<i>Branch</i>
<i>Fixed assets</i>		\$	\$
Cost	100,000	30,000	130,000
Less Aggregate depreciation	(75,000)	(22,500)	(97,500)
	<u>25,000</u>	<u>7,500</u>	<u>32,500</u>
Branch current account	100,725		
Provision for unrealised profit	(2,000)		
	<u>98,725</u>		
<i>Current assets</i>			
Stock	36,000	8,000	46,500
Stock-in-transit	6,000	—	—
Less Provision for unrealised profit	(1,500)	—	—
Debtors	42,000	87,600	129,600
Cash at bank	5,000	100	6,100
Cash in transit	1,000	—	—
	<u>88,500</u>	<u>95,700</u>	<u>182,200</u>
<i>Current liabilities</i>			
Creditors	37,000	—	37,000
Accruals	—	2,475	2,475
	<u>37,000</u>	<u>2,475</u>	<u>39,475</u>
<i>Net current assets</i>	<u>51,500</u>	<u>93,225</u>	<u>142,725</u>
	<u>175,225</u>	<u>100,725</u>	<u>175,225</u>
Share capital	60,000	—	60,000
Profit and loss account	115,225	—	115,225
Head office current account	—	100,725	—
	<u>175,225</u>	<u>100,725</u>	<u>175,225</u>
<i>Workings</i>		<i>Opening Stock</i>	<i>Closing Stock</i>
		\$	\$
Head office		30,000	36,000
Stock-in-transit		—	6,000
Less Unrealised profit ($\$6,000 \times \frac{1}{4}$)		—	(1,500)
Branch		6,000	8,000
Less Unrealised profit: ($\$6,000 \times \frac{1}{4}$)		(1,500)	—
($\$8,000 \times \frac{1}{4}$)		—	(2,000)
		<u>34,500</u>	<u>46,500</u>

Question 3-5A

(a) All in \$000

(i)		Paper Products Branch Stock (Selling price)	
	\$		\$
Balance b/d	75	Returns	30
Goods to branch	600	Cash sales	120
Branch debtors: returns	8	Branch debtors	437
		Stock deficiency to branch adjustment	6
		Balance c/d	90
	<u>683</u>		<u>683</u>
Balance b/d	90		

(ii)		Goods Sent to Branch (Cost price)	
	\$		\$
Returns from branch	20	Branch stock	400
Head office trading a/c	380		
	<u>400</u>		<u>400</u>

(iii)		Branch Stock Adjustment (Profit loading)	
	\$		\$
Returns from branch	10	Unrealised profit b/d	25
Branch stock deficiency	6	Goods to branch	200
Branch profit and loss	179		
Unrealised profit c/d	30		
	<u>225</u>		<u>225</u>
		Unrealised profit b/d	30

(iv)		Branch Debtors	
	\$		\$
Balance b/d	66	Branch stock: Returns	8
Branch stock	437	Bank	390
		Discounts	9
		Bad debts	15
		Balance c/d	81
	<u>503</u>		<u>503</u>
Balance b/d	81		

(v)		Branch Bank	
	\$		\$
Balance b/d	3	General expenses	42
Cash sales	120	To HO bank	459
Branch debtors	390	Balance c/d	12
	<u>513</u>		<u>513</u>
Balance b/d	12		

3-5A con't

(b)

Paper Products

Trading and Profit and Loss Account for the year ended 31 March 20X6

	<i>Head Office</i>		<i>Branch</i>		<i>Total</i>	
	\$	\$	\$	\$	\$	\$
Sales: Cash		1,500		120		1,620
Credit		1,960		429		2,389
		<u>3,460</u>		<u>549</u>		<u>4,009</u>
<i>Less</i> Cost of goods sold						
Opening stock	180		50		230	
<i>Add</i> Purchases	<u>2,400</u>		<u>380</u>		<u>2,780</u>	
	2,580		430		3,010	
<i>Less</i> Closing stock	<u>(220)</u>	<u>(2,360)</u>	<u>(60)</u>	<u>(370)</u>	<u>(280)</u>	<u>(2,730)</u>
Gross profit		<u>1,100</u>		<u>179</u>		<u>1,279</u>
<i>Less</i> Expenses						
General expenses	410		42		452	
Discounts allowed	29		9		38	
Bad debts	<u>24</u>	<u>(463)</u>	<u>15</u>	<u>(66)</u>	<u>39</u>	<u>(529)</u>
Net profit		<u><u>637</u></u>		<u><u>113</u></u>		<u><u>750</u></u>

- (c) See text, but merits mainly concern tight control as HO can see what profits the branch *ought* to be making, also saves branch staff having to keep full accounting records.

Demerits depend on whether branch staff are given room for initiative within the above system, or else the HO stupidly lets the system strangle all initiative.

Question 3-7A

LR

Trading and Profit and Loss Account for the year ended 31 December 20X9

	(a) <i>Head Office</i>		(b) <i>Branch</i>	
	\$	\$	\$	\$
Sales		83,550		51,700
<i>Less</i> Cost of goods sold				
Purchases	123,380			
Goods to branch	<u>(44,264)</u>		<u>44,264</u>	
	79,116			
<i>Less</i> Closing stock	<u>(12,276)</u>	<u>(66,840)</u>	<u>(2,664)</u>	<u>(41,600)</u>
Gross profit		<u>16,710</u>		<u>10,100</u>
<i>Less</i> General expenses		<u>(8,470)</u>		<u>(6,070)</u>
Net profit		<u><u>8,240</u></u>		<u><u>4,030</u></u>

Balance Sheet as at 31 December 20X9

	\$	\$
<i>Fixed assets</i>		39,000
<i>Current assets</i>		
Stock	14,940	
Debtors	15,020	
Cash in transit	1,000	
Bank	5,260	
	<u>36,220</u>	
<i>Less Current liabilities</i>		
Creditors	(12,690)	
Working capital		<u>23,530</u>
		<u>62,530</u>
<i>Financed by:</i>		
Capital introduced		52,000
Add Net profit		12,270
		<u>64,270</u>
<i>Less Drawings</i>		(1,740)
		<u>62,530</u>

Workings

Stocks: Head office

	\$	\$
Purchases		123,380
<i>Less</i> Cost of sales: $\frac{100}{125} \times \$83,550$	66,840	
Cost of goods to branch: $\frac{100}{125} \times \$56,250$	45,000	(111,840)
		<u>11,540</u>
Add Cost of goods in transit: $\frac{100}{125} \times \$920$		736
		<u>12,276</u>

Stocks: Branch

	\$	\$
Cost of goods sent		45,000
<i>Less</i> Cost of sales: $\frac{100}{125} \times \$51,700$	41,360	
Cost of goods in transit	736	
Stock shortage at cost: $\frac{100}{125} \times \$300$	240	(42,336)
		<u>2,664</u>

Question 3-9A

(a)

Star Stores

Trading and Profit and Loss Account for the year ended 31 December 20X9

	<i>Head Office</i>		<i>Branch</i>	
	\$000	\$000	\$000	\$000
Sales		1,200		570
Goods transferred to branch		360		—
		<u>1,560</u>		<u>570</u>
<i>Less</i> Cost of goods sold				
Opening stock	80		30	
<i>Add</i> Purchases	880		—	
Transfer of goods from head office	—		300	
	<u>960</u>		<u>330</u>	
<i>Less</i> Closing stock	(100)	(860)	(48)	(282)
Gross profit		<u>700</u>		<u>288</u>
<i>Less</i> Administrative expenses	380		30	
Distribution costs	157		172	
Increase in provision for profit included in branch stock $(48 \times \frac{1}{6}) - 5 + (60 \times \frac{1}{6})$	13	(550)	—	(202)
Net profit		<u><u>150</u></u>		<u><u>86</u></u>

(b)

Balance Sheet as at 31 December 20X9

	<i>Cost</i>	<i>Depreciation</i>	<i>Net</i>
	\$000	\$000	\$000
<i>Fixed assets</i>			
Plant and equipment	330	150	180
Motor vehicles	700	400	300
	<u>1,030</u>	<u>550</u>	<u>480</u>
<i>Current assets</i>			
Stock (\$100 + \$48 + \$60 - \$18)	190		
Debtors and prepayments	206		
Bank and cash (\$25 + \$2 + 15)	42	438	
<i>Less Current liabilities</i>			
Creditors and accruals		(196)	242
			<u>722</u>
Capital: Balance at 1.1.20X9			550
<i>Add</i> Net profit			236
			<u>786</u>
<i>Less</i> Drawings			(64)
			<u><u>722</u></u>

Workings

Branch Current Account

	\$000		\$000
Balance b/d	255	Stock in transit c/d	60
Net profit	86	Cash in transit c/d	15
	<u>341</u>	Balance c/d	266
			<u>341</u>

Head Office Current account

	\$000		\$000
Balance c/d	266	Balance b/d	180
	<u>266</u>	Net profit	86
			<u>266</u>

Question 3-11A

(a)

Mr Wong's company Income Statement for the year ended 31 December 20X9

	<i>Head Office</i>	<i>Branch office</i>	<i>Company</i>
	\$000	\$000	\$000
Sales	11,485	9,985	21,470
<i>Less</i> Cost of sales			
Opening inventories	(2,425)	(770)	(3,125)
Goods from head office	—	(7,425)	—
Goods sent to branch	7,700	—	—
Purchases	(12,750)	—	(12,750)
Closing inventories (Working 5)	2,725	880	3,775
Gross profit	<u>6,735</u>	<u>2,670</u>	<u>9,370</u>
<i>Add</i> Profit in inventories written back	70	—	—
	<u>6,805</u>	<u>2,670</u>	<u>9,370</u>
<i>Less</i> Expenses			
Administration expenses	1,169	495	1,664
Other expenses	726	105	831
Provision for unrealised profit in inventories	105	—	—
Net profit	<u>4,805</u>	<u>2,070</u>	<u>6,875</u>

3-11A con't

(b)

Mr Wong's company
Balance Sheet as at 31 December 20X9

	<i>Head Office</i>	<i>Branch Office</i>	<i>Company</i>
	\$000	\$000	\$000
Non-current assets	17,250	3,500	20,750
<i>Less</i> Accumulated depreciation	(685)	(320)	(1,005)
	<u>16,565</u>	<u>3,180</u>	<u>19,745</u>
<i>Current assets</i>			
Inventories	2,725	880	3,775
Goods in transit	275	—	—
Trade receivables	2,498	678	3,176
Branch office current account (Working 2)	4,645	—	—
Cash and cash equivalents	1,245	210	1,605
Cash in transit	150	—	—
	<u>11,538</u>	<u>1,768</u>	<u>8,556</u>
<i>Current liabilities</i>			
Trade payables	1,873	303	2,176
Provision for unrealised profit in inventories (Working 4)	105	—	—
	<u>1,978</u>	<u>303</u>	<u>2,176</u>
Net current assets	<u>9,560</u>	<u>1,465</u>	<u>6,380</u>
Total assets <i>less</i> current liabilities	<u>26,125</u>	<u>4,645</u>	<u>26,125</u>
Net assets	<u><u>26,125</u></u>	<u><u>4,645</u></u>	<u><u>26,125</u></u>
<i>Capital and reserves</i>			
Issued capital	13,000	—	13,000
Head office current account (Working 1)	—	4,645	—
Accumulated profits (Working 3)	13,125	—	13,125
	<u><u>26,125</u></u>	<u><u>4,645</u></u>	<u><u>26,125</u></u>

Workings:

Working 1: Head office current account	\$000
Balance b/d	2,575
Net profit	2,070
	<u><u>4,645</u></u>

Working 2:

Branch Office Current Account

	\$000		\$000
Balance b/d	3,000	Goods in transit	275
		Cash in transit	150
		Balance c/d	2,575
	<u>3,000</u>		<u>3,000</u>
Balance b/d	2,575	Balance c/d	4,645
Branch profit	2,070		
	<u><u>4,645</u></u>		<u><u>4,645</u></u>

Working 3: Head office income statement

	\$000
Balance b/d	6,250
Branch profit	2,070
Head office profit	4,805
	<u>13,125</u>

Working 4: Calculation of unrealised profit in inventories at branch and goods in transit
 $(\$275,000 + \$880,000) \times 10/110 = \$105,000$

Working 5: Unrealised profit in closing inventories

	\$000
Closing inventories	
Head office	2,725
Branch profit	880
Goods in transit	275
	<u>3,880</u>
Less Profit in inventories	(105)
	<u>3,775</u>

Question 4-2A

(a) *Tung's books*

Machinery			
20X3		\$	
Jan 1	CD & Co Ltd	2,092	
Provision for Depreciation			
20X3		\$	
Dec 31	Balance c/d	209	
20X4			
Dec 31	Balance c/d	397	
		<u>397</u>	
20X5			
Dec 31	Balance c/d	567	
		<u>567</u>	
20X3		\$	
Dec 31	Profit and loss	209	
20X4			
Jan 1	Balance b/d	209	
Dec 31	Profit and loss	188	
		<u>397</u>	
20X5			
Jan 1	Balance b/d	397	
Dec 31	Profit and loss	170	
		<u>567</u>	

4-2A con't

CD & Co Ltd							
20X3			\$	20X3			\$
Jan	1	Bank	600	Jan	1	Machinery	2,092
Dec	31	Bank	600	Dec	31	HP interest (10% of \$1,492)	149
Dec	31	Balance c/d	1,041				
			<u>2,241</u>				<u>2,241</u>
20X4				20X4			
Dec	31	Bank	600	Jan	1	Balance b/d	1,041
Dec	31	Balance c/d	545	Dec	31	HP interest	104
			<u>1,145</u>				<u>1,145</u>
20X5				20X5			
Dec	31	Bank	600	Jan	1	Balance b/d	545
			<u>600</u>	Dec	31	HP interest	55
							<u>600</u>

(b) Balance Sheet as at 31 December 20X3 (extract)

<i>Fixed assets</i>	\$	\$
Machinery at cost	2,092	
<i>Less</i> Depreciation	(209)	1,883
<i>Current liabilities</i>		
Owing on HP		1,041

Question 4-4A

(a) JYuen's books

Motor Vehicles							
20X6			\$	20X6			\$
May	31	HP Company: Cash price JY1	18,000	Dec	31	Balance c/d	42,000
Oct	31	HP Company: Cash price JY2	24,000				
			<u>42,000</u>				<u>42,000</u>
20X7				20X7			
Jan	1	Balance b/d	42,000	Sept	1	Disposal: JY1	18,000
				Dec	31	Balance c/d	24,000
			<u>42,000</u>				<u>42,000</u>

(b)			Depreciation				
20X6			\$	20X6		\$	
Dec	31	Balance c/d	2,900	Dec	31	Profit and loss:	
						JY1 $20\% \times \frac{7}{12} \times \$18,000$	2,100
						JY2 $20\% \times \frac{2}{12} \times \$24,000$	800
			<u>2,900</u>				<u>2,900</u>
20X7				20X7			
Sept	1	Disposal: JY1	4,500	Jan	1	Balance b/d	2,900
Dec	31	Balance c/d	5,600	Sept	1	Profit and loss:	
						JY1 $20\% \times \frac{8}{12} \times \$18,000$	2,400
						JY2 $20\% \times \$24,000$	4,800
			<u>10,100</u>				<u>10,100</u>

(c)		Hire Purchase Company					
		JY1	JY2			JY1	JY2
20X6		\$	\$	20X6		\$	\$
May 31	Cash: deposit	3,120	—	May 31	Cash price	18,000	—
Oct 31	Cash: deposit	—	4,800	Dec 31	Cash price	—	24,000
Dec 31	Cash: instalments			" 31	Profit and loss:		
	7 × \$700	4,900	—		HP interest		
	2 × \$900	—	1,800		7 × \$80	560	—
	Balance c/d	10,540	17,600		2 × \$100	—	200
		<u>18,560</u>	<u>24,200</u>			<u>18,560</u>	<u>24,200</u>
20X7				20X7			
Aug 31	Cash: 8 × \$700	5,600	—	Jan 1	Balance b/d	10,540	17,600
Sept 20	Cash to settle	6,000	—	Sept 20	Profit and loss:		
Dec 31	Cash 12 × \$900	—	10,800		HP interest	1,060	—
	Balance c/d	—	8,000	Dec 31	Profit and loss:		
					HP interest 12 × \$100	—	1,200
		<u>11,600</u>	<u>18,800</u>			<u>11,600</u>	<u>18,800</u>

(d)		Assets Disposal			
20X7		\$	20X7		\$
Sept 1	Motor vehicles: JY1	18,000	Sept 1	Depreciation	4,500
			" 20	Cash	12,500
			Dec 31	Profit and loss:	
				Loss on disposal	1,000
		<u>18,000</u>			<u>18,000</u>

Question 4-7A

Object Ltd

Trading and Profit and Loss Account for the year ended 31 August 20X6

	\$	\$
Hire purchase sales		540,000
Cash sales		71,000
		<u>611,000</u>
<i>Less</i> Cost of goods sold		
Opening stock	15,000	
Purchases	342,000	
Stock repossessed	2,500	
	<u>359,500</u>	
<i>Less</i> Closing stock (see W1)	(12,000)	(347,500)
		<u>263,500</u>
<i>Add</i> Profit on repossessed goods (see W2)		700
		<u>264,200</u>
<i>Less</i> Provision for unrealised profit (see W3)		(99,792)
Gross profit		<u>164,408</u>
<i>Less</i> Administration and shop expenses	130,000	
Depreciation	15,000	(145,000)
Net profit for the year		<u><u>19,408</u></u>

Balance Sheet as at 31 August 20X6

	\$	\$	\$
<i>Fixed assets</i>			
Premises and equipment at cost		100,000	
<i>Less</i> Depreciation to date		(60,000)	40,000
		<u></u>	
<i>Current assets</i>			
Stock		12,000	
Debtors (see W4)	223,560		
<i>Less</i> Provision for unrealised profit (W3)	(99,360)	124,200	
Bank and cash		<u>6,208</u>	
		<u>142,408</u>	
<i>Creditors: amounts falling due within one year</i>			
Trade creditors		(80,000)	
Net current assets			<u>62,408</u>
			<u><u>102,408</u></u>
<i>Capital and reserves</i>			
Called-up share capital			75,000
Profit and loss account (\$19,408 + \$8,000)			27,408
			<u><u>102,408</u></u>

<i>Workings:</i>	\$	\$	\$
(W1) Opening stock		15,000	
Purchases		342,000	357,000
Cash sales	71,000		
Less Repossessed	(3,500)	67,500	
Accordingly:			
Cost of sales $\$67,500 \times \frac{100}{150}$		45,000	
HP sale: Cost $\$540,000 \times \frac{100}{180}$		300,000	(345,000)
Closing stock			12,000

(W2)		Repossession	
	\$		\$
Debtors	3,240	Provision for unrealised profit	1,440
Profit to trading a/c	700	Purchases	2,500
	<u>3,940</u>		<u>3,940</u>

(W3)		Provision for Unrealised Profit	
	\$		\$
Repossessions $\$3,240 \times \frac{80}{180}$	1,440	Balance b/d	1,008
Balance c/d $\$223,560 \times \frac{80}{180}$	99,360	Trading account	99,792
	<u>100,800</u>		<u>100,800</u>

(W4)		HP Debtors	
	\$		\$
Balance b/d	2,268	Cash	315,468
HP sales	540,000	Repossessions	3,240
	<u>542,268</u>	Balance c/d	223,560
			<u>542,268</u>

Question 4-9A

(a) (i)		Machine	
	\$		\$
1.1.X7 HP Loan	20,000		
(ii)		Accumulated Depreciation: Machinery	
	\$		\$
31.12.X8 Balance c/d	8,000	31.12.X7 Profit and loss	4,000
	<u>8,000</u>	31.12.X8 Profit and loss	4,000
			<u>8,000</u>
31.12.X9 Balance c/d	12,000	1.1.X9 Balance b/d	8,000
	<u>12,000</u>	31.12.X9 Profit and loss	4,000
			<u>12,000</u>

4-9A con't

(iii)		Hire Purchase Loan	
	\$		\$
1.1.X7 Bank	6,000	1.1.X7 Machine	20,000
31.12.X7 Bank	5,828	31.12.X7 Profit and loss (12% × \$14,000)	1,680
31.12.X7 Balance c/d	9,852		
	<u>21,680</u>		<u>21,680</u>
31.12.X8 Bank	5,828	1.1.X8 Balance b/d	9,852
31.12.X8 Balance c/d	5,206	31.12.X8 Profit and loss (12% × \$9,852)	1,182
	<u>11,034</u>		<u>11,034</u>
31.12.X9 Bank	5,831	1.1.X9 Balance b/d	5,206
	<u>5,831</u>	31.12.X9 Profit and loss (12% × \$5,206)	625
			<u>5,831</u>

(b) Balance Sheet as at 31 December (Extracts)

	20X7	20X8	20X9
	\$	\$	\$
Fixed assets			
Machine at cost (i)	20,000	20,000	20,000
Less Depreciation to date (ii)	(4,000)	(8,000)	(12,000)
	<u>16,000</u>	<u>12,000</u>	<u>8,000</u>
Long-term liabilities			
Owing under hire purchase (iii)	5,206		
Current liabilities			
Owing under hire purchase (iv)	4,646	5,206	

Question 5-2A

(a) Great Morgan Ltd Investment Account — SHK Properties						
Date	Narrative	Quantity	Unit cost/ price	Capital	Income	
			\$	\$		\$
20X8						
Apr 1	Purchases	10,000	55.00	550,000		6,000
May 19	Purchases	5,000	40.00	200,000		—
		<u>15,000</u>	<u>50.00</u>	<u>750,000</u>		
Jun 12	Disposal	(5,000)	30.00	(150,000)		
	Loss on disposal			(100,000)		
		<u>10,000</u>	<u>50.00</u>	<u>500,000</u>		
Sep 8	Purchases	5,000	26.00	130,000		
		<u>15,000</u>	<u>42.00</u>	<u>630,000</u>		
Sep 27	Disposal	(5,000)	30.00	(150,000)		
	Loss on disposal			(60,000)		
Sep 30	Balance c/f	<u>10,000</u>	<u>42.00</u>	<u>420,000</u>		

(b) List of listed investments at 30 September 20X8

<i>Name of security</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Cost</i>	<i>Unit Price</i>	<i>Market Value</i>
	\$	\$		\$	\$
SHK Properties	10,000	42.00	420,000	27.00	270,000
Henderson Land	10,000	38.00	380,000	26.50	265,000
New World	10,000	26.40	264,000	10.40	104,000
Cheung Kong	10,000	43.00	430,000	35.90	359,000
			<u>1,494,000</u>		<u>998,000</u>
HK Telecom	10,000	13.90	139,000	15.10	151,000
HK Electric	10,000	22.80	228,000	26.70	267,000
China Light	10,000	34.10	341,000	37.00	370,000
HK & China Gas	10,000	7.50	75,000	9.50	95,000
HK & China Gas 20Y0 Warrant	500	0.00	—	0.35	175
			<u>783,000</u>		<u>883,175</u>
Citibank	1,000	US\$47.00	366,600	US\$48.00	374,400
American Online	1,000	US\$97.00	756,600	US\$99.50	776,100
AT&T	1,000	US\$62.50	487,500	US\$59.00	460,200
			<u>1,610,700</u>		<u>1,610,700</u>
			<u>3,887,700</u>		<u>3,491,875</u>

	<i>Market value at 30 Sep 20X8</i>	<i>Cost of investment at 30 Sep 20X8</i>	<i>Provision for diminution in value of investments</i>
	\$	\$	\$
Local Listed Investment			
— Property Stock	998,000	1,494,000	496,000
Local Listed Investment			
— Utility Stock	883,175	783,000	—
Overseas Investment			
— Listed Stock	1,610,700	1,610,700	—
Unlisted Investment	300,000	300,000	—
	<u>3,791,875</u>	<u>4,187,700</u>	<u>496,000</u>

Since the unlisted investments were purchased on 30 September 20X8, it was presumed that the purchase price represented the market value.

(d) Notes to the accounts

Investments	\$
Shares listed in Hong Kong, at cost	2,277,000
Less Provision for diminution in value	(496,000)
Shares listed in Hong Kong, at written down value	<u>1,781,000</u>
Shares listed in overseas, at cost	1,610,700
Listed shares	<u>3,391,700</u>
Unlisted shares, at cost	300,000
	<u>3,691,700</u>
Market value of listed investments	<u>3,491,875</u>

Question 8-4A

(Dates omitted)

(a) Ordinary Share Capital			
	\$		\$
Forfeited shares ($5,000 \times \$1$)	5,000	Balance b/d	500,000
Balance c/d	595,000	Application and allotment	70,000
		First and final call	30,000
	<u>600,000</u>		<u>600,000</u>
Balance c/d	600,000	Balance b/d	595,000
		Amber Ltd	5,000
	<u>600,000</u>		<u>600,000</u>

(b) Share Premium			
	\$		\$
Balance c/d	52,500	Application and allotment	50,000
		Forfeited shares	2,500
	<u>52,500</u>		<u>52,500</u>

(c) Application and Allotment			
	\$		\$
Bank refunds ($75,000 \times \$0.65$)	48,750	Bank ($200,000 \times \$0.65$)	130,000
Bank refunds re 3 for 4 allotment		Bank ($100,000 \times \$0.55$)	55,000
($25,000 \times \$0.65$)	16,250		
Ordinary share capital	70,000		
Share premium	50,000		
	<u>185,000</u>		<u>185,000</u>

(d) First and Final Call			
	\$		\$
Ordinary share capital ($100,000 \times \$0.3$)	30,000	Bank ($95,000 \times \$0.3$)	28,500
		Forfeited shares ($5,000 \times \$0.3$)	1,500
	<u>30,000</u>		<u>30,000</u>

(e) Forfeited Shares			
	\$		\$
First and final call	1,500	Ordinary share capital	5,000
Amber Ltd	1,000		
Share premium	2,500		
	<u>5,000</u>		<u>5,000</u>

(f)		Amber Ltd	
	\$		\$
Ordinary share capital	5,000	Bank ($5,000 \times \$0.8$)	4,000
		Forfeited shares*	1,000
	<u>5,000</u>		<u>5,000</u>
*discount on reissue			

Question 8-6A

		Grobigg Ltd Application and Allotment	
	\$		\$
Cash: return of unsuccessful application monies ($8,000 \times \$0.75$)	6,000	Cash ($180,000 \times \$0.75$)	135,000
Share capital: Due on application and allotment ($150,000 \times \$0.80$)	120,000	Cash: Balance due on allotment	13,500
Share premium ($150,000 \times \$0.15$)	22,500		
	<u>148,500</u>		<u>148,500</u>

		Call	
	\$		\$
Share capital ($150,000 \times \$0.20$)	30,000	Cash ($149,600 \times \$0.20$)	29,920
		Forfeited shares	80
	<u>30,000</u>		<u>30,000</u>

		Forfeited Shares	
	\$		\$
Call	80	Share capital	400
Share capital	400	Cash ($400 \times \$0.90$)	360
Share premium	280		
	<u>760</u>		<u>760</u>

		Share Premium	
			\$
		Application and allotment	22,500
		Forfeited shares	280

		Share Capital	
	\$		\$
Forfeited shares	400	Application and allotment	120,000
Balance c/d	150,000	Forfeited shares	400
		Call	30,000
	<u>150,400</u>		<u>150,400</u>

Question 8-7A

(a)		Hong Yat Limited Journal			
<i>Date</i>		<i>Particulars</i>	<i>Dr</i>	<i>Cr</i>	
20X7			\$	\$	
Jan	1	Bank (6,000,000 × \$0.60) Application and allotment Being the receipt of application monies for 6,000,000 shares.	3,600,000		3,600,000
Jan	15	Application and allotment (1,000,000 × \$0.60) Bank Being refund of the application monies to completely unsuccessful applicants.	600,000		600,000
Mar	1	Bank Application and allotment Being the receipt of the balance of allotment monies after deducting the excess application monies received. (4,000,000 × \$0.20 – 1,000,000 × \$0.60)	200,000		200,000
Mar	1	Application and allotment (4,000,000 × \$0.80) Ordinary share capital (4,000,000 × \$0.30) Share premium (4,000,000 × \$0.50) Being the posting of application and allotment monies to ordinary share capital and share premium respectively.	3,200,000		1,200,000 2,000,000
Apr	1	Bank (3,970,000 × \$0.20) Call in arrears (30,000 × \$0.20) First and final call (4,000,000 × \$0.20) Being receipt of first and final call with the exception of one shareholder holding 30,000 shares who failed to pay when it was due.	794,000 6,000		800,000
Apr	1	First and final call Ordinary share capital Being the posting of the first and final call monies to ordinary share capital.	800,000		800,000
May	31	Forfeited shares (30,000 × \$0.20) Call in arrears Being the transfer of outstanding amount on 30,000 shares to forfeited shares.	6,000		6,000
May	31	Ordinary share capital (30,000 × \$0.50) Forfeited shares Being the cancellation of 30,000 forfeited shares.	15,000		15,000
June	6	Bank Forfeited shares Being the re-issue of the 30,000 forfeited shares at \$15,000 fully paid.	15,000		15,000

June 6	Forfeited shares (\$15,000 + \$9,000)	24,000	
	Ordinary share capital ($30,000 \times (\$0.60 - \$0.50 + \$0.20 + \$0.20)$)		15,000
	Share premium ($((\$0.60 + \$0.20 + \$0.20 + \$0.30) - \$1) \times 30,000$)		9,000
	Being the posting of the relevant amount to the ordinary share capital and share premium (profit on re-issue of forfeited shares).		

(b) Advantages:

- No fixed annual charges (dividends) are payable.
- Ordinary shares do not have a maturity date for repayment.
- It reduces the gearing level of the company.

Question 9-2A

(a)			Debenture Redemption Reserve						
20X3					\$	20X3	\$		
Dec	31	Balance c/d			<u>6,960.36</u>	Dec	31	Profit and loss	<u>6,960.36</u>
								(\$30,000 × \$0.232012)	
20X4						20X4			
Dec	31	Balance c/d			14,268.74	Jan	1	Balance b/d	6,960.36
						Dec	31	Bank: Interest	348.02
						"	31	Profit and loss	6,960.36
					<u>14,268.74</u>			<u>14,268.74</u>	
20X5						20X5			
Dec	31	Balance c/d			21,942.52	Jan	1	Balance b/d	14,268.74
						Dec	31	Bank: Interest	713.42
						"	31	Profit and loss	6,960.36
					<u>21,942.52</u>			<u>21,942.52</u>	
20X6						20X6			
Dec	31	Reserve: Debentures now redeemed			30,000.00	Jan	1	Balance b/d	21,942.52
						Dec	31	Bank: Interest	1,097.12
						"	31	Profit and loss	6,960.36
					<u>30,000.00</u>			<u>30,000.00</u>	

(b)		Debenture Sinking Fund Investment			
20X3			\$		\$
Dec	31	Bank	6,960.36		
20X4					
Dec	31	Bank	7,308.38		
20X5				20X5	
Dec	31	Bank	7,673.78	Dec	31 Bank: Sale
			<u>21,942.52</u>		<u>21,942.52</u>

(c)			Debentures		
20X6		\$	20X3		\$
Dec 31	Bank (redemption)	30,000.00	Jan 1	Bank	30,000.00

9-2A con't

(d) Profit and Loss Account for the year ended 31 December

		\$
20X3	Debenture redemption reserve	6,960.36
20X4	Debenture redemption reserve	6,960.36
20X5	Debenture redemption reserve	6,960.36
20X6	Debenture redemption reserve	6,960.36

Question 9-3A

(a)	Dr	Cr
	\$	\$
(A1) Bank	7,000	
(A2) Preference share applicants		7,000
Cash received from applicants		
(B1) Preference share applicants	7,000	
(B2) Preference share capital		7,000
Preference shares allotted		
(C1) Profit and loss appropriation	3,000	
(C2) Capital redemption reserve		3,000
Part of purchase price of shares not covered by new issue, to comply with Companies Ordinance		
(D1) Ordinary share capital	10,000	
(D2) Ordinary share purchase		10,000
Shares being purchased		
(E1) Ordinary share purchase	10,000	
(E2) Bank		10,000
Payment made for share purchase		

	Balances before	Dr	Effect	Cr	Balances after
	\$		\$		\$
Net assets (except bank)	31,000				31,000
Bank	16,000	(A1)	7,000	(E2)	13,000
	<u>47,000</u>				<u>44,000</u>
Preference share capital	8,000			(B2)	7,000
Preference share applicants	—	(B1)	7,000	(A2)	7,000
Ordinary share capital	20,000	(D1)	10,000		10,000
Ordinary share purchase	—	(E1)	10,000	(D2)	10,000
Capital redemption reserve	—			(C2)	3,000
Share premium	4,000				4,000
	<u>32,000</u>				<u>32,000</u>
Profit and loss	15,000	(C1)	3,000		12,000
	<u>47,000</u>				<u>44,000</u>

(b)	<i>Dr</i>	<i>Cr</i>
	\$	\$
(A1) Ordinary share capital	12,000	
(A2) Ordinary share purchase		12,000
Shares being purchased		
(B1) Profit and loss appropriation	2,400	
(B2) Ordinary share purchase		2,400
Premium on purchase of shares not previously issued at premium		
(C1) Profit and loss appropriation	12,000	
(C2) Capital redemption reserve		12,000
Transfer because shares purchased out of distributable profits		
(D1) Ordinary share purchase	14,400	
(D2) Bank		14,400
Payment of redemption		

	<i>Balances before</i>	<i>Dr</i>	<i>Effect</i>	<i>Cr</i>	<i>Balances after</i>
	\$		\$	\$	\$
Net assets (except bank)	31,000				31,000
Bank	16,000			(D2) 14,400	1,600
	<u>47,000</u>				<u>32,600</u>
Preference share capital	8,000				8,000
Ordinary share capital	20,000	(A1) 12,000			8,000
Ordinary share purchase	—	(D1) 14,400	(A2) 12,000		—
			(B2) 2,400		
Capital redemption reserve	—		(C2) 12,000		12,000
Share premium	4,000				4,000
	<u>32,000</u>				<u>32,000</u>
Profit and loss	15,000	(B1) 2,400			600
		(C1) 12,000			
	<u>47,000</u>				<u>32,600</u>

(c)	<i>Dr</i>	<i>Cr</i>
	\$	\$
(A1) Preference share capital	8,000	
(A2) Preference share purchase		8,000
Shares to be purchased		
(B1) Preference share purchase	8,000	
(B2) Bank		8,000
Cash paid on purchase		
(C1) Profit and loss appropriation	8,000	
(C2) Capital redemption reserve		8,000
Transfer per Companies Ordinance		

9-3A con't

	<i>Balances before</i>		<i>Dr</i>		<i>Effect</i>	<i>Cr</i>		<i>Balances after</i>
	\$			\$			\$	\$
Net assets (except bank)	31,000							31,000
Bank	16,000				(B2)	8,000		8,000
	<u>47,000</u>							<u>39,000</u>
Preference share capital	8,000	(A1)	8,000					—
Preference share purchase	—	(B1)	8,000	(A2)	8,000			—
Ordinary share capital	20,000							20,000
Capital redemption reserve	—				(C2)	8,000		8,000
Share premium	4,000							4,000
	<u>32,000</u>							<u>32,000</u>
Profit and loss	15,000	(C1)	8,000					7,000
	<u>47,000</u>							<u>39,000</u>

(d)					<i>Dr</i>		<i>Cr</i>
					\$		\$
(A1) Bank					12,000		
(A2) Preference share applicants							12,000
Cash received from applicants							
(B1) Preference share applicants					12,000		
(B2) Preference share capital							12,000
Preference shares allotted							
(C1) Ordinary share capital					12,000		
(C2) Ordinary share purchase							12,000
Shares to be purchased							
(D1) Ordinary share purchase					12,000		
(D2) Bank							12,000
Payment made to purchase shares							

	<i>Balances before</i>		<i>Dr</i>		<i>Effect</i>	<i>Cr</i>		<i>Balances after</i>
	\$			\$			\$	\$
Net assets (except bank)	31,000							31,000
Bank	16,000	(A1)	12,000	(D2)	12,000			16,000
	<u>47,000</u>							<u>47,000</u>
Preference share capital	8,000			(B2)	12,000			20,000
Preference share applicants	—	(B1)	12,000	(A2)	12,000			—
Ordinary share capital	20,000	(C1)	12,000					8,000
Ordinary share purchase	—	(D1)	12,000	(C2)	12,000			—
Share premium	4,000							4,000
	<u>32,000</u>							<u>32,000</u>
Profit and loss	15,000							15,000
	<u>47,000</u>							<u>47,000</u>

(e)	<i>Dr</i> \$	<i>Cr</i> \$
(A1) Bank	10,000	
(A2) Preference share applicants		10,000
Cash received from applicants		
<hr/>		
(B1) Preference share applicants	10,000	
(B2) Preference share capital		10,000
Preference shares allotted		
<hr/>		
(C1) Ordinary share capital	6,000	
(C2) Ordinary share purchase		6,000
Shares being purchased		
<hr/>		
(D1) Share premium account	1,200	
(D2) Ordinary share purchase		1,200
Amount of share premium account used for redemption		
<hr/>		
(E1) Profit and loss appropriation	1,800	
(E2) Ordinary share purchase		1,800
Excess of premium payable over amount of share premium account usable for the purpose		
<hr/>		
(F1) Ordinary share purchase	9,000	
(F2) Bank		9,000
Amount payable on purchase		
<hr/>		

	<i>Balances before</i> \$	<i>Dr</i>	<i>Effect</i> \$	<i>Cr</i>	<i>Balances after</i> \$
Net assets (except bank)	31,000				31,000
Bank	16,000	(A1) 10,000	(F2)	9,000	17,000
	<u>47,000</u>				<u>48,000</u>
Preference share capital	8,000		(B2)	10,000	18,000
Preference share applicants	—	(B1) 10,000	(A2)	10,000	—
Ordinary share capital	20,000	(C1) 6,000			14,000
Ordinary share purchase	—	(F1) 9,000	(C2)	6,000	—
			(D2)	1,200	
			(E2)	1,800	
Share premium	4,000	(D1) 1,200			2,800
	<u>32,000</u>				<u>34,800</u>
Profit and loss	15,000	(E1) 1,800			13,200
	<u>47,000</u>				<u>48,000</u>

Question 9–6A

(Dates omitted)	<i>Dr</i>	<i>Cr</i>
	\$	\$
(a) Bank	1,320,000	
Application and allotment		1,320,000
Application monies received		
(b) Application and allotment	1,032,000	
Bank		1,032,000
Oversubscriptions refunded		
(c) Application and allotment	340,000	
Ordinary share capital		140,000
Share premium		200,000
Amount due on allotment ordinary shares		
(d) Bank (see workings W1)	51,975	
Application and allotment		51,975
(e) Call	60,000	
Ordinary share capital		60,000
First and final call made		
(f) Bank	59,910	
Call		59,910
Amount paid on call		
(g) Ordinary share capital	300	
Forfeited shares		300
Shares forfeited		
(h) Forfeited shares	115	
Application and allotment		25
Call		90
Amounts not received cancelled		
(i) Forfeited shares	300	
Ordinary share capital		300
Forfeited shares now reissued		
(j) Bank	500	
Forfeited shares		500
Cash received on reissue		
(k) Forfeited shares	385	
Share premium		385
Profit on reissue transferred		
(l) Bank	800,000	
Application and allotment — redeemable shares		800,000
Monies received on issue		
(m) Application and allotment — redeemable shares	800,000	
Share premium		300,000
Redeemable shares		500,000
Redeemable shares allotted		

	\$	\$
(n) Redeemable preference shares (Old)	500,000	
Share premium	200,000	
Redemption of shares		700,000
Shares to be redeemed at premium \$0.4		
(o) Redemption of shares	700,000	
Bank		700,000
Monies paid on redemption		
(p) Investments	100,000	
Ordinary share capital		100,000
400,000 March Hares shares of \$0.25 purchased, payment being 200,000		
\$0.5 ordinary shares		
(q) 8 per cent debentures	400,000	
Share premium	40,000	
Debenture redemption		440,000
Amount due on debentures to be redeemed		
(r) Debenture redemption	440,000	
Bank		440,000
Redeemed debentures paid for		
(s) Bank	475,000	
Share premium	25,000	
7% Debentures		500,000
Issue of 7% debentures at 5% discount		
Workings (W1): Due on application and allotment		340,000
Received on application	1,320,000	
Less Returned	(1,032,000)	(288,000)
		<u>52,000</u>
Less Unpaid 100 × \$0.25		(25)
		<u><u>51,975</u></u>

Question 9–8A

(a) Ordinary Share Capital			
	\$000		\$000
Balance c/d	1,000	Balance b/d	500
		Ordinary share application	150
		Ordinary share allotment	150
		Ordinary share first call	100
		Ordinary share final call	100
	<u>1,000</u>		<u>1,000</u>
(b) and (c) Ordinary Share Application and Allotment			
	\$000		\$000
Bank (10,000 × \$3)	30	Bank (85,000 × \$3)	255
Ordinary share capital	300	Bank (50,000 × \$8) – \$75,000	325
Share premium	250		
	<u>580</u>		<u>580</u>

9-8A con't

(d) Share Premium			
	\$000		\$000
Balance c/d	305	Ordinary share allotment	250
		Investments (own shares)	55
	<u>305</u>		<u>305</u>
(e) Ordinary Share: First Call			
	\$000		\$000
Ordinary share capital	100	Bank	100
	<u>100</u>		<u>100</u>
(f) Ordinary Share: Final Call			
	\$000		\$000
Ordinary share capital	100	Bank	90
		Investments (own shares)	10
	<u>100</u>		<u>100</u>
(g) Investments: Own Shares			
	\$000		\$000
Ordinary share: final call	10	Bank	65
Share premium	55		
	<u>65</u>		<u>65</u>

Question 9-10A

Andy's Printing Ltd Journal			
Date	Particulars	Dr	Cr
20X7		\$	\$
Dec 31	10% Debenture	1,000,000	
	Debenture redemption		1,000,000
	Being declaration of debenture redemption		
" 31	Bank	525,000	
	Ordinary share capital		500,000
	Share premium		25,000
	Being receipt from issuing of shares to fund the debenture redemption		
" 31	Profit and loss appropriation	475,000	
	Debenture redemption reserve		475,000
	Being transfer from profit and loss to debenture redemption reserve		
" 31	Share premium	100,000	
	Profit and loss appropriation	50,000	
	Debenture redemption		150,000
	Being redemption of debenture at premium was funded by profit and loss and share premium		

			\$	\$
Dec	31	Debenture redemption Bank Being payment of debenture redemption	1,150,000	1,150,000
Feb	7	Bank (200,000 × \$0.2) Application and allotment Being receipt of application monies	40,000	40,000
Mar	1	Bank (200,000 × \$0.2) Application and allotment Being receipt of allotment monies	40,000	40,000
"	1	Application and allotment Ordinary share capital Being transfer to ordinary share capital	80,000	80,000
Apr	1	First call (200,000 × \$0.3) Ordinary share capital Being first call on shares	60,000	60,000
"	1	Bank Calls in arrears (\$0.3 × 10,000) First call Calls in advance Being receipt of call monies and balances transferred	62,000 3,000	60,000 5,000
May	1	Second call (200,000 × \$0.3) Ordinary share capital Being second call on shares	60,000	60,000
"	1	Bank Call in advance Second call Being receipt of call monies	55,000 5,000	60,000
Jun	8	Ordinary shares (\$0.7 × 10,000) Calls in arrears Forfeited shares Being forfeited of 10,000 ordinary shares	7,000	3,000 4,000
"	8	Forfeited shares (\$0.7 × 10,000) Ordinary shares Being the reissue of ordinary shares	7,000	7,000
"	8	Creditor — Mr David Chan Forfeited shares Being outstanding debts settled by the reissue of ordinary shares	4,000	4,000
"	8	Forfeited shares Share premium Being transfer the profit on forfeited shares to share premium	1,000	1,000

Question 9–12A

(a)

Debenture Redemption Reserve Fund (DRRF)

20X7			\$	20X7			\$
Dec	31	Debenture redemption [O]	20,000	Jan	1	Balance b/f	480,000
"	31	General reserve [P]	579,000	Feb	1	Bank [A]	40,000
				Jul	1	Debenture redemption [G]	1,000
				Aug	1	Bank [H]	25,000
				Dec	31	Sinking fund investment [L]	53,000
			<u>599,000</u>				<u>599,000</u>

(b)

Sinking Fund Investment

20X7			\$	20X7			\$
Jan	1	Balance b/f	480,000	Jul	1	Bank [D]	98,000
Feb	1	Bank [B]	40,000	Dec	31	Bank [K]	500,000
Aug	1	Bank [I]	25,000				
Dec	31	DRRF [L]	53,000				
			<u>598,000</u>				<u>598,000</u>

(c)

8% Debenture

20X7			\$	20X7			\$
Jul	1	Debenture redemption [E]	100,000	Jan	1	Balance b/f	500,000
Dec	31	Debenture redemption [M]	400,000				
			<u>500,000</u>				<u>500,000</u>

(d)

Debenture Interest

20X7			\$	20X7			\$
Jun	30	Bank [C] ($\$500,000 \times 8\% \times \frac{1}{2}$)	20,000	Dec	31	Profit and loss	36,000
Dec	31	Bank [J] ($\$400,000 \times 8\% \times \frac{1}{2}$)	16,000				
			<u>36,000</u>				<u>36,000</u>

(e)

Debenture Redemption

20X7			\$	20X7			\$
Jul	1	Bank [F]	99,000	Jul	1	8% Debentures [E]	100,000
"	1	DRRF [G]	1,000				
			<u>100,000</u>				<u>100,000</u>
Dec	31	Bank [N]	420,000	Dec	31	8% Debentures [M]	400,000
			<u>420,000</u>	"	31	DRRF [O]	20,000
							<u>420,000</u>

(f)

General Reserve					
20X7			20X7		
Dec	31	Balance c/f	Dec	31	DRRF [P]
		<u>579,000</u>			<u>579,000</u>

(g)

Bank					
20X7			20X7		
Jan	1	Balance b/f	Feb	1	Sinking fund investment [B]
Feb	1	DRRF [A]	Jun	30	Debenture interest [C]
Jul	1	Sinking fund investment [D]	Jul	1	Debenture redemption [F]
Aug	1	DRRF [H]	Aug	1	Sinking fund investment [I]
Dec	31	Sinking fund investment [K]	Dec	31	Debenture interest [J]
			"	31	Debenture redemption [N]
			"	31	Balance c/f
		<u>723,000</u>			<u>723,000</u>

Question 10-3A

(a)

Hubble Ltd Journal			
	Dr	Cr	
	\$	\$	
Cash	75,000		
Freehold premises		55,000	
Capital reserve		20,000	
Sale of freehold premises profit transferred to capital reserve			
Freehold premises	80,000		
Capital reserve		80,000	
Surplus on revaluation of premises transferred to capital reserve (\$400,000 – (\$375,000 – \$55,000))			
Freehold premises	100,000		
Plant and machinery	10,000		
Stock	55,000		
Vendor: A Bubble		165,000	
Assets taken over as per purchase agreement			
Vendor: A Bubble	165,000		
Ordinary share capital		120,000	
Share premium		20,000	
Cash		25,000	
Discharge of purchase consideration by issue of 120,000 ordinary share \$1 each and a cash payment of \$25,000			

10-3A con't

(b)

Hubble Ltd Balance Sheet as at 31 May 20X0

	\$	\$
Fixed assets		
Freehold premises at cost or valuation		500,000
Plant and machinery at cost	160,000	
Less Depreciation	(48,765)	111,235
Motor vehicles at cost	8,470	
Less Depreciation	(1,695)	6,775
		<u>618,010</u>
Current assets		
Stock	157,550	
Debtors	96,340	
Bank	11,825	
Cash	105	
	<u>265,820</u>	
Less Current liabilities		
Trade creditors	(63,200)	
Working capital		<u>202,620</u>
		<u>820,630</u>
Financed by:		
Share capital		
Authorised: 650,000 ordinary shares		<u>650,000</u>
Issued: 520,000 ordinary shares		520,000
Reserves		
Share premium	20,000	
Capital reserve	100,000	
Profit and loss	180,630	300,630
		<u>820,630</u>
Workings		
Freehold premises	$\$375,000 + \$100,000 + \$80,000 - \$55,000$	= \$500,000
Plant and machinery	$\$101,235 + \$10,000$	= \$111,235
Bank	$\$75,000 - \$38,175 - \$25,000$	= \$11,825

Authors' note:

The premises sold by Hubble had never been depreciated. The 'profit' of \$20,000 was not, therefore, an adjustment of depreciation, but a capital profit. Capital profits cannot be distributed as cash dividends and therefore the 'profit' of \$20,000 should be taken to a capital reserve.

Question 10-5A

VU Limited				
		<i>Pre-incorporation</i> <i>1.4.20X9 to 30.6.20X9</i>		<i>Post-incorporation</i> <i>1.7.20X9 to 31.3.20Y0</i>
		\$	\$	\$
Sales			30,000	95,000
<i>Less</i> Cost of sales	(A)		(20,779)	(59,221)
			<u>9,221</u>	<u>35,779</u>
<i>Less</i> Depreciation	(B)	555		1,665
Directors' fees		—		500
Administration expenses	(B)	2,210		6,630
Sales commission	(C)	1,050		3,325
Interest on purchase consideration	(B)	1,400		467
Distribution costs:				
Variable	(C)	900		2,850
Fixed	(B)	625		1,875
Debenture interest			<u>1,600</u>	
			(6,740)	(18,912)
Net profit for the periods			<u>2,481</u>	<u>16,867</u>
<i>Less</i> Goodwill written off	(D)	1,000		
Preliminary expenses written off	(D)	1,481		169
Proposed dividend				<u>7,560</u>
			<u>2,481</u>	<u>(7,729)</u>
Retained profit carried forward				<u>9,138</u>

Notes:

- (A) See workings below. (B) Time basis. (C) Pro rata to sales. (D) The goodwill is written off against the pre-incorporation profit of \$2,481, as are preliminary expenses (so far as possible).

The split of cost of sales is rather tricky. The answer will be demonstrated in an arithmetical, rather than algebraic, fashion:

Sales are:	Pre-incorporation	\$30,000 = 24%
	Post-incorporation	\$95,000 = 76%

As post-incorporation cost of sales fell by 10% then the relationship between pre- and post-incorporation cost of sales is:

Pre-incorporation	24.0
Post-incorporation 76% - ($\frac{1}{10}$ of 76%)	68.4
	<u>92.4</u>

$$\therefore \text{Pre-incorporation costs are } \$80,000 \times \frac{100}{92.4} \times \frac{24}{100} = \underline{\underline{\$20,779}}$$

Question 10-6A

Rowlock Ltd

Trading and Profit and Loss Account for the year ended 31 May 20X9

	\$	\$
Sales		52,185
Cost of goods sold:		
Opening stock	5,261	
<i>Add</i> Purchases	38,829	
	<u>44,090</u>	
<i>Less</i> Closing stock	(4,946)	(39,144)
Gross profit	<u>13,041</u>	13,041

		<i>Pre-incorporation</i>		<i>Post-incorporation</i>	
	\$	\$	\$	\$	\$
Gross profit (allocated on basis of sales 5 : 16 *)			3,105		9,936
Variable expenses:					
Wrapping	840				
Postage	441				
Packing	1,890				
(5 : 16)	<u>3,171</u>	755		2,416	
Fixed expenses					
Office	627				
Warehouse rent and rates	921				
(4 : 8)	<u>1,548</u>	516		1,032	
Expenses attributable to company:					
Director's salary		—		1,000	
Debenture interest		—		525	
		<u> </u>	(1,271)	<u> </u>	(4,973)
			<u>1,834</u>		<u>4,963</u>
Formation expenses			(218)		—
Net profit			<u>1,616</u>		<u>4,963</u>

* Gross profit allocated per volume sales in each period:

20X8

Month	Start Date	End Date
June	1	1
July	1	1
August	1	1
September	1	2

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20X9

Month	Start Date	End Date
October	2	2
November	2	2
December	2	2
January	2	2
February	2	2
March	2	2
April	2	2
May	2	2

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Balance Sheet as at 31 May 20X9

	\$	\$
Fixed assets		
Goodwill (see workings)		4,434
Sundry		25,000
		<u>29,434</u>
Current assets		
Stock	4,946	
Sundry	9,745	
	<u>14,691</u>	
Less Current liabilities	<u>(4,162)</u>	
Working capital		10,529
		<u>39,963</u>
Financed by:		
Ordinary share capital		20,000
Profit and loss		4,963
		<u>24,963</u>
7% Debentures		15,000
		<u>39,963</u>

Workings

Purchase of Business Account

	\$		\$
Drawings	500	Balance Rowlock's capital account	
Purchase consideration:		at 1.6.20X8 = net assets	29,450
Ordinary shares	20,000	Pre-incorporation profits	1,616
Debentures	15,000	Goodwill (difference)	4,434
	<u>35,500</u>		<u>35,500</u>

Question 10-8A

- (a) The reasons for the conversion of a partnership into a limited company may be:
- to limit the liabilities of the partners up to the amount of capital issued; or
 - to allow flexibility in raising capital, such as the issue of ordinary shares to potential investors, the issue of preference shares, the issue of convertible bonds, the issue of debentures etc.; or
 - to permit over 20 investors to invest in the business.

10-8A con't

(b)

Fok Enterprise Ltd Balance Sheet as at 30 June 20X6

Fixed assets	\$	\$
Land and building (Note 1)		1,500,000
Office equipment	48,000	
Less Provision for depreciation	(24,000)	24,000
		<u>1,524,000</u>
Goodwill (Note 2)		203,600
Current assets		
Stock (Note 1)	201,500	
Debtors	140,500	
Cash at bank (Note 4)	37,200	
	<u>379,200</u>	
Less Current liabilities		
Creditors	(106,800)	
Net current assets		<u>272,400</u>
		<u><u>2,000,000</u></u>
Financed by:		
Issued share capital		
1,000,000 Ordinary shares of \$1 each, fully paid (Note 3)		1,000,000
Reserves		
Share premium (Note 3)		1,000,000
		<u><u>2,000,000</u></u>

Note 1

These assets are stated at revaluation.

Note 2

	\$	\$
Purchase consideration		2,032,000
Less Net assets purchased		
Land and building	1,500,000	
Office equipment	48,000	
Provision for depreciation	(24,000)	
Stock	201,500	
Debtors	140,500	
Cash at bank	69,200	
Creditors	(106,800)	(1,828,400)
Goodwill		<u><u>203,600</u></u>

Note 3

Purchase consideration funded by:		\$
Issue of 1,000,000 ordinary shares for \$2 (par \$1 + premium \$1)		2,000,000
Cash (balancing figure)		32,000
Total purchase consideration		<u><u>2,032,000</u></u>

Note 4	\$
Cash at bank *(acquired from partnership)	69,200
Partial payment of consideration (Note 3)	(32,000)
Balance c/f	<u>37,200</u>

Note 5

The formation expense is irrelevant to the new company because it is the expense of the partnership.

(c)		Project A		Project B
	\$	\$	\$	\$
Sales		—		42,000
Cost of sales				
Opening stock	—		—	
Cost of production	20,000		30,000	
	<u>20,000</u>		<u>30,000</u>	
Closing stock	(20,000)	—	—	(30,000)
Gross profit		<u>—</u>		<u>12,000</u>

No revenue has been recognised for Project A because the goods have not been despatched, while the revenue of Project B is recognised because the goods have been despatched for delivery.

Question 10-9A

(a)			
Project	Valuation	Rationale	
A	Nil	Pure or applied research is regarded as part of the operating cost required to	
B	Nil	maintain an enterprise's business and its competitive position. It is not expected for the enterprise to benefit in any particular period. Due to this characteristic, research costs should be recognised as an expense in the period in which they are incurred and should not be recognised as an asset in a subsequent period.	
C	\$150,000	The nature of development activities is such that the enterprise can determine the probability of receiving future economic benefits. Therefore development costs are recognised as an asset when they meet criteria which indicate that it is probable that the costs will give rise to future economic benefits.	
(b)	King Limited's acquisition		\$
	Purchase consideration		2,000,000
	Fixed assets	800,000	
	Research and development costs	150,000	
	Investments	200,000	
	Net current assets	100,000	(1,250,000)
	Goodwill on acquisition		<u>750,000</u>
(c)	Jack Limited's acquisition		\$
	Purchase consideration		2,000,000
	Fixed assets	900,000	
	Research and development costs	150,000	
	Investments	200,000	
	Net current assets	100,000	(1,350,000)
	Goodwill on acquisition		<u>650,000</u>

10-9A con't

(d) King Limited		
Balance Sheet (immediately after the purchase of Queen Limited)		
		\$
Fixed assets	(\$5,000,000 + \$800,000)	5,800,000
Goodwill		—
Development costs		150,000
Investments		200,000
Net current assets	(\$3,000,000 + \$100,000)	3,100,000
		<u>9,250,000</u>
Share capital	(\$4,000,000 + \$1 × 1,000,000)	5,000,000
Share premium	(\$1 × 1,000,000 new shares)	1,000,000
General reserves	(\$4,000,000 – \$750,000 goodwill written off)	3,250,000
		<u>9,250,000</u>

(e) Jack Limited		
Balance Sheet (immediately after the purchase of Queen Limited)		
		\$
Fixed assets	(\$4,000,000 + \$900,000)	4,900,000
Goodwill	(\$650,000 – $\frac{\$650,000}{5}$)	520,000
Development costs		150,000
Investments		200,000
Net current assets	(\$4,000,000 + \$100,000 – \$400,000)	3,700,000
		<u>9,470,000</u>
Share capital	(\$5,000,000 + \$1 × 800,000)	5,800,000
Share premium	(\$1 × 800,000 new shares)	800,000
General reserves	(\$3,000,000 – $\frac{\$650,000}{5}$ goodwill amortised over 5 years)	2,870,000
		<u>9,470,000</u>

Question 11-3A

- (a) (i) Deferred tax should be accounted for to the extent that it is probable that a liability or asset will crystallise.

(ii) Crystallisation

The assessment of whether a liability or asset will crystallise is based upon reasonable assumptions relating to financial plans or projections covering a period of years sufficient to enable an assessment to be made of the likely pattern of future tax liabilities.

If these financial plans are not fully developed or subject to a high degree of uncertainty, a prudent view should be taken. However, no minimum period of years is specified by the standard and in practice there may well be increasing uncertainty beyond say the next two years. In such cases, the procedure is to look for a pattern of originating or timing differences e.g. plans for continuing expansion, cyclical capital expenditure.

Given the uncertainty, the plans need to be reviewed each year to assess how closely the actual capital flows have followed the plans for the year, e.g. a material difference might cause future years to be substantially revised: to take the current liquidity position into account, e.g. a growth in output might

have created a larger than expected need for working capital which might impact on planned future capital expenditure; and to take external changes into account, e.g. closures or restriction of capital expenditure in response to recession with a fall in demand or credit squeeze with a fall in the availability of finance.

Debit balances

Deferred tax net debit balances should not be carried forward as assets, except to the extent that they are expected to be recoverable without replacement by equivalent debit balances.

(b) (i) *Depreciation allowance timing differences:*

The cost of the offices does not qualify for tax allowances and the depreciation of \$1.5m on the offices needs to be deducted from the total depreciation charge for deferred tax purposes.

The relevant amounts are:

<i>Year ended</i> <i>31 December</i>	<i>Depreciation</i>	<i>Depreciation</i> <i>allowances</i>	<i>Timing</i> <i>differences</i>	<i>Net</i> <i>cumulative</i>
	\$m	\$m	\$m	\$m
20X3	11.0 – 1.5 = 9.5	18.92	9.42 originating	9.42
20X4	19.8 – 1.5 = 18.3	12.32	5.98 reversing	3.44
20X5	19.8 – 1.5 = 18.3	10.12	8.18 reversing	(4.74)
20X6	17.6 – 1.5 = 16.1	14.84	1.26 reversing	(6.00)

The net cumulative timing differences need to be calculated for the future periods as follows:

<i>Year ended</i> <i>31 December</i>	<i>Timing differences</i>	<i>Net cumulative</i> <i>timing differences</i>
	\$m	\$m
20X3	9.42 originating	9.42
20X4	5.98 reversing	3.44
20X5	8.18 reversing	(4.74)
20X6	1.26 reversing	(6.00)

King Pacific Ltd should provide deferred tax on the maximum potential liability of \$6m arising in 20X6 at 35 per cent i.e. \$2.1m.

The balance sheet amount of \$2.1m will be included under the heading 'Taxation, including deferred tax' with a note as follows:

Deferred taxation accounted for in the balance sheet.

Timing differences on depreciation allowances and depreciation = \$2.1m

The \$2.1m is based on a partial provision approach. In addition there will be a note of the amount not provided for the full potential credit provision. The full provision would be 35 per cent of \$8m [depreciation allowances of \$35.4m – aggregate depreciation (\$28.9m (W1) less depreciation on the offices \$1.5m) \$27.4m].

(W1)

Aggregate depreciation at 31 December 20X2

	<i>Offices</i>	<i>Plant</i>	<i>Equipment</i>	<i>Total</i>
	\$m	\$m	\$m	\$m
Cost	30.0	7.5	130.0	167.5
Aggregate depreciation	(1.5)	(0.3)	(27.1)	(28.9)
Net book value at 31 December 20X2	<u>28.5</u>	<u>7.2</u>	<u>102.9</u>	<u>138.6</u>

Deferred taxation not accounted for in the balance sheet

Depreciation allowances utilised in excess of depreciation charged = (\$2.8m – \$2.1m) \$0.7m

11-3A con't

(ii) *Deferred asset arising from the taxable losses:*

The loss of \$28m gives rise to a deferred asset of \$9.8m.

There is then the question of whether this can be debited to the deferred tax account and recognised in the balance sheet. This requires an assessment of the recoverability of the tax.

Information will be required that (a) there is a history of profitability with any previous losses having been fully recovered and (b) there must be assurance, beyond a reasonable doubt, that future taxable profits will be sufficient to offset the loss during the period of time permitted for such carry forward.

There is information given in the question that there is a history of profitability. There is no information given as to future trading profits/losses. A deferred asset cannot be created until this estimate of future trading results has been established.

If the company satisfies the recoverability test, the deferred tax account will be debited with the \$9.8m arising from the losses resulting in a debit balance of \$7.7m which will be classified under 'prepayments and accrued income' in the balance sheet.

- (c) (i) Revaluation of assets, which it is not intended to sell, resulting in an increase in the balance sheet amount. The balance sheet has benefited from the increased value and on the matching principle any potential liability should be disclosed if not provided.
- (ii) Earnings retained overseas. If further taxation would be payable on the distribution of these earnings then the potential liability, however remote, should be disclosed for a proper evaluation of the assets and earnings.
- (d) There are a number of areas in which the application of the HKSSAP could give rise to different amounts being calculated for deferred tax although the circumstances might be similar. We will comment on two such areas, namely, assessment of forecasts and revaluations.

Assessment of forecasts

There is the difficulty that any provision is dependent upon an assessment of the accuracy of the forecast and this depends on the individual making the forecast. As a result, consistency of treatment between companies is unlikely.

The treatment of revaluations

The standard is unsatisfactory in that it lacks clarity over the appropriate treatment which means that it is a matter for each individual company as to whether or not to make a provision for a future tax liability depending on a decision as to the possible sale or scrapping of the fixed assets, e.g. it is extremely easy for the management to revalue but profess an intention not to sell any of the revalued assets thereby avoiding the need for any provision.

Question 13-3A

Workings

Owens Ltd Capital Reduction			
	\$		\$
Development expenditure	75,000	Preference share capital	37,500
Debit balance of the profit and loss	85,000	Ordinary shares	270,000
Plant (balance)	147,500		
	<u>307,500</u>		<u>307,500</u>

Journal		
	<i>Dr</i>	<i>Cr</i>
	\$	\$
Capital reduction	160,000	
Development expenditure		75,000
Profit and loss account		85,000
Preference share capital	37,500	
Ordinary shares capital	270,000	
Capital reduction		307,500
Capital reduction	147,500	
Plant		147,500

Balance Sheet as at 31 December 20X9		
<i>Fixed assets</i>	\$	\$
Leasehold premises		60,000
Plant		62,500
		<u>122,500</u>
<i>Current assets</i>		
Inventory	64,000	
Debtors	70,000	
Cash at bank	6,000	
	<u>140,000</u>	
<i>Less Current liabilities</i>		
Creditors	(120,000)	
Working capital		<u>20,000</u>
		<u>142,500</u>
<i>Financed by:</i>		
Issued capital:		
150,000 6 per cent Preference shares of \$0.75 each		112,500
300,000 Ordinary shares of \$0.1 each		30,000
		<u>142,500</u>

Question 13-5A

(a)		Realisation	
	\$		\$
Goodwill	20,000	Budgets Ltd	143,150
Fixed assets	100,000	Loss on realisation	56,850
Inventory	22,000		
Work in progress	5,500		
Debtors	34,000		
Bank	17,500		
Formation expenses	1,000		
	<u>200,000</u>		<u>200,000</u>

13-5A con't

Sundry Shareholders

	\$		\$
Profit and loss	40,000	Ordinary share capital	120,000
Loss of realisation	56,850	Preference share capital	50,000
Budgets Ltd: Shares	73,150		
	<u>170,000</u>		<u>170,000</u>

(b) (i)		\$	\$
To Debenture holders:	Cash	20,000	
	+ 6% Debentures	30,000	50,000
To Creditors:	Cash	14,000	
	Shares	6,000	20,000
To Preference shareholders:	Dividend arrears	5,400	
	Shares: 7 for every 8	43,750	49,150
To Ordinary shareholders:	24,000 shares (1 for 5)		24,000
Total purchase consideration			143,150
(ii) Agreed value of fixed assets			\$
Inventory			20,000
Work in progress			5,500
Debtors			34,000
Bank			17,500
Fixed assets (balance)			66,150
			143,150

(c) **Budgets Ltd**
Balance Sheet as at 1 April 20X6

	\$	\$
<i>Fixed assets</i>		66,150
<i>Current assets</i>		
Inventory	20,000	
Work in progress	5,500	
Debtors	34,000	
Bank	104,350	163,850
		<u>230,000</u>
<i>Financed by:</i>		
Issued share capital		200,000
Debentures		30,000
		<u>230,000</u>

Bank

	\$		\$
Balance b/d	17,500	Debenture holders	20,000
Shares issued (\$200,000 – \$79,150)	120,850	Creditors	14,000
		Balance c/d	104,350
	<u>138,350</u>		<u>138,350</u>

Question 14-3A

- (a) There are two methods of accounting for construction contracts: the percentage of completion method and the completed contract method. Using the first method, profit is recognised as the contract activity progresses. Using the second method, profit is recognised only when the contract is completed. If the total profit is recognised only on completion of the contract, it will bear no relationship to the operating activity in respect of the contract over the years in which it has been in progress. Hence the recognition of attributable profit during the period of a long-term construction contract has been recommended, despite the fact that this contradicts the prudence concept. This is one instance where the matching concept has taken precedence over the prudence concept.

- (b) (i) A 'construction contract' is a contract specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology and function or their ultimate purpose or use. Construction contracts include:
- contracts for the rendering of services which are directly related to the asset construction; and
 - contracts for the destruction or restoration of assets, and the restoration of the environment following asset demolition.

SSAP 2.123 differentiates between two types of construction contract: fixed price contract and cost plus contract. A fixed price contract is a construction contract in which the contractor agrees to a fixed contract price, or a fixed rate per unit of output. Under a cost plus contract, the contractor is reimbursed for allowable or otherwise defined costs, plus a percentage of these costs or a fixed fee.

- (ii) When the outcome of a construction contract can be estimated reliably, contract revenue and contract costs associated with the construction contract should be recognised as revenue and expenses respectively based on the percentage of completion of the contract activity at the balance sheet date. Under this method, contract revenue is recognised as revenue in the profit and loss account in the accounting periods in which the work is performed. Contract costs are usually recognised as an expense in the profit and loss account in the accounting periods in which the work to which they relate is performed. However, any expected excess of total contract costs over total contract revenue for the contract is recognised as an expense immediately.

- (c) **Land Development Ltd**
Extracts from the income statement for the year ended 31 December

	<i>To date</i>	<i>Recognised in prior year</i>	<i>Recognised in current year</i>
20W9	\$000	\$000	\$000
Revenue ($\$300,000 \times 25\%$)	75,000		
Expenses ($\$240,000 \times 25\%$)	(60,000)		
Profit	<u>15,000</u>		
	<i>To date</i>	<i>Recognised in prior year</i>	<i>Recognised in current year</i>
20X0	\$000	\$000	\$000
Revenue ($\$300,000 \times 75\%$)	225,000	75,000	150,000
Expenses ($\$240,000 \times 75\% + \$37,500$)	(217,500)	(60,000)	(157,500)
Profit/(loss)	<u>7,500</u>	<u>15,000</u>	<u>(7,500)</u>

14-3A con't

Extracts from the balance sheet as at 31 December

		20W9	20X0
		\$000	\$000
<i>Current assets</i>			
Construction contract			
Contract receivable (retention)		7,500	22,500
			(7,500 + 15,000)
Due from customers		—	—
<i>Current liabilities</i>			
Construction contract			
Due to customers		—	—
 <i>Notes to students:</i>			
Particulars of contract	20W9	20X0	20X1
	\$000	\$000	\$000
Total contract price	300,000	300,000	300,000
Costs to date	60,000	217,500	277,500
Expected costs to complete	180,000	60,000	—
Total estimated costs	240,000	277,500	277,500
Estimated profit	60,000	22,500	22,500
Progress billings to date	75,000	225,000	
% of completion	25%	75%	100%
 Due from customers / due to customers			
		20W9	20X0
		\$000	\$000
Contract costs		60,000	157,500
Profit (loss) recognised		15,000	(7,500)
		75,000	150,000
Progress billings		(75,000)	(150,000)
Due from (to) customers		—	—

Question 14-4A

(a) *Obtaining an order prior to manufacture*

This would be an unlikely place for the critical event to occur. Obtaining an order for a large or long-term construction contract is often very important and gives some measure of reassurance in matters such as employment security and even going concern. However as there would be so much uncertainty involved with regard to the final outcome of such contracts it would not be prudent to recognise income or profit at this point.

Acquisition of goods or raw materials

For most industries this event is a routine occurrence that could not be considered critical. However where this is a very difficult task, perhaps due to the rarity or scarcity of materials, then it may be critical. A rare practical example of this is in the extraction of precious metals or gems, e.g. gold and diamond mining. Because gold is a valuable and readily marketable commodity the real difficulty in deriving income from it is obtaining it, thus this becomes the critical event in such circumstances.

Production of goods

Again for most industries this is routine and not critical. There are some industries where, due to a long production period, income is recognised during the production or manufacturing period. The most common example of this is the treatment of long-term construction contracts under IAS 11: *Construction Contracts*. A less well known example of this 'accretion approach' is found where natural growth occurs such as in the growing of timber. In this industry market prices are available at various stages of growth and income may be recognised at these stages.

Obtaining an order for goods that are in inventory

This is getting near to the point when most of the uncertainties in the cycle have either been resolved or are reasonably determinable. The sales/marketing department of a company would probably consider this as the critical event, however recognition is usually delayed until delivery.

Delivery/acceptance of the goods

For the vast majority of businesses this is the point at which income is recognised, and it usually coincides with the transfer of the legal title to the goods. There are still some uncertainties at this point. For example, the goods may be faulty or the customer may not be able to pay for them. However past experience can be used to quantify and accrue for these possibilities with reasonable accuracy. Occasionally goods are delivered subject to a 'reservation of title' clause, however this is usually ignored for the purpose of revenue recognition.

Collection of cash

With the obvious exception of cash sales, IAS 18: *Revenue* says revenue recognition should only be delayed to this point if collection is perceived to be uncertain, particularly difficult or risky. Income (and profits) from high risk credit sale agreements may be one example of this, another possibility is sales made to overseas customers where the foreign government takes a long time to grant permission to remit the consideration. Particular problems may also arise when dealing with countries that have non-convertible currencies.

After sales service or warranties

This serves as a reminder that not all the risks and associated costs are resolved when cash is received. For some products such costs can be significant (e.g. in the supply of new motor vehicles or rectification work on construction contracts) however it is normally possible to estimate these costs and provide for them at the time of the sale. Unless the obligations go beyond normal warranty provisions, it would be unrealistic, and may cause distortions, if income was not recognised until such obligations had elapsed (IAS 18).

- (b) The Framework approaches income and expense recognition from a balance sheet perspective. The definition of income encompasses both revenue and other gains, whilst that of expense includes losses. Recognition of gains and losses takes place when there is an increase or decrease in equity other than from contributions to, or withdrawals of, capital. Thus increases in economic benefits in the form of inflows or enhancements of assets or decreases in liabilities result in income or gains; and decreases in assets or increases in liabilities results in expenses or losses.

The above definitions identify the essential features of assets and liabilities, but they do not attempt to specify the criteria that need to be met before they are recognised. Recognition is the process of incorporating in the financial statements an item that meets the definition of an element (e.g. an asset or a gain). It involves both a description in words and an assignment of a monetary amount. An item meeting the definition should be recognised if:

- (i) it is probable that any future economic benefit associated with the item will flow to or from the enterprise
- (ii) the item has a cost or value that can be measured (in monetary terms) with reliability

14-4A con't

The above are generally regarded as tests of realisation or of being earned. Failure to recognise such items in the financial statements is not rectified by disclosures in the notes or explanatory material. However such treatment may be appropriate for elements meeting the definitions of an item, but not its recognition criteria (e.g. a contingency).

- (c) (i) Although the 'performance' side of this contract is complete from Telecast Industries' point of view, the income is only earned as the film is shown. Therefore Telecast Industries should accrue for 15% of Warner Cinemas box office revenues from this film for the period 1 July 20X7 to the year end of 30 September 20X7. The only problems here would be prompt access to the relevant information from Warner Cinemas and the possibility, which is probably remote, of a bad debt.
- (ii) In this case the income is a fixed fee and not dependent on any future performance from either party to the contract. Therefore, applying the criteria in the Framework and IAS 18, Telecast Industries should recognise the whole of the \$10,000 in the current year even though some of the screenings may take place after the year end.
- (iii) A traditional view of this contract may be that \$4 million has been paid by Global Satellite to screen the film 10 times and Telecast Industries should therefore recognise \$400,000 each time the film is screened. If this were the case it would mean that no income would be recognised in the current year. However if the IASC's principles described above are considered:
- the film is complete and the rights to it are owned by Telecast Industries
 - a contract has been signed
 - the consideration has been received
 - Telecast Industries have no significant future obligations to perform.

This would appear to meet all of the criteria for income recognition and thus the whole of the \$4 million should be recognised in the current year.

Question 14-7A

- (a) (i) Most merchandising companies sell finished products and recognise revenue at the point of sale. This is often identified as the moment when title legally passes from seller to purchaser. At the point of sale there is an arm's-length transaction to measure reliably the amount of revenue recognised, and point-of-sale timing for revenue recognition is used by many firms, especially merchandising companies.

Four advantages of point-of-sale timing for revenue recognition:

- (1) It is a discernible event.
 - (2) The seller has completed its part of the bargain; that is, the revenue has been earned with the passage of title when the goods are delivered.
 - (3) Realisation has occurred because cash or cash equivalents have been received.
 - (4) The seller's costs have been incurred with the result that net income can be measured.
- (ii) For service companies, accounting recognition of revenue approximates the earning process. The recognition of revenue for accounting purposes takes place during the period in which the services are rendered. Although it is theoretically possible to accrue revenue continuously as the services are rendered, for practical reasons revenue is usually accrued periodically with an emphasis on the appropriate period of recognition. Theoretically, revenue is properly recognised in the accounting period in which the revenue-generating activity takes place.

In some non-service and non-merchandising companies, revenue is recognised as the productive activity takes place instead of at a later period (as at the point of sale). The most common situation in which revenue is recognised as production takes place involves the application of percentage-of-completion accounting to long-term construction contracts. Under this procedure, revenue is approximated, based on degree of contract performance to date, and recorded as earned in the period in which the productive activity takes place.

- (b) (i) 'Revenue' is the gross inflow of economic benefits during the period arising in the course of the ordinary activities of an enterprise when those inflows result in increases in equity, other than increases relating to contributions from equity participants.
- (ii) When goods are sold in exchange for dissimilar goods or services, the exchange is regarded as a transaction which generates revenue. The revenue is measured at the fair value of the goods or services received, as adjusted by the amount of any cash or cash equivalents transferred. When the fair value of the goods or services received cannot be measured reliably, the revenue is measured at the fair value of the goods or services given up, as adjusted by the amount of any cash or cash equivalents transferred.
- (c) (i) Best Advice Ltd has two basic alternatives. It could recognise revenue according to the hours worked by the personnel, or according to the amounts billed.

In a situation where the company can estimate accurately the number of hours to be worked by each person and the rate at which those hours can be billed, revenue should be recognised on the basis of the hours worked by its personnel.

The recognition of revenue according to the amounts billed does not provide any conceptual advantage over the hours-worked alternative, but may be more convenient because it is based on information generated by the company's accounting system.

- (ii) When services are performed by an indeterminate number of acts over a specified period of time, income is recognised on a straight-line basis over the specified period unless some other better method is available. The initial fee should be deferred and recognised as revenue over the lifetime of the related membership by the straight-line method.

The continuing membership fees should be recognised as earned, i.e. each month as the member is obligated to pay them.

- (iii) Francisco Ltd should recognise dividends from Ted Ltd in its 20X1 accounts as the shareholders approved the dividends at the general meeting on 15 April 20X1.

Francisco Ltd can recognise the dividends declared by Fed Ltd in its 20X0 accounts, since a holding company can recognise dividends from a subsidiary at the end of the subsidiary's financial period, even though these dividends are only formally declared afterwards. Francisco Ltd's right to receive dividend payments from Fed Ltd is already established by its control over Fed Ltd.

Question 15-1A

- (a) In accordance with SSAP 2.129, research cost should be recognised as an expense in the period in which they are incurred and should not be recognised as an intangible asset.
- (b) In accordance with SSAP 2.129, the development costs of a project should be recognised as an expense in the period in which they are incurred unless all the criteria for asset recognition identified in the standard are met. Development costs initially recognised as an expense should not be recognised as an intangible asset in a subsequent period.

15-1A con't

The amount of development costs recognised as an intangible asset should be amortised and recognised as an expense on a systematic basis so as to reflect the pattern in which the related economic benefits are recognised.

- (c) In accordance with SSAP 2.129, development costs of a project should be recognised as an intangible asset if, and only if, Sample Limited can demonstrate all of the following:
- (i) the technical feasibility of completing the intangible asset so that it will be available for use or sale;
 - (ii) its intention to complete the intangible asset and use or sell it;
 - (iii) its ability to use or sell the intangible asset;
 - (iv) how the intangible asset will generate probable future economic benefits. Among other things, the enterprise should demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset;
 - (v) the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
 - (vi) its ability to measure the expenditure attributable to the intangible asset during its development reliably.

The development cost of a project recognised as an asset should not exceed the amount that, taken together with further development costs, related production costs, and selling and administrative costs directly incurred in marketing the product, is probable of being recovered from related future economic benefits.

- (d) Project A:

The research on recovery rate is primary investigation undertaken with the prospect of gaining new scientific or technical knowledge and should therefore be recognised as an expense in the period in which it is incurred.

Project B and Project D:

The two projects fulfilled the criteria for intangible asset recognition identified in SSAP 2.129 and should therefore be recognised as an intangible asset.

Amounts to be capitalised for projects B and D in the year ended 30 September 20X2 were:

<i>Project</i>	<i>B</i>	<i>D</i>
	\$	\$
Materials and wages	400,000	200,000
Salary of R&D director	30,000	20,000
Depreciation on plant and machinery used specifically for each project	50,000	14,000
	<u>480,000</u>	<u>234,000</u>

Project C:

This project is carried out on behalf of a third party and the costs incurred should be treated as work-in-progress with the cost calculated as follows:

	\$
Materials and wages	180,000
Salary of R&D director	24,000
Depreciation on plant and machinery used specifically for the project	6,000
	<u>210,000</u>
Restricted to cost recoverable	<u>200,000</u>

Question 16-3A

(i) (Internal use)

Falconer Limited

Trading and Profit and Loss Account for the year ended 31 August 20X8

	\$	\$	\$
Sales		815,920	
<i>Less</i> Returns inwards		(15,380)	800,540
<i>Less</i> Cost of sales			
Inventories 1 September 20X7		128,750	
<i>Add</i> Purchases	540,500		
<i>Less</i> Returns outwards	(24,620)	515,880	
Carriage inwards		5,100	
		649,730	
<i>Less</i> Inventories 31 August 20X8		(144,510)	
Cost of goods sold		505,220	
Wages		6,370	
Hire of plant and machinery		5,200	(516,790)
Gross profit			283,750
Distribution costs			
Salaries and wages	19,480		
Motor expenses	8,970		
General distribution expenses	4,780		
Rent and rates	6,400		
Advertising	8,380		
Depreciation: Motors	7,000		
Plant and machinery	3,500	58,510	
Administrative expenses			
Discounts allowed	5,890		
Salaries and wages	24,800		
Motor expenses	16,220		
General administrative expenses	5,110		
Rent and rates	3,200		
Directors' remuneration	12,400		
Bad debts	1,020		
Auditors' remuneration	1,700		
Hire of plant and machinery	3,720		
Depreciation: Motors	9,000		
	83,060		
<i>Less</i> Discounts received	(7,940)	75,120	(133,630)
			150,120
Income from shares in subsidiary companies		12,800	
Income from shares in associated companies		10,500	23,300
			173,420
Debenture interest			(4,800)
Profit on ordinary activities before taxation			168,620
Tax on profit on ordinary activities			(59,300)
Profit on ordinary activities after taxation			109,320

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Profit on disposal of investments	6,600	
Tax on profit from disposal of investments	(1,920)	4,680
		<u>114,000</u>
Profit for the financial year		18,270
Retained profits from last year		<u>132,270</u>
Transfer to general reserve	25,000	
Preference dividend paid	15,000	
Proposed ordinary dividend	60,000	(100,000)
Retained profits carried to next year		<u><u>32,270</u></u>

(ii) (Published accounts)

Falconer Limited
Income Statement for the year ended 31 August 20X8

	\$	\$
Turnover		<u>800,540</u>
Profit on ordinary activities before taxation		175,220
Tax on profit on ordinary activities		(61,220)
		<u>114,000</u>
Profit for the financial year		18,270
Retained profits from last year		<u>132,270</u>
Transfers to reserves	25,000	
Dividends paid and proposed	75,000	(100,000)
Retained profits carried to next year		<u><u>32,270</u></u>

Question 16-4A

(Published accounts)

Danielle Limited
Income Statement for the year ended 31 December 20X9

	\$	\$
Turnover		<u>860,450</u>
Profit on ordinary activities before taxation		81,500
Tax on profit on ordinary activities		(28,350)
		<u>53,150</u>
Profit for the financial year		29,370
Undistributed profits from last year		<u>82,520</u>
Transfer to general reserve	15,000	
Proposed ordinary dividend	50,000	(65,000)
Undistributed profits carried to next year		<u><u>17,520</u></u>

(Internal use)

Danielle Limited
Trading and Profit and Loss Account for the year ended 31 December 20X9

	\$	\$	\$
Sales		880,000	
<i>Less</i> Returns inwards		<u>(19,550)</u>	860,450
<i>Less</i> Cost of sales			
Inventories 1 January 20X9		220,500	
<i>Add</i> Purchases	405,600		
<i>Less</i> Returns outwards	<u>(15,800)</u>	389,800	
		<u>610,300</u>	
<i>Less</i> Inventories 31 December 20X9		<u>(210,840)</u>	(399,460)
Gross profit			<u>460,990</u>
Distribution costs			
Hire of motor vehicles	9,470		
General distribution expenses	11,300		
Wages and salaries	134,690		
Motor expenses	12,400		
Depreciation: Plant and machinery	<u>30,000</u>	197,860	
Administrative expenses			
Discounts allowed	5,040		
Hire of motor vehicles	5,710		
General administrative expenses	15,800		
Wages and salaries	89,720		
Directors' remuneration	42,000		
Motor expenses	6,200		
Auditors' remuneration	3,000		
Depreciation: Plant and machinery	<u>25,000</u>		
	<u>192,470</u>		
<i>Less</i> Discounts received	<u>(3,890)</u>	<u>188,580</u>	(386,440)
			<u>74,550</u>
Licence fees receivable			5,100
			<u>79,650</u>
Bank interest receivable			1,850
Profit on ordinary activities before taxation			<u>81,500</u>
Tax on profit on ordinary activities			(28,350)
Profit on ordinary activities after taxation			<u>53,150</u>
Undistributed profits from last year			29,370
			<u>82,520</u>
Transfer to general reserve		15,000	
Proposed ordinary dividend		<u>50,000</u>	(65,000)
Undistributed profits carried to next year			<u><u>17,520</u></u>

Question 17-2A

(a) (For internal use)

Payne Peerbrook Limited			
Trading and Profit and Loss Account for the year ended 31 December 20X8			
	\$	\$	\$
Sales		449,110	
<i>Less</i> Returns inwards		(11,380)	437,730
<i>Less</i> Cost of sales			
Inventories 1 January 20X8		107,143	
<i>Add</i> Purchases		218,940	
<i>Add</i> Carriage inwards		2,475	
		328,558	
<i>Less</i> Inventories 31 December 20X8		(144,081)	
		184,477	
Wages		3,096	
Depreciation: Plant and machinery		7,000	(194,573)
Gross profit			243,157
Distribution costs			
Warehouse wages	39,722		
Wages and salaries: Sales staff	28,161		
Motor expenses	12,300		
General distribution expenses	8,061		
Depreciation: Plant and machinery	21,000		
Motor vehicles	6,000	115,244	
Administrative expenses			
Wages and salaries	34,778		
Motor expenses	4,100		
General administrative expenses	7,914		
Debenture interest	10,000		
Directors' remuneration	18,450		
Bad debts	3,050		
Discounts allowed	5,164		
Depreciation: Plant and machinery	7,000		
Motor vehicles	2,000		
	92,456		
<i>Less</i> Discounts received	(4,092)	88,364	(203,608)
			39,549
Other operating income: Royalties receivable			4,179
Profit on ordinary activities before taxation			43,728
Tax on profit on ordinary activities			(14,150)
Profit on ordinary activities after taxation			29,578
Undistributed profits from last year			19,343
			48,921
Preference dividend		5,000	
Proposed ordinary dividend		10,000	(15,000)
Undistributed profits carried forward to next year			33,921

(b) (For publication)

Payne Peerbrook Limited
Income Statement for the year ended 31 December 20X8

	\$
Turnover	432,566
Cost of sales	(190,481)
Gross profit	<u>242,085</u>
Other revenue	4,179
Distribution expenses	(115,244)
Administrative expenses	(87,292)
Profit before taxation	<u>43,728</u>
Taxation	(14,150)
Net profit for the year	<u><u>29,578</u></u>
Dividend	
Preference dividend paid	5,000
Proposed ordinary dividend	10,000
	<u><u>15,000</u></u>

Payne Peerbrook Limited
Balance Sheet as at 31 December 20X8

	Note	\$	\$
<i>Non-current assets</i>			
Fixed assets	1		91,100
Intangible assets			45,820
			<u>136,920</u>
<i>Current assets</i>			
Inventories		144,081	
Trade debtors		78,105	
		<u>222,186</u>	
<i>Current liabilities</i>			
Bank loans and overdrafts		4,279	
Trade creditors		37,106	
Bills payable		6,050	
Other payable	2	29,150	
		<u>76,585</u>	
Net current assets			145,601
<i>Non-current liabilities</i>			
Debenture loans			(80,000)
			<u>202,521</u>
<i>Capital and reserves</i>			
Share capital	3		110,000
Reserves	4		92,521
			<u><u>202,521</u></u>

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Payne Peerbrook Limited
Notes on the Accounts for the year ended 31 December 20X8

1	Fixed assets	<i>Plant & machinery</i>	<i>Motor vehicles</i>	<i>Total</i>
		\$	\$	\$
	Costs	175,000	32,000	207,000
	Aggregate depreciation			
	At 31 December 20X7	58,400	14,500	72,900
	Charge for the year	35,000	8,000	43,000
	At 31 December 20X8	93,400	22,500	115,900
	Net book value	81,600	9,500	91,100
<hr/>				
2	Other payable			\$
	Profits tax payable			14,150
	Preference dividend payable			5,000
	Ordinary dividend payable			10,000
				29,150
<hr/>				
3	Share capital			\$
	50,000 Preference shares of \$1 each			50,000
	120,000 Ordinary shares of \$0.50 each			60,000
				110,000
<hr/>				
4	Reserves			\$
	General reserve			45,000
	Exchange reserve			13,600
	Profit and loss account			33,921
				92,521

Payne Peerbrook Limited
Statement of Changes in Equity for the year ended 31 December 20X8

	<i>Share capital</i>	<i>General reserve</i>	<i>Exchange reserve</i>	<i>Retained profits</i>	<i>Total</i>
	\$	\$	\$	\$	\$
Balance at 31 December 20X7	110,000	45,000	13,600	19,343	187,943
Profit for the year	—	—	—	29,578	29,578
Dividend for the year	—	—	—	(15,000)	(15,000)
Balance at 31 December 20X8	110,000	45,000	13,600	33,921	202,521

Question 17-4A

(a) (i) Movements on reserves

	<i>Share premium</i>	<i>Revaluation reserve</i>	<i>Retained earnings</i>	<i>Total</i>
	\$000	\$000	\$000	\$000
At 30 September 20X8	400	—	4,060	4,460
Rights issue	1,000	—	—	1,000
Bonus issue	(1,400)	—	(600)	(2,000)
Revaluation of assets	—	500	—	500
Net profit for year	—	—	370	370
At 30 September 20X9	<u>Nil</u>	<u>500</u>	<u>3,830</u>	<u>4,330</u>

(ii) Movements on fixed assets

	<i>Land</i>	<i>Buildings</i>	<i>Plant and machinery</i>	<i>Total</i>
<i>Cost</i>	\$000	\$000	\$000	\$000
At September 20X8	2,000	1,500	2,800	6,300
Additions	600	2,400	1,600	4,600
Disposals	—	—	(1,000)	(1,000)
Revaluation	500	—	—	500
At 30 September 20X9	<u>3,100</u>	<u>3,900</u>	<u>3,400</u>	<u>10,400</u>
<i>Aggregate Depreciation</i>				
At 30 September 20X8	Nil	450	1,000	1,450
Charge for year	Nil	46	220	266
Disposals	—	—	(800)	(800)
At 30 September 20X9	<u>Nil</u>	<u>496</u>	<u>420</u>	<u>916</u>
Net book value 30 September 20X9	<u>3,100</u>	<u>3,404</u>	<u>2,980</u>	<u>9,484</u>

Calculation of depreciation charges

		\$000
Buildings	$2\% \times 1,500,000$	30
	$2\% \times 2,400,000 \times \frac{4}{12}$	16
		<u>46</u>
Plant and machinery	$10\% \times 1,800,000$	180
	$10\% \times 1,600,000 \times \frac{3}{12}$	40
		<u>220</u>

(b) *Share premium account*

The distribution of a dividend implies a profit of some kind out of which the dividend is paid. No profit arises when an issue of shares is made at a premium — the premium is part of the capital of the company.

Revaluation reserve

A gain does arise when assets are revalued, but it is not realised into cash. It is a generally accepted accounting principle that profit can only be distributed when it is realised, because an unrealised profit can disappear if the value of the revalued asset subsequently drops.

Question 20-4A**P & S Consolidated Balance Sheet**

	\$
Goodwill	5,000
Fixed assets	17,000
Inventory	10,000
Debtors	7,000
Bank	3,000
	<u>42,000</u>
Share capital	42,000
	<u>42,000</u>

Question 20-5A**P & S Consolidated Balance Sheet**

	\$
Fixed assets	66,000
Goodwill: negative goodwill	(13,000)
Inventory	11,000
Debtors	9,000
Bank	7,000
	<u>80,000</u>
Share capital	80,000
	<u>80,000</u>

Question 20-8A**P & S Consolidated Balance Sheet**

	\$
Fixed assets	1,560
Goodwill: negative goodwill	(60)
Inventory	500
Debtors	440
Bank	160
	<u>2,600</u>
Share capital	2,300
Minority interest	300
	<u>2,600</u>

Question 20-9A

P & S Consolidated Balance Sheet

	\$
Goodwill	350
Fixed assets	3,250
Inventory	1,400
Debtors	1,050
Bank	350
	<u>6,400</u>
Share capital	6,000
Minority interest	400
	<u>6,400</u>

Question 20-12A

P, S1 and S2 Consolidated Balance Sheet

	\$
Goodwill	850
Goodwill: negative goodwill	(350)
	<u>500</u>
Fixed assets	14,450
Current assets	6,700
	<u>21,650</u>
Share capital	15,000
Profit and loss account	2,000
General reserve	3,300
Minority interest	1,350
	<u>21,650</u>

Question 20-13A

P, S1 and S2 Consolidated Balance Sheet

	\$
Goodwill (S1 \$1,030 + S2 \$1,400)	2,430
Fixed assets	9,630
Current assets	4,700
	<u>16,760</u>
Share capital	11,000
Profit and loss account	1,000
General reserve	2,600
Minority interest	2,160
	<u>16,760</u>

Question 21-3A

P & S Consolidated Balance Sheet as at 31 December 20X7

	\$
Goodwill (Cost \$4,850 – (55% of (\$5,000 + \$700 + \$1,500)))	890
Fixed assets	17,750
Current assets	16,600
	<u>35,240</u>
Share capital	30,000
Profit and loss account (\$1,500 + (55% of \$500))	1,775
Minority interest (\$2,250 + (45% of (\$1,200 + \$1,500)))	3,465
	<u>35,240</u>

Question 21-5A

P, S1 and S2 Consolidated Balance Sheet as at 31 December 20X3

	\$
Goodwill (S1 Cost: \$49,000 – (80% of (\$50,000 + \$3,000 + \$6,000)))	1,800
Negative goodwill (S2 Cost: \$30,500 – (75% of (\$36,000 + \$4,800 + \$1,800)))	(1,450)
Fixed assets	159,600
Current assets	114,300
	<u>274,250</u>
Share capital	200,000
Profit and loss account (\$27,000 – (80% of \$1,600) + (75% of \$3,400))	28,270
General reserve	23,000
Minority interest (20% of (\$50,000 + \$1,400 + \$6,000) + 25% of (\$36,000 + \$8,200 + \$1,800))	22,980
	<u>274,250</u>

Question 21-6A

(All in \$000)	\$000	\$000
(a) Cost of acquisition		150
Nominal value shares bought	80	
Retained profits (\$50 × 80%)	40	(120)
Goodwill		<u>30</u>
(b)		\$000
Heather		700
Thistle (\$120 – \$50) × 80%		56
		<u>756</u>
Less Goodwill written off per (a)		(30)
Group retained profit		<u>726</u>

(c) Minority interest:	\$000
Nominal value of shares	100
Retained profits on acquisition	120
	<u>220</u>

Minority interest $\$220,000 \times 20\% = \underline{\underline{\$44,000}}$

Question 22-4a

Seneley Group Consolidated Balance Sheet as at 30 September 20X6

	\$000	\$000
Goodwill (W4)		58
Goodwill: negative goodwill (W4)		<u>(52)</u>
		6
Tangible fixed assets		745
<i>Current assets</i>		
Stock (\$225 + \$150 + \$45 - \$4)	416	
Debtors (W1)	420	
Cash and bank	65	
	<u>901</u>	
<i>Creditors: amounts falling due within one year</i>		
Creditors (W1)	(430)	
Net current assets		<u>471</u>
		<u>1,222</u>
<i>Capital and reserves</i>		
Called-up share capital		800
Profit and loss account (W2)		237
		<u>1,037</u>
Minority interest (W3)		185
		<u>1,222</u>

(W1)	<i>Debtors</i>		<i>Creditors</i>	
	\$000	\$000	\$000	\$000
Seneley		240		320
Lowe		180		90
Wright		50		70
		<u>470</u>		<u>480</u>
<i>Less Intercompany debts:</i>				
Wright owed Lowe	25		25	
Lowe owed Seneley	20		20	
Seneley owed Wright	5	(50)	5	(50)
	<u></u>	<u>420</u>	<u></u>	<u>430</u>

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(W2) <i>Profit and loss:</i>				\$000
Seneley				200
Lowe $(\$150 - \$90) \times 80\%$				48
Wright $(\$50 - \$60) \times 70\%$				(7)
				<u>241</u>
<i>Less</i> Profit in stock				(4)
				<u>237</u>
(W3) <i>Minority interest:</i>				\$000
Lowe $\$550 \times 20\%$				110
Wright $\$250 \times 30\%$				75
				<u>185</u>
(W4) <i>Cost of control:</i>		<i>Lowe</i>		<i>Wright</i>
		\$000		\$000
Cost of investment		450		130
Share capital	80%	(320)	70%	(140)
Profit and loss	80%	(72)	70%	(42)
Goodwill/(Negative goodwill)		<u>58</u>		<u>(52)</u>

Question 22-5A

P, S1 and S2 Consolidated Balance Sheet as at 31 December 20X3

	\$	\$
Goodwill		43,200
Fixed assets		<u>239,800</u>
		283,000
<i>Current assets</i>		
Inventory $(\$66,000 - \$600)$	65,400	
Debtors $(\$63,000 - \$4,300)$	58,700	
Bank	13,000	
	<u>137,100</u>	
<i>Less Current liabilities</i>		
Creditors $(\$50,000 - \$4,300)$	(45,700)	
Net current assets		<u>91,400</u>
		<u>374,400</u>
<i>Financed by:</i>		
Share capital		300,000
Profit and loss account: $(P \$15,000 - \$600 + S1 \$12,000 - S2 \frac{9}{16} \times \$2,400)$		25,050
General reserve		7,000
Minority interest $(\frac{7}{16} \times (\$80,000 + \$10,400 + \$6,400))$		42,350
		<u>374,400</u>

Question 22-7A

Block Group of Companies Consolidated Balance Sheet as at 30 September 20X8

	\$000	\$000	\$000
Goodwill (W1)			100
Goodwill: negative goodwill (W1)			(60)
			<u>40</u>
Fixed assets (\$8,900 + \$2,280 + \$3,240)			14,420
<i>Current assets</i>			
Stock (\$300 + \$80 + \$160 - \$50)		490	
Debtors (\$1,600 + \$130 + \$50 - \$20 - \$30)		1,730	
Cash (\$400 + \$110 + \$120)		630	
		<u>2,850</u>	
<i>Less Creditors: amounts falling due within one year</i>			
Creditors (\$200 + \$90 + \$110 - \$20 - \$30)	350		
Proposed dividends (\$100 + \$10 + \$8)	118	(468)	
	<u></u>	<u></u>	
Net current assets			2,382
Total assets <i>less</i> current liabilities			<u>16,842</u>
<i>Capital and reserves</i>			
Called-up share capital			10,000
Profit and loss account (W2)			5,182
			<u>15,182</u>
Minority interest (W3)			1,660
			<u>16,842</u>
<i>Workings:</i>			
(W1) <i>Goodwill</i>		<i>Chip</i>	<i>Knot</i>
	\$000	\$000	\$000
Cost		2,500	1,600
Shares	3,000		2,000
Profit and loss	200		500
	<u>3,200</u>	<u>(2,560)</u>	<u>2,500</u>
	× 80%		× 60%
		<u>(60)</u>	<u>(1,500)</u>
			<u>100</u>
(W2) <i>Profit and loss</i>			\$000
Block			5,000
Chip (\$500 - \$200) × 80%			240
Knot (\$400 - \$500) × 60%			(60)
Dividends proposed: Chip 80% × \$50			40
Knot 60% × \$20			12
Stock profit unrealised \$100 × 50%			(50)
			<u>5,182</u>
(W3) <i>Minority interest</i>			\$000
Chip 20% × \$3,500			700
Knot 40% × \$2,400			960
			<u>1,660</u>

Question 23-2A

	Shares	\$	\$
75% Share capital and reserves 31 December 20X9			540,000
Shares bought 31 December 20X6	100,000	210,000	
Shares bought 31 December 20X9	200,000	550,000	
	<u>300,000</u>		(760,000)
Goodwill			<u>220,000</u>

Question 23-4A

	\$	\$
Shares bought		225,000
Reserves at 31 December 20X0 (\$28,000 + \$20,000)	48,000	
Add Proportion of 20X1 profits before acquisition ($\frac{5}{12} \times \$36,000$)	15,000	
	<u>63,000</u>	
Proportion of pre-acquisition profits ($\frac{225,000}{300,000} \times \$63,000$)		47,250
		<u>272,250</u>

Paid for shares \$333,000. Therefore goodwill is \$333,000 - \$272,250 = \$60,750.

Question 24-2A

P & S Consolidated Balance Sheet as at 31 December 20X4

	\$
Goodwill (Cost \$194,000 - \$100,000 - \$11,000 - Dividend \$20,000 = \$63,000)	63,000
Fixed assets	334,000
Current assets	108,000
	<u>505,000</u>
Share capital	400,000
Profit and loss account: (P \$39,000 + \$64,000 - \$20,000 + \$22,000)	105,000
	<u>505,000</u>

Question 24-4A

P & S Consolidated Balance Sheet as at 31 December 20X4

	\$	\$
Goodwill (Cost \$230,000 - \$120,000 - 60% of \$51,000)		79,400
Fixed assets		503,000
Current assets	176,000	
Less Current liabilities: Proposed dividend	<u>(16,000)</u>	
Net current assets		160,000
		<u>742,400</u>
Share capital		500,000
Profit and loss account: (P \$105,000 + 60% of \$13,000 + 60% of \$40,000)		136,800
Minority interest: (\$80,000 + 40% of \$64,000)		105,600
		<u>742,400</u>

Question 24-6A

(a)

P plc & S plc Consolidated Balance Sheet as at 30 April 20X8

Goodwill			\$000 22
	<i>Cost</i>	<i>Depreciation to date</i>	
<i>Tangible fixed assets</i>	\$000	\$000	\$000
Freehold property	141	55	86
Plant	440	148	292
	<u>581</u>	<u>203</u>	<u>378</u>
<i>Current assets</i>			
Stock (W1)		172	
Debtors (W2)		35	
Cash (W3)		25	
		<u>232</u>	
<i>Creditors: amounts falling due within one year</i>			
Trade creditors (W4)	51		
Taxation	80		
Proposed dividends:			
to group shareholders	15		
to minority interest (W5)	<u>2.6</u>	<u>(148.6)</u>	
Net current assets			83.4
Total assets <i>less</i> current liabilities			<u>483.4</u>
<i>Capital and reserves</i>			
Called-up share capital			300
Reserves			
Share premium			20
General reserve (W7)			64
Profit and loss account			57.4
			<u>441.4</u>
Minority interest (W6)			42
			<u>483.4</u>

Workings:

	Cost of Control	
	\$000	\$000
Cost of control	160	
		Ordinary share capital ($80\% \times 100$)
		Preference share capital ($50\% \times 20$)
		Share premium ($80\% \times 10$)
		General reserve ($80\% \times 20$)
		Profit and loss ($80\% \times 30$)
		Goodwill
	<u>160</u>	<u>160</u>

24-6 con't

	\$000	\$000	\$000
(W1) Stock: P	111		
S	65	176	
Less Profit in unsold stock 20% margin \times 20	<u> </u>	(4)	<u>172</u>
 (W2) Debtors: P	30		
S	15	45	
Less Intercompany account	<u> </u>	(10)	<u>35</u>
 (W3) Cash: P		19	
S		2	
Cheque in transit		4	<u>25</u>
 (W4) Trade creditors: P	35		
S	22	57	
Less Intercompany account	<u> </u>	(6)	<u>51</u>
 (W5) Payable by S: Preference		2	
Ordinary		8	<u>10</u>
To minority interest: 50% \times \$2		1	
20% \times \$8		1.6	<u>2.6</u>
 (W6) Minority interest: Ordinary share capital (20% \times \$100)		20	
Preference share capital (50% \times \$20)		10	
Share premium (20% \times \$10)		2	
General reserve (20% \times \$15)		3	
Profit and loss (20% \times \$35)		7	<u>42</u>
 (W7) General reserve: P		68	
Less 80% reduction S reserve \times \$5		(4)	<u>64</u>
 (W8) Profit and loss: P	50		
S 80% \times \$5	4		
Dividends due (\$6.4 + \$1.0)	7.4	61.4	
Less Profit on intercompany stock (<i>see</i> W1)	<u> </u>	(4)	<u>57.4</u>

- (b) 'Cost of control' is the excess of the purchase price over the value of the assets acquired when one company takes a controlling interest in another company. It is often called 'goodwill' although the term 'cost of control' is more explicit.

The treatment in the financial statements has followed the option in FRS 10 to capitalise the goodwill but not amortise it, presumably on the grounds that it will have an indefinite useful economic life.

Question 24-8A

Houston Ltd Balance Sheet as at 31 March 20X5

	Note	\$	\$
<i>Fixed assets</i>			
Tangible assets	1		580,000
Investment in Starry Ltd	3		300,000
			<u>880,000</u>
<i>Current assets</i>	4	290,415	
Current account with Starry Ltd	5	27,861	
		<u>318,276</u>	
<i>Current liabilities</i>	6	(162,856)	
<i>Net current assets</i>			<u>155,420</u>
Total assets less current liabilities			1,035,420
Long-term liabilities			(150,000)
			<u>885,420</u>
<i>Share capital</i>			
Ordinary shares of \$1 each			720,000
<i>Reserves</i>			
General reserves	8	154,000	
Retained profits	9	<u>11,420</u>	<u>165,420</u>
			<u>885,420</u>
<i>Notes</i>			
1 <i>Tangible assets</i>			\$
Consolidated balance at 31 March 20X5			797,000
Less Starry's balance at 31 March 20X5			(217,000)
Houston's balance at 31 March 20X5			<u>580,000</u>
2 <i>Pre-acquisition general reserve</i>			\$
Starry's reserve at 31 March 20X5			24,000
Less Transfer from retained profit			(4,000)
Pre-acquisition reserve at 1 April 20X4			<u>20,000</u>
3 <i>Cost of control account</i>			Dr/(Cr)
			\$
Cost of investment			300,000
Share capital			(250,000)
Pre-acquisition reserve			(20,000)
Pre-acquisition retained profit			(2,000)
Goodwill arising on consolidation			<u>(28,000)</u>

24–8A con't

4	Current assets	\$	\$
	Consolidated balance at 31 March 20X5		536,046
	<i>Less</i> Stocks-in-transit	9,775	
	Adjust unrealised profit of stocks-in-transit ($\$9,775 \times 15/115$)	(1,275)	(8,500)
			<u>527,546</u>
	<i>Less</i> Cash-in-transit		(5,000)
			<u>522,546</u>
	<i>Less</i> Current assets of Starry at 31 March 20X5	239,565	
	<i>Less</i> Unrealised profit on stocks sold to Starry ($\$56,994 \times 15/115$)	(7,434)	(232,131)
	Houston's balance at 31 March 20X5		<u><u>290,415</u></u>
5	Current account		<i>Dr/(Cr)</i>
	In books of Starry Ltd		\$
	Balance at 31 March 20X5		(13,086)
	<i>Add</i> Stocks-in-transit (already recorded in the books of Houston)		(9,775)
	Adjusted balance at 31 March 20X5		<u><u>(22,861)</u></u>
	In books of Houston Ltd		<i>Dr/(Cr)</i>
	Adjusted balance at 31 March 20X5		22,861
	<i>Add</i> Cash-in-transit (already recorded in the books of Starry)		5,000
	Balance at 31 March 20X5		<u><u>27,861</u></u>
6	Current liabilities		\$
	Consolidated balance at 31 March 20X5		247,485
	<i>Less</i> Starry's balance at 31 March 20X5		(84,629)
	Houston's balance at 31 March 20X5		<u><u>162,856</u></u>
7	Long-term liabilities		\$
	Consolidated balance at 31 March 20X5		230,000
	<i>Less</i> Starry's balance at 31 March 20X5		(80,000)
	Houston's balance at 31 March 20X5		<u><u>150,000</u></u>
8	General reserves		\$
	Consolidated balance at 31 March 20X8		158,000
	<i>Add</i> Pre-acquisition reserves eliminated on consolidation (Note 2)		20,000
			<u>178,000</u>
	<i>Less</i> Reserves of Starry on company level		(24,000)
	Houston's balance at 31 March 20X5		<u><u>154,000</u></u>
9	Retained profits		\$
	Consolidated balance at 31 March 20X5		5,561
	<i>Add</i> Consolidation adjustments		
	Pre-acquisition retained profits		2,000
	Unrealised profit on stocks ($\$56,994 + \$9,775 \times 15/115$)		8,709
			<u>16,270</u>
	<i>Less</i> Profits of Starry on company level		(4,850)
	Houston's balance at 31 March 20X5		<u><u>11,420</u></u>

Question 25-3A

P & S Consolidated Balance Sheet as at 31 December 20X5

	\$	\$
Goodwill		5,400
Fixed assets	110,000	
<i>Less</i> Depreciation	(11,000)	99,000
Current assets		21,600
		<u>126,000</u>
Share capital		80,000
Profit and loss account: (P \$38,000 + S \$9,000 – \$1,000)		46,000
		<u>126,000</u>

Question 25-4A

H Ltd and S Ltd Balance Sheet as at 30 June 20X7

	\$	\$
Fixed assets		344,000
Goodwill on consolidation		28,000
		<u>372,000</u>
Current assets	236,000	
<i>Less</i> Current liabilities	(197,000)	
Net working capital		39,000
		<u>411,000</u>
Financed by:		
Share capital — Ordinary shares of \$2 each		220,000
Revaluation reserve		2,400
Profit and loss account		162,000
Shareholders' funds		<u>384,400</u>
Minority interest		26,600
		<u>411,000</u>

Investments in S Ltd

	\$		\$
Balance b/f	<u>100,000</u>	Cost of control	<u>100,000</u>

Cost of Control

	\$		\$
Cost of investment	100,000	Nominal value of shares held (\$20,000 × 80%)	16,000
		Pre-acquisition revaluation (\$30,000 × 80%)	24,000
		Pre-acquisition profit (\$40,000 × 80%)	32,000
		Goodwill on consolidation	28,000
	<u>100,000</u>		<u>100,000</u>

25-4A con't

Minority Interest

	\$		\$
Balance c/f	26,600	Ordinary shares	4,000
		Revaluation reserves	6,600
		Profit and loss account	16,000
	<u>26,600</u>		<u>26,600</u>

Profit and Loss Account of H Ltd

	\$		\$
Bonus issue ($\$200,000 \times 10\% - \$14,000$)	6,000	Balance b/f	140,000
Unrealised profit on stock ($\$24,000 \times \frac{20}{120}$)	4,000		
Consolidated profit and loss	130,000		
	<u>140,000</u>		<u>140,000</u>

Ordinary Shares of H Ltd

	\$		\$
Balance c/f	220,000	Balance b/f	200,000
		Bonus issue financed by:	
		Share premium	14,000
		Profit and loss account	6,000
	<u>220,000</u>		<u>220,000</u>

Ordinary Shares of S Ltd

	\$		\$
Cost of control ($\$20,000 \times 80\%$)	16,000	Balance b/f	20,000
Minority interest ($\$20,000 \times 20\%$)	4,000		
	<u>20,000</u>		<u>20,000</u>

Profit and Loss Account of S Ltd

	\$		\$
Cost of control ($\$40,000 \times 80\%$)	32,000	Balance b/f	
Consolidated profit and loss ($\$40,000 \times 80\%$)	32,000	— pre-acquisition	40,000
Minority interest ($\$80,000 \times 20\%$)	16,000	— post acquisition	40,000
	<u>80,000</u>		<u>80,000</u>

Revaluation Reserve of S Ltd

	\$		\$
Cost of control ($\$30,000 \times 80\%$)	24,000	Balance b/f	33,000
Consolidated revaluation reserve ($\$3,000 \times 80\%$)	2,400		
Minority interest ($\$33,000 \times 20\%$)	6,600		
	<u>33,000</u>		<u>33,000</u>

	<i>H Ltd</i>	<i>S Ltd</i>	<i>Adjustment</i>	<i>Consolidation</i>
	\$	\$	\$	\$
Fixed assets	204,000	140,000	—	344,000
Current assets	160,000	80,000	(4,000)	236,000
Current liabilities	110,000	87,000	—	197,000

Question 25-5A

P & S Consolidated Balance Sheet as at 31 December 20X5

	\$	\$
Goodwill		2,000
Fixed assets	108,000	
Less Depreciation	(23,800)	84,200
Current assets		32,000
		<u>118,200</u>
Share capital		75,000
Profit and loss account: (P \$38,000 – \$2,000 + S \$7,000 + \$200)		43,200
		<u>118,200</u>

Question 25-6A

- (a) The revaluation of the fixed assets at the date of acquisition affects the calculation of goodwill and the minority interest. The depreciation charge affects only post-acquisition profits.

H Ltd and Subsidiary Consolidated Balance Sheet as at 30 June 20X9

	\$	\$
<i>Fixed Assets</i> (Note 1)		
Cost/Valuation	225,000	
Accumulated depreciation	(77,500)	147,500
Goodwill on consolidation		21,000
Net current assets		103,000
		<u>271,500</u>
<i>Financed by:</i>		
Share capital — Ordinary shares		120,000
Reserve		26,000
Profit and loss account		83,300
Shareholders' funds		<u>229,300</u>
Minority interest		42,200
		<u>271,500</u>

25-6 con't

Investment in S Ltd			
	\$		\$
Balance b/f	<u>78,000</u>	Cost of control	<u>78,000</u>
Cost of control			
	\$		\$
Investment in S Ltd	78,000	Nominal value of shares held (60% × \$60,000)	36,000
		S Ltd reserves (60% × \$10,000)	6,000
		S Ltd revaluation reserves (60% × (\$60,000 – \$40,000)) (Note 2)	12,000
		S Ltd profit and loss (60% × \$5,000)	3,000
		Goodwill on consolidation	21,000
	<u>78,000</u>		<u>78,000</u>
S Ltd Reserves			
	\$		\$
Cost of control	6,000	Balance b/f	15,000
Consolidated reserves (60% × (\$15,000 – \$10,000))	3,000		
Minority interest (40% × \$15,000)	6,000		
	<u>15,000</u>		<u>15,000</u>
S Ltd Profit and Loss account			
	\$		\$
Cost of control (60% × \$5,000)	3,000	Balance b/f	18,000
Extra depreciation (Note 3)	7,500		
Consolidated profit and loss (60% × (\$13,000 – \$7,500))	3,300		
Minority interest (40% × (\$18,000 – \$7,500))	4,200		
	<u>18,000</u>		<u>18,000</u>
Minority Interest			
	\$		\$
Consolidated balance sheet	42,200	Nominal value of share held (40% × \$60,000)	24,000
		S Ltd reserves (40% × \$15,000)	6,000
		S Ltd revaluation reserves (40% × (\$60,000 – \$40,000))	8,000
		S Ltd profit and loss (40% × (\$18,000 – \$7,500))	4,200
	<u>42,200</u>		<u>42,200</u>

Consolidated Reserves			
	\$		\$
Consolidated balance sheet	26,000	H Ltd reserves	23,000
		S Ltd reserves	3,000
	<u>26,000</u>		<u>26,000</u>

Consolidated Profit and Loss Account			
	\$		\$
Consolidated balance sheet	83,300	H Ltd profit and loss	80,000
		S Ltd profit and loss	3,300
	<u>83,300</u>		<u>83,300</u>

Note 1

	<i>Cost/Valuation</i>	<i>Depreciation</i>	<i>Net book value</i>
	\$	\$	\$
H Ltd, at cost	165,000	55,000	110,000
S Ltd, at valuation	60,000	22,500	37,500
	<u>225,000</u>	<u>77,500</u>	<u>147,500</u>

Note 2

The revaluation took place on the date of acquisition. Therefore the revaluation reserve is increased by comparing the net book value at the date of acquisition with the revalued amount. Since three years have elapsed since the date of acquisition, the net book value on 1 July 20X6 is computed by adding back three years' depreciation of \$5,000 per annum (i.e. $\$50,000 \times 10\%$) to the net book value on 30 June 20X9, i.e. $\$25,000 + \$15,000 = \$40,000$. The revaluation reserve is \$20,000 ($\$60,000 - \$40,000$).

Note 3

The extra depreciation is the difference between the amount of depreciation on the revalued assets and the depreciation on the book value. The annual depreciation charge on the revalued assets is \$7,500 [Amount revalued / remaining useful lives i.e. $\$60,000 / (10 \text{ years} - 2 \text{ years})$] whereas the annual depreciation charge on the book value is \$5,000 per annum. The total difference for the three years is \$7,500 [$(\$7,500 - \$5,000) \times 3 \text{ years}$].

- (b) Following the bonus issue on 1 July 20X9, S Ltd's share capital will be increased to \$70,000 ($\$60,000 + \$10,000$) while its reserves will be reduced by a corresponding amount to \$5,000 ($\$15,000 - \$10,000$). Since the bonus issue of shares is made out of the pre-acquisition reserves, the total amount of the nominal value of the shares acquired and the share of the pre-acquisition reserves remains the same in the cost of control account. So it can be seen that although the account changes as a result of the bonus issue, the minority interest's total share of the subsidiary's share capital and reserves remains the same. Hence, the bonus issue has no effect on the goodwill account and minority interest account in this case.

Question 25-7A

H Ltd Consolidated Balance Sheet as at 31 March 20X6

	\$	\$	\$
<i>Fixed assets</i> (Note 2)			10,660
<i>Investment</i>			
Investment in A Ltd			1,350
<i>Current assets</i>			
Stocks	5,200		
Debtors	7,200		
Bills receivable	2,250		
Cash at bank	2,300	16,950	
<i>Current liabilities</i>			
Creditors	4,700		
Bill payable	750	(5,450)	
<i>Net working capital</i>			11,500
			<u>23,510</u>
<i>Financed by:</i>			
<i>Share capital</i>			10,000
<i>Reserves</i>			
Capital reserve on consolidation (Note 4)		2,550	
General reserve		8,000	
Profit and loss account (Note 5)		2,960	13,510
			<u>23,510</u>

Note 1

	\$
Net book value of S Ltd's fixed assets at 31 March 20X6	3,300
Add Depreciation for the year	400
Cost of fixed assets of S Ltd at 31 March 20X6	3,700
Less Cost of items purchased from H Ltd	(600)
Net book value of S Ltd's fixed assets at 1 April 20X5	3,100
Revalued amount at 1 April 20X5	5,200
Revaluation surplus	<u>2,100</u>

Note 2

Consolidated fixed assets

	<i>H Ltd</i>	<i>S Ltd</i>	<i>Consolidated</i>
	\$	\$	\$
Balance at 31 March 20X6	5,400	3,300	8,700
Add Revaluation surplus (Note 1)	—	2,100	2,100
Less Unrealised surplus (Note 3)	—	(140)	(140)
	<u>5,400</u>	<u>5,260</u>	<u>10,660</u>

Note 3

Unrealised profits

	\$
Fixed assets (\$600 – \$460)	140
Stocks ($\$1,500 \times \frac{1}{5}$)	300
	<u>440</u>

Note 4

Cost of Control Account

	\$		\$
Cost of investment	4,150	Share capital	4,000
Capital reserve on consolidation	2,550	Revaluation reserve (Note 1)	2,100
		Retained profit	600
	<u>6,700</u>		<u>6,700</u>

Note 5

Consolidated Profit and Loss Accounts

	<i>H Ltd</i>	<i>S Ltd</i>	<i>Consolidated</i>
	\$	\$	\$
Balance at 31 March 20X6	2,700	1,200	3,900
<i>Less</i> Pre-acquisition reserve	—	(600)	(600)
Unrealised profit (Note 3)	(440)	—	(440)
<i>Add</i> Debenture interest	—	100	100
	<u>—</u>	<u>100</u>	<u>2,960</u>

Question 26–2A

P, S1 and S2 Consolidated Balance Sheet as at 31 December 20X9

	\$
Goodwill (workings 1)	20,040
Fixed assets	226,500
Current assets	49,500
	<u>296,040</u>
Share capital	200,000
Profit and loss account: (P \$79,000 + S1 80% of \$4,000 + S2 56% of \$5,000)	85,000
Minority interest (workings 2)	11,040
	<u>296,040</u>

Workings

	\$	\$	\$
(1) Goodwill: Cost of shares to group in S1 Ltd		39,000	
Cost of shares to group in S2 Ltd (80% of \$13,000)		10,400	49,400
<i>Less</i> Shares: in S1	16,000		
in S2 (56% of \$10,000)	5,600	21,600	
Profit and loss: in S1 (80% of \$6,000)	4,800		
in S2 (56% of \$1,000)	560	5,360	
General reserve: in S1 80% of \$3,000		2,400	(29,360)
			<u>20,040</u>

26-2A con't

(2) Minority interest:			
Shares in S1	4,000		
Shares in S2 (44% of \$10,000)	4,400	8,400	
Profit and loss: in S1 (20% of \$10,000)	2,000		
in S2 (44% of \$6,000)	2,640	4,640	
General reserve: in S1 (20% of \$3,000)		600	13,640
Less Cost of shares in S2 to minority interest of S1 (20% of \$13,000)			(2,600)
			<u>11,040</u>

Question 26-4A

(a) H Ltd and subsidiary Consolidated Balance Sheet at 31 December 20X7			
	\$000		\$000
Fixed assets (\$276,000 + \$94,000)			370,000
Goodwill on consolidation (W7)			32,000
Other long-term investment			5,200
			<u>407,200</u>
<i>Current assets</i>			
Stock (\$336,000 + \$165,000 – \$1,000)	500,000		
Debtors (\$120,800 + \$57,200)	178,000		
Dividend receivable	170		
Cash (\$36,630 + \$8,000)	44,630		
	<u>722,800</u>		
<i>Current liabilities</i>			
Creditors (\$281,800 + \$318,200)	(600,000)		
Net current assets			<u>122,800</u>
			<u>530,000</u>
<i>Share capital</i>			
Ordinary shares			100,000
<i>Reserves</i>			
Revaluation reserves	39,430		
Profit and loss account	387,170		426,600
Minority interest			<u>3,400</u>
			<u>530,000</u>

Workings

Treatment of S Ltd

(1)		Cost of Control	
	\$000		\$000
Cost of ordinary shares	80,000	Ordinary shares (\$20,000 × 70%)	14,000
Cost of preference shares	8,800	Preference shares (\$4,000 × 30%)	1,200
		Profit and loss (\$48,000 × 70%)	33,600
		Goodwill	40,000
	<u>88,800</u>		<u>88,800</u>

(2) Profit and Loss Account			
	\$000		\$000
Balance b/f	20,000	Minority interest ($\$20,000 \times 30\%$)	6,000
Cost of control	33,600	Consolidated reserves	
		($\$48,000 + \$20,000$) $\times 70\%$	47,600
	<u>53,600</u>		<u>53,600</u>

(3) Minority Interest			
	\$000		\$000
Profit and loss account	6,000	Ordinary shares ($\$20,000 \times 30\%$)	6,000
Balance c/f	3,400	Preference shares ($\$4,000 \times 70\%$)	2,800
		Revaluation surplus	
		($\$94,000 - \$92,000$) $\times 30\%$	600
	<u>9,400</u>		<u>9,400</u>

(4) Consolidated Profit and Loss			
	\$000		\$000
Unrealised profit in stock ($\$5,000 \times \frac{1}{5}$)	1,000	Balance from H Ltd	443,600
Profit and loss — S Ltd	47,600	Dividend income from W Ltd	170
Amortisation of S Ltd			
— goodwill ($\$40,000 \times \frac{1}{5}$)	8,000		
Balance c/f	387,170		
	<u>443,770</u>		<u>443,770</u>

(5) Revaluation Reserve			
	\$000		\$000
Balance c/f	39,430	Balance from H Ltd	38,030
		Revaluation surplus	
		($\$94,000 - \$92,000$) $\times 70\%$	1,400
	<u>39,430</u>		<u>39,430</u>

Treatment of W Ltd

(6) Calculation of control (all workings in '000s)

	Votes per share	No. of votes		Total
		H Ltd	Other holdings	
'A' Ordinary shares 2,000 shares	1	80% 1,600	20% 400	2,000
'B' Ordinary shares 1,000 shares	13	10% 1,300	90% 11,700	13,000
3,000 shares		<u>2,900</u>	<u>12,100</u>	<u>15,000</u>

H Ltd owns 56.7% of the equity (1,600 'A' shares and 100 'B' shares out of a total capital of 3,000 ordinary shares). At the first instant, it would appear that W Ltd is a subsidiary.

However, H Ltd only controls 19.3% (2,900/15,000) of the voting power and therefore as there is no evidence to the contrary, it is neither a subsidiary nor an associated company.

26-4A con't

For accounting purpose, H Ltd should only account for the dividend income from W Ltd and the cost should be treated as 'Other long-term investment'.

(7) <i>Goodwill on consolidation</i>	\$
Balance (W1)	40,000
Less Write off for 20X7	(8,000)
Balance c/f	<u>32,000</u>

- (b) S Ltd has made significant losses during the year ended 31 December 20X7 (\$68 million). As a result, consideration should be given to writing down the value of the shares in S Ltd in the holding company's accounts if it is felt that there has been a permanent diminution in its value. The same principle will apply to the goodwill figure for S Ltd in the group accounts. Also there is 'going concern' consideration regarding S Ltd which may have to be taken into account in the preparation of group accounts.

Question 26-5A

Bryon Ltd & its subsidiaries Balance Sheet as at 30 September 20X6

	\$	\$	\$
<i>Fixed assets</i>			
Tangible assets			
Freehold land and buildings at cost (W1)			2,825,000
Plant and equipment at cost (W2)		11,468,400	
Less Depreciation (W3)		(8,419,600)	3,048,800
			<u>5,873,800</u>
<i>Current assets</i>			
Stocks (W4)		2,870,500	
Debtors (W5)		4,525,000	
Cash at bank (W6)		142,000	
		<u>7,537,500</u>	
<i>Current liabilities</i>			
Creditors: amounts falling due within one year	3,873,050		
Proposed dividends	200,000		
Proposed dividends payable to minority interests (W7)	145,000		
Bank overdraft	1,450,850	(5,668,900)	
Net current assets			<u>1,868,600</u>
			<u>7,742,400</u>
<i>Creditors: amounts falling due after more than one year</i>			
10% Debenture			(2,000,000)
			<u>5,742,400</u>
<i>Capital and reserves</i>			
Called-up share capital			2,000,000
Reserves (W9)		874,675	
Less Goodwill arising on consolidation written off		(550,625)	324,050
Minority interests (W8)			<u>3,418,350</u>
			<u>5,742,400</u>

Workings: Bryon owns 75% of Carlyle
 Bryon owns $75\% \times 66\frac{2}{3}\% = 50\%$ of Doyle

(W1)			\$
	Land and buildings per balance sheets		2,625,000
	Extra value: Doyle		200,000
			<u>2,825,000</u>
(W2)			\$
	Plant and equipment per balance sheets		11,250,000
	Extra value: Doyle		218,400
			<u>11,468,400</u>
(W3)			\$
	Depreciation per balance sheets		8,280,000
	Extra depreciation: Doyle		139,600
			<u>8,419,600</u>
(W4)			\$
	Stocks per balance sheets		2,950,500
	Less Intercompany profit: Doyle		(80,000)
			<u>2,870,500</u>
(W5)		\$	\$
	Debtors per balance sheets		4,700,000
	Less Expected dividend included in Bryon Ltd $\$0.05 \times \$1,500,000$	75,000	
	Cheque in transit	<u>100,000</u>	(175,000)
			<u>4,525,000</u>
(W6)			\$
	Bank per balance sheets		42,000
	Cheque in transit		100,000
			<u>142,000</u>
(W7)			\$
	Proposed preference dividend $\frac{1}{2}$ year: $8\% \times \$2,000,000 \times 6$ months		80,000
	Doyle: $10\% \text{ ordinary} \times \$1,200,000 \times 33\frac{1}{3}\%$		40,000
	Carlyle: $\$0.05 \times \$2,000,000 \times 25\%$		25,000
			<u>145,000</u>

26-5A con't

(W8)

<i>Minority interests</i>	\$	\$
Shares: Ordinary: Carlyle (25%)		250,000
Doyle (50%)		600,000
Preference: Carlyle (100%)		2,000,000
		<u>2,850,000</u>
<i>Reserves: Carlyle</i>		
Per question	1,013,400	
Less Preference dividend 1.10.20X6	(80,000)	
	<u>933,400</u>	
25% of \$933,400	233,350	
Less Proposed dividend in minority interest (see W7)	(25,000)	208,350
<i>Reserves: Doyle</i>		
Per balance sheet	521,200	
Fair value adjustments	278,800	
	<u>800,000</u>	
50% share	400,000	
Less Proposed dividend (see W7)	(40,000)	360,000
		<u>3,418,350</u>

(W9) Reserves

(i) <i>Profit in Doyle</i>	\$
Per question	310,000
Less Additional depreciation	(40,000)
Amended profit for 12 months	<u>270,000</u>
Post-acquisition = $\frac{\text{No. of shares bought}}{\text{Issued shares}} \times \text{Profit} \times \text{Months owned}$	\$
= (Bought 31 March 20X6) $\frac{400,000}{1,200,000} \times 270,000 \times \frac{6}{12}$	45,000
= (Bought 30 June 20X6) $\frac{400,000}{1,200,000} \times 270,000 \times \frac{6}{12}$	22,500
	<u>67,500</u>
75% goes to group reserves*	<u>50,625</u>
* Not $66\frac{2}{3}$ as the shares shown in the above calculation do not include minority interest. As Bryon Ltd owns 75% of Carlyle Ltd, that is the proportion to use.	
(ii)	\$
Reserves in Doyle per balance sheet	521,200
Add Fair value adjustment	278,800
	<u>800,000</u>
Minority owns 50%	
Bryon's share 50%	400,000
Less 75% share of post-acquisition profits (see (i))	(50,625)
Value of reserves at date of purchases	<u>349,375</u>

	\$	\$
Reserves for balance sheet therefore per unconsolidated balance sheets:		
Bryon	879,000	
Carlyle	1,013,400	
Doyle	521,200	2,413,600
<i>Add</i> Fair value adjustment (Doyle)		278,800
		<u>2,692,400</u>
<i>Less</i> Unrealised profits on stocks (W4)	80,000	
Elimination proposed dividend (Carlyle)	75,000	
Pre-acquisition profits Carlyle (75%)	600,000	
Doyle reserves: pre-acquisition (<i>see</i> (ii))	349,375	
Minority interest (Doyle)	400,000	
Minority interest (Carlyle):		
1,013,400 – preference dividend due 80,000 = 933,400 × 25%	233,350	
Proposed dividend preference shares (Carlyle)	80,000	(1,817,725)
		<u><u>874,675</u></u>

Question 27–2A

H Ltd and its subsidiaries Consolidated Profit and Loss Account for the year ended 30 June 20X9

	<i>H Ltd</i>	<i>R Ltd</i>	<i>Adjustments</i>	<i>Consolidated Profit and Loss Account</i>
	\$	\$	\$	\$
Turnover	<u>600,000</u>	<u>75,000</u>	—	<u>675,000</u>
Operating profit before exceptional item	120,000	30,000	<i>Cr</i> 2,000 (Note 1)	152,000
Exceptional item:				
Profit on disposal of investment in a subsidiary	30,000	—	<i>Dr</i> 3,600 (Note 2)	26,400
Profit before taxation	150,000	30,000	<i>Dr</i> 1,600	178,400
<i>Less</i> Taxation	(20,000)	(6,000)		(26,000)
Profit before minority interests	130,000	24,000	<i>Dr</i> 1,600	152,400
<i>Less</i> Minority interests	—	—	<i>Dr</i> 6,000 (Note 3)	(6,000)
Profit attributable to shareholders	130,000	24,000	<i>Dr</i> 7,600	146,400
Retained profits brought forward	70,000			89,200
Post-acquisition group share	—	24,000	<i>Dr</i> 4,800 (Note 4)	—
Retained profits carried forward	<u>200,000</u>	<u>48,000</u>	<i>Dr</i> 12,400	<u>235,600</u>

27-2A con't

H Ltd and its subsidiaries Consolidated Balance Sheet as at 30 June 20X9

	<i>H Ltd</i>	<i>R Ltd</i>	<i>Adjustments</i>		<i>Consolidated Balance Sheet</i>
	\$	\$	\$		\$
Share capital: \$1 per share	500,000	100,000	<i>Dr</i> 70,000 (Note 5)		500,000
			<i>Dr</i> 30,000 (Note 6)		
Retained profits:	200,000	—	<i>Cr</i> 2,000 (Note 1)		235,600
Pre-acquisition	—	50,000	<i>Dr</i> 35,000 (Note 5)		
			<i>Dr</i> 15,000 (Note 6)		
Post-acquisition	—	48,000	<i>Dr</i> 3,600 (Note 2)		
			<i>Dr</i> 6,000 (Note 3)		
			<i>Dr</i> 4,800 (Note 4)		
Minority interest	—	—	<i>Cr</i> 3,600 (Note 2)		59,400
			<i>Cr</i> 6,000 (Note 3)		
			<i>Cr</i> 4,800 (Note 4)		
			<i>Cr</i> 45,000 (Note 6)		
Creditors	50,000	32,000			82,000
10% debenture	—	50,000	<i>Dr</i> 40,000 (Note 7)		10,000
Current account with H Ltd	—	50,000	<i>Dr</i> 50,000 (Note 8)		—
	<u>750,000</u>	<u>330,000</u>	<i>Dr</i> <u>193,000</u>		<u>887,000</u>
Net assets	522,000	330,000			852,000
Goodwill (cost of control)	—	—	<i>Cr</i> 105,000 (Note 5)		35,000
			<i>Dr</i> 140,000 (Note 9)		
Investment: R Ltd 70,000 shares	140,000	—	<i>Cr</i> 140,000 (Note 9)		—
10% debentures issued					
by R Ltd	40,000	—	<i>Cr</i> 40,000 (Note 7)		—
Current account with R Ltd	48,000	—	<i>Dr</i> 2,000 (Note 1)		—
			<i>Cr</i> 50,000 (Note 8)		
	<u>750,000</u>	<u>330,000</u>	<i>Cr</i> <u>193,000</u>		<u>887,000</u>

Note 1: The accrued debenture interest to H Ltd is $\$40,000 \times 10\% \times \frac{1}{2} = \$2,000$. The amount was provided in R Ltd but not yet recognised in H Ltd. Therefore, the following adjustment should be made:

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Current account with R Ltd	2,000	
Consolidated profit and loss account		2,000

Note 2: Before disposal of shares in R Ltd, H Ltd's share of post-acquisition profits on the disposed 10,000 shares before being disposed in R Ltd are $\$24,000 \times 10\% + \$24,000 \times \frac{1}{2} \times 10\% = \$3,600$. This reduced the profit on disposal and increased the minority interest. Therefore, the following adjustment is made:

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Consolidated profit and loss account	3,600	
Minority interest		3,600

Note 3: H Ltd disposed of 10,000 shares (i.e. 10% of shares) in R Ltd in the middle of the financial year. (So the minority interest on profit sharing is: $\$24,000 \times \frac{1}{2} \times 20\% + \$24,000 \times \frac{1}{2} \times 30\% = \$6,000$). Therefore, the following adjustment is made:

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Consolidated profit and loss account	6,000	
Minority interest		6,000

Note 4: Minority interest as at 1 July 20X8 was:
 $\$24,000 \times (1 - 80\%) = \$4,800$

Therefore, the following adjustment is made:

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Consolidated profit and loss account	4,800	
Minority interest		4,800

Note 5: Being adjustment of net assets acquired for the 70% investment in R Ltd.

	<i>Dr</i>	<i>Cr</i>
	\$	\$
R Ltd — Share capital ($\$100,000 \times 70\%$)	70,000	
R Ltd — Pre-acquisition profits ($\$50,000 \times 70\%$)	35,000	
Cost of control		105,000

Note 6: Being adjustment of minority interest included in the share capital and pre-acquisition profits of R Ltd.

	<i>Dr</i>	<i>Cr</i>
	\$	\$
R Ltd — Share capital ($\$100,000 \times 30\%$)	30,000	
R Ltd — Pre-acquisition profits ($\$50,000 \times 30\%$)	15,000	
Minority interest		45,000

Note 7: Being elimination of investment in 10% debentures of R Ltd.

	<i>Dr</i>	<i>Cr</i>
	\$	\$
R Ltd — 10% debentures	40,000	
H Ltd investment in R Ltd 10% debentures		40,000

Note 8: Being elimination of inter-group balances.

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Current account with H Ltd	50,000	
Current account with R Ltd		50,000

Note 9: Being transfer of cost of investment in R Ltd to cost of control.

	<i>Dr</i>	<i>Cr</i>
	\$	\$
Cost of control	140,000	
Investment in R Ltd		140,000

Question 27–4A

Animal Ltd

Consolidated Trading and Profit and Loss Account for the year ended 31 December 20X8

	\$
Turnover (\$194,000 + \$116,000 + \$84,000 – \$1,000)	393,000
Cost of sales (\$153,000 + \$87,000 + \$63,000 – \$1,000)	(302,000)
Gross profit	91,000
General expenses	(74,250)
Profit before tax	16,750
Minority interest (W1)	(1,570)
Group profit for the year	15,180
Balance from previous year (W2)	16,800
	31,980
Proposed dividend	(7,000)
Balance carried forward	24,980

Balance Sheet as at 31 December 20X8

	\$	\$
Fixed assets		99,000
Goodwill (W3)		5,450
Current assets	96,000	
Less Current liabilities	(62,000)	
Net current assets		34,000
		138,450
Share capital		100,000
Profit and loss account		24,980
Minority interest (W4)		13,470
		138,450

Workings:

(W1) <i>Minority interest:</i>	\$	\$	\$
20% × \$6,100 for Bird		1,220	
Preference dividend 7% × \$5,000 for Fish		350	
			1,570
(W2) <i>Profit brought forward:</i>			
Animal Ltd		15,600	
Fish (\$1,900 – \$700)		1,200	16,800
(W3) <i>Goodwill:</i>	<i>Bird</i>	<i>Fish</i>	
Cost of shares	33,700	21,250	
Par value	(24,000)	(20,000)	
Pre-acquisition profit	(4,800)	(700)	
Goodwill	4,900	550	5,450

(W4) <i>Minority interest:</i>	<i>Bird</i>	<i>Fish</i>	
	\$	\$	\$
Share capital	6,000	5,000	
Profit and loss: $20\% \times (\$6,000 + \$4,600)$	2,120	—	
Preference dividend	—	350	
	<u>8,120</u>	<u>5,350</u>	<u>13,470</u>

Summarised Profit and Loss Accounts

	<i>Animal</i>	<i>Bird</i>	<i>Fish</i>	<i>Total</i>
	\$	\$	\$	\$
Sales	194,000	116,000	84,000	394,000
Cost of sales	(153,000)	(87,000)	(63,000)	(303,000)
Gross profit	<u>41,000</u>	<u>29,000</u>	<u>21,000</u>	<u>91,000</u>
General expenses	(32,600)	(22,900)	(18,750)	(74,250)
Net profit	<u>8,400</u>	<u>6,100</u>	<u>2,250</u>	<u>16,750</u>
Dividend received (+)	1,200	—	—	—
Dividend paid	—	(1,500)	—	—
Dividend proposed	(7,000)	—	—	—
	<u>2,600</u>	<u>4,600</u>	—	—

Question 27–5A

(a)

H Ltd and subsidiaries Consolidated Profit and Loss Account incorporating the results of associated company for the year ended 31 December 20X8

	\$000	\$000
Turnover		<u>5,000</u>
Operating profit		860
Share of profit of associated company ($\$120 \times 30\%$)		<u>36</u>
Profit before taxation		896
Taxation: Company and subsidiaries	150	
Associated company ($\$30 \times 30\%$)	<u>9</u>	<u>(159)</u>
		737
Minority interests		<u>(60)</u>
		677
Proposed dividends		<u>(50)</u>
Retained profits for the year		627
Retained profits brought forward		1,451
Retained profits carried forward		<u>2,078</u>
Retained profits for the year:		
H Ltd		468
Subsidiaries		150
Associated company ($\$30 \times 30\%$)		<u>9</u>
		<u>627</u>

27-5A con't

Note 1

H Ltd's percentage of ownership in A Ltd
 $= 540,000 / 1,800,000$
 $= 30\%$

Note 2

Retained profits brought forward from A Ltd	\$000
Retained profits at 31 December 20X7	870
Less Pre-acquisition profits	(700)
Retained profits brought forward from 20X7	<u>170</u>

Note 3

Retained profits of H Ltd for year 20X8	\$000
Prior to dividend from A Ltd	450
Share of dividend from A Ltd ($\$60 \times 30\%$)	18
	<u>468</u>

(b)

H Ltd and subsidiaries Consolidated Balance Sheet at 31 December 20X8

	\$000	\$000
Fixed assets		1,020
Interests in associated company (Note 4)		2,560
Current assets		
Stocks	920	
Debtors	1,200	
Dividend receivable ($\$60 \times 30\%$)	18	
	<u>2,138</u>	
Current liabilities		
Creditors	900	
Taxation	150	
Proposed dividends	50	
	<u>1,100</u>	
Net current assets		1,038
		<u>4,618</u>
Capital and reserves		
Ordinary share capital of \$1 each		2,000
Retained profits		2,078
Minority interests		540
		<u>4,618</u>

Note 4

<i>Interest in associated company</i>	\$000
Share of net assets other than goodwill	
$(\$1,800 + \$900) \times 30\%$	810
Premium on acquisition of associated company	
$\$2,000 - (\$1,800 + \$700) \times 30\%$	1,250
	<u>2,060</u>
<i>Add</i> Loans to associated company	500
	<u><u>2,560</u></u>

Question 27-6A

Old plc & subsidiaries
Consolidated Profit and Loss Account for the year ended 30 April 20X6

	\$	\$
Turnover (W1)		2,372,500
Cost of sales		(1,450,500)
Gross profit		<u>922,000</u>
Distribution expenses	255,000	
Administration expenses	122,000	(377,000)
Profit for the year before taxation		<u>545,000</u>
Corporation tax based on profits of the year		(215,000)
Profit for the year after taxation		<u>330,000</u>
Minority interest (W1) (L \$8,400 + F \$4,000)	12,400	
Pre-acquisition dividend	1,000	(13,400)
Profit for the year (W2)		<u>316,600</u>
Dividends:		
Interim dividends paid	45,000	
Proposed final dividend	67,500	(112,500)
Retained profit for the year		<u>204,100</u>
Retained profit brought forward from last year		61,000
Retained profit carried forward to next year		<u><u>265,100</u></u>

27-6A con't

Workings:

(W1) *Lodge*

	Year \$	9 months \$
Sales	650,000	487,500
Cost of goods sold (\$475,000 + \$80,000 – \$85,000)	(470,000)	(352,500)
	<u>180,000</u>	<u>135,000</u>
Distribution expenses	(60,000)	(45,000)
Administration expenses	(72,000)	(54,000)
	<u>48,000</u>	<u>36,000</u>
Taxation	(20,000)	(15,000)
	<u>28,000</u>	<u>21,000</u>
Minority interest 40%		8,400
Proposed dividend 40% × \$15,000		(6,000)
		<u>2,400</u>

(W2)

	<i>Old</i> \$	<i>Field</i> \$	<i>Lodge</i> \$	
Turnover	1,250,000	875,000	487,500	
Purchases	(780,000)	(555,000)	(356,250)	
Adjust stock	20,000	(15,000)	3,750	
	<u>490,000</u>	<u>305,000</u>	<u>135,000</u>	
Distribution	(125,000)	(85,000)	(45,000)	
Administration	(28,000)	(40,000)	(54,000)	
	<u>337,000</u>	<u>180,000</u>	<u>36,000</u>	
Corporation tax	(125,000)	(75,000)	(15,000)	
	<u>212,000</u>	<u>105,000</u>	<u>21,000</u>	
Profit unrealised	(8,000)	—	—	
Minority interest (<i>see</i> W1)	—	—	(8,400)	
Preference dividend: minority	—	(4,000)	—	
Pre-acquisition preference dividend	—	(1,000)	—	
	<u>204,000</u>	<u>100,000</u>	<u>12,600</u>	<u>316,600</u>

Question 28-1A

- (a) Huge has 75% of Large's share capital. Large is therefore quite clearly a subsidiary and will be treated as such in the consolidated accounts.

Huge has 25% of the ordinary share capital of Medium. This means that Medium is an associated or related company. The equity method of accounting therefore applies under HKSSAP 7, where the test of it is based on minimum holding of 20% and the ability to exert significant influence.

Huge owns only 10% of Small. This means that this will simply be shown as an investment.

(b)

Huge Ltd and Subsidiary Large Ltd
Consolidated Balance Sheet as at 30 September 20X7

<i>Fixed assets</i>	\$000	\$000
Property, plant and machinery (\$2,004 + \$780)		2,784
Investment in related company (Medium)	180	
Add Share of post-acquisition profits (W1)	15	195
Other investments (Small)		12
		<u>2,991</u>
<i>Current assets</i>		
Stock (\$489 + \$303)	792	
Debtors (\$488 + \$235 + \$10)	733	
Debtors — related company	40	
Bank and cash (\$45 + \$62)	107	
	<u>1,672</u>	
<i>Current liabilities</i>		
Trade creditors (\$318 + \$170)	(488)	
Net current assets		<u>1,184</u>
Total assets <i>less</i> Current liabilities		<u>4,175</u>
<i>Capital and reserves</i>		
Called-up share capital		2,400
Capital reserve (see W2)		190
Revenue reserves (see W3)		1,280
		<u>3,870</u>
Minority interest (see W4)		305
		<u>4,175</u>
<i>Workings:</i>		
(W1) <i>Medium: Post-acquisition profits</i>	\$	\$
Reserves 30.9.20X7	210,000	
Less Reserves 1.10.20X6	<u>(150,000)</u>	<u>60,000</u>
25% thereof = 25% × \$60,000 =		<u>15,000</u>
(W2) <i>Purchase of Large shares</i>		\$
600,000 shares at par		600,000
$\frac{600,000}{800,000} \times \text{Revenue reserves } \$320,000 =$		240,000
		<u>840,000</u>
Cost of purchase		(650,000)
Capital reserve		<u>190,000</u>
(W3) <i>Revenue reserves:</i>	\$	\$
Huge	1,190,000	
Large 75% × post-acquisition profits \$100,000 (\$420,000 – \$320,000)	75,000	
Medium – per (W1)	<u>15,000</u>	<u>1,280,000</u>
(W4)	\$	\$
25% share capital (Large) × 800,000 =	200,000	
25% reserves (Large) × 420,000 =	<u>105,000</u>	<u>305,000</u>

Question 29-2A

- (a) A company should be accounted for as an associated company if:
- (i) the company is not a subsidiary of the investing group or company; and
 - (ii) the investing group or company's interest is effectively that of a partner in a joint venture or consortium and the investing group or company is in a position to exercise a significant influence over the company in which the investment is made for; or
 - (iii) the investing group or company's interest is for the long term and, having regard to the disposition of the other shareholdings, the investing group or company is in a position to exercise a significant influence over the company in which the investment is made.

Significant influence exists if the investing company involves participation in the financial and operating policy decisions of that company (including dividend policy) but not necessarily control of those policies. Representation on the board of directors is indicative of such participation but it is not conclusive evidence.

Where the investing company holds 20 per cent or more of the voting rights of the company, it should be presumed that the investing company has the ability to exercise significant influence over that company.

On the contrary, if the investing group or company holds less than 20 per cent of the voting rights of the company, the interest in the company will be stated in the accounts as long-term investments. Meanwhile, if the investing group or company holds more than 50 per cent of the voting rights of the company, there will not be significant influence over the company. In fact, the company is under control by the investing group or company and so should be stated in the accounts as interest in subsidiaries.

For the purposes of establishing whether or not significant influence is presumed to exist, the investment in that company should be taken as the aggregate of the holdings of the investing company together with the whole of those of its subsidiaries.

- (b) (i) Turnover of an associated company should *never* be included in the group's turnover.
- (ii) The share of extraordinary items should be included with the group's extraordinary items. If the extraordinary items of the associate company is so material, separate disclosure in group's profit and loss account will be required.
- (iii) Material and unrealised inter-company profits with investing group companies should be eliminated.
- (iv) The share of goodwill of an associated company should be disclosed in the notes on the accounts under the heading 'Interest in associated companies'.

Question 29-3A

- (a) HKSSAP 32 states that all material subsidiary companies should be included in the consolidated accounts except in one of the following circumstances:
- (i) where severe long-term restrictions hinder the exercise of the rights of the parent company over the assets or management of the subsidiary. The restrictions must be in place, and continuing rather than merely threatened,
 - (ii) where the group's interest in the subsidiary company is held exclusively with a view to subsequent resale. Exclusion on these grounds will only be permitted if the subsidiary has not previously been consolidated.

The directors of Jasmin (Holdings) Ltd would not be allowed to exclude the financial statements of Kasbah Ltd on the grounds of dissimilar activities as the production of yarn (Jasmin) and garments (Kasbah) should not be the reason for excluding Kasbah Ltd from the consolidated financial statements.

(b)

Jasmin (Holdings) Limited
Consolidated Balance Sheet as at 31 March 20X4

	\$000	\$000
Goodwill		30,640
Fixed assets		379,400
Investment in associated company		8,438
		<u>418,478</u>
Current assets		
Stock	436,700	
Cash	319,500	
	<u>756,200</u>	
Creditors	(528,100)	
Net current assets		228,100
Net assets		<u><u>646,578</u></u>
Capital and reserves		
Share capital		
Ordinary \$1 shares		60,000
Revaluation reserve	37,964	
Profit and loss reserve	<u>545,474</u>	
		583,438
Minority interest		<u><u>3,140</u></u>
		<u><u>646,578</u></u>

Workings

Treatment of Kasbah Ltd
Cost of Control

	\$000		\$000
Cost of shares (Ordinary + Preference)	97,600	Ordinary shares ($\$20,000 \times 0.9$)	18,000
		Preference shares ($\$4,000 \times 0.2$)*	800
		Profit and loss reserve	40,500
		Goodwill	38,300
	<u>97,600</u>		<u>97,600</u>

Profit and Loss Reserve

	\$000		\$000
Balance b/f	18,800	Minority interest	1,880
Cost of control	40,500	Consolidated reserves	57,420
	<u>59,300</u>		<u>59,300</u>

Minority Interest

	\$000		\$000
Profit and loss reserve	1,880	Ordinary shares	2,000
Revaluation loss	180	Preference shares	3,200
Balance c/f	<u>3,140</u>		
	<u>5,200</u>		<u>5,200</u>

29–3A con't

Profit and Loss Reserve — Jasmin			
	\$000		\$000
Unrealised profit in stock*	300	Bal. Jasmin	610,000
Profit and loss reserve — Kasbah	57,420		
Balance c/f	552,280		
	<u>610,000</u>		<u>610,000</u>

Revaluation Reserve — Jasmin			
	\$000		\$000
Revaluation loss	1,620	Bal. Jasmin	40,000
Balance c/f	38,380		
	<u>40,000</u>		<u>40,000</u>

* Jasmin (Holdings) Ltd is making the sale, therefore it eliminates 100% of the profit.

Treatment of Fortran Ltd

Calculation of control

	<i>Jasmin</i>	<i>No. of votes Other holdings</i>	<i>Total</i>
'A' Ordinary shares			
6,000 shares	80% 4,800	20% 1,200	6,000
'B' Ordinary shares			
4,000 shares	10% 800	90% 7,200	8,000
	<u>5,600</u>	<u>8,400</u>	<u>14,000</u>

Jasmin (Holdings) Ltd owns 52% of the equity (4,800 'A' shares and 400 'B' shares out of a total capital of 10,000 ordinary shares). At first sight, it would appear that Fortran Ltd is a subsidiary. However, Jasmin only controls 40% of the voting power ($\frac{5,600}{14,000}$) and therefore as there is no evidence to the contrary, it is an associated company. However, for equity accounting purposes, Jasmin (Holdings) Ltd has the right to 52% of the associate's profits and losses. Therefore it is this percentage which is used to compute the profits and losses attributable to the holding of shares.

Investment in associated company

		\$000
Cost of shares in Fortran Ltd		8,000
Share of post acquisition reserves:		
Revaluation reserve	(800) × 52%	(416)
Profit and loss reserve	2,000 × 52%	1,040
		<u>8,624</u>

Alternative calculation:

	\$000	\$000	\$000
Share of net assets $\$14,800 \times 52\%$ at 31.3.20X4			7,696
Goodwill on acquisition			
Cost of shares		8,000	
Less Net assets acquired			
Share capital	10,000		
Revaluation reserve	2,000		
Profit and loss reserve	1,600		
	<u>13,600</u> $\times 52\%$		
		(7,072)	928
			<u>8,624</u>

The group's policy is to write off goodwill on acquisition over five years. Therefore $\$928,000/5$ i.e. $\$186,000$ (to nearest $\$1,000$) will be further written off the balance sheet value of Fortran Ltd and profit and loss reserves. The value of Fortran Ltd in the consolidated balance sheet is $(\$8,624,000 - \$186,000)$ i.e. $\$8,438,000$.

Consolidated reserves

Revaluation reserve	\$000	\$000
Balance per consolidated workings		38,380
Fortran Ltd		(416)
		<u>37,964</u>
Profit and loss reserve		
Balance per consolidated workings		552,280
Goodwill written off — Kasbah	7,660	
Fortran	186	(7,846)
Fortran Ltd		<u>1,040</u>
		<u>545,474</u>

Question 29–5A

- (a) The equity method of accounting for investment in associates is a method of accounting under which the investment in a company is shown in the consolidated balance sheet at:

- 1 the cost of investment; and
- 2 the investing company's share of the post-acquisition retained profits/losses of the company; less
- 3 any amount written off in respect of (1) and (2) above;

and under which the investing company accounts separately in its income statement for its share of the profits/losses before taxation, taxation and extraordinary item of the company.

The equity method recognises that full consolidation would not be appropriate where there is no controlling interest. At the same time, where an important part of the business is conducted through other companies, merely accounting for dividends is not sufficient to provide adequate information to the shareholders. The equity method is therefore considered suitable in cases where the investing group exercises significant influence over the invested company.

29–5A con't

(b)

Huge Ltd

Consolidated Income Statement for the year ended 31 December 20X0

			\$000	\$000
Turnover				<u>89,700</u>
Profits before tax			10,490	
Share of associate's profits			375	10,865
Taxation				
Group			5,050	
Associate			165	(5,215)
Profit after tax				<u>5,650</u>
Minority interest				(332)
Group profit				<u>5,318</u>
Transfer to reserves				(283)
Dividends				(3,000)
Retained for the year				<u>2,035</u>
By Huge Ltd			1,928	
Large Ltd			80	
Big Ltd			27	<u>2,035</u>
<i>Consolidation schedule</i>	<i>Huge</i>	<i>Large (80%)</i>	<i>Group</i>	<i>Big (30%)</i>
	\$000	\$000	\$000	\$000
Turnover	70,000	<u>20,000</u>	<u>89,700</u>	<u>10,000</u>
Intercompany sales	(300)			
	<u>69,700</u>			
Trading profit	10,000	3,820		2,150
Debenture interest received	100			
Unrealised profit in stock ($\$50 \times \frac{1}{5}$)	(10)			
Directors' fees	(1,150)	(350)		(600)
Depreciation	(1,200)	(470)		(300)
Debenture interest	—	(250)		—
Profit before tax	<u>7,740</u>	<u>2,750</u>	10,490	<u>1,250</u>
Share of profits of Big ($\$1,250 \times 30\%$)			375	<u>375</u>
			<u>10,865</u>	
Tax: Group	(4,000)	(1,050)	(5,050)	
Associate ($\$550 \times 30\%$)	—	—	(165)	(165)
Profit after tax	<u>3,740</u>	<u>1,700</u>	<u>5,650</u>	<u>210</u>
Minority interest ($(\$1,700 - \$40) \times 20\%$)	—	(332)	(332)	
Group profit	<u>3,740</u>	<u>1,368</u>	<u>5,318</u>	
Inter-group dividends				
Large ($\$1,500 \times 80\% + \$40 \times 20\%$)	1,208	(1,208)		
Big ($\$600 \times 30\%$)	180	—	—	(180)
	<u>5,128</u>	<u>160</u>	<u>5,318</u>	<u>30</u>
Transfer to reserves	(200)	(80)	(283)	(3)
Dividends	(3,000)	—	(3,000)	—
Retained for the year	<u>1,928</u>	<u>80</u>	<u>2,035</u>	<u>27</u>

(c) Investment in associate

	\$000
Cost of acquisition	520
Nominal value of shares ($\$1,500 \times 30\%$)	(450)
Profit and loss ($\$50 \times 30\%$)	(150)
Discount on acquisition	(80)
Share of net assets at 31 December 20X0	
$(\$2,000 + (\$1,250 - \$550 - \$600)) \times 30\%$	630
Investment in associate	<u>550</u>

Question 30-2A

See text section 30.1

Question 30-4A

See text section:

- (a) 30.2
- (b) 30.3
- (c) 30.4
- (d) 30.5
- (e) 30.6

Question 30-6A

- (a) 1 : 8.33 or 12%
- (b) $\frac{\$0.06}{2.4} = 2.5\%$
- (c) 48 cents
- (d) $\frac{\$2.4}{\$0.48} = 5$

Question 30-10A

	<i>NE Ltd</i>		<i>SW Ltd</i>	
	<i>20X1</i>	<i>20X2</i>	<i>20X1</i>	<i>20X2</i>
Return on assets employed	20.0%	25.0%	23.0%	12.5%
Net profit margin	20.0%	22.7%	23.0%	8.9%
Capital turnover	\$1.00	\$1.10	\$1.00	\$1.40
Stock turnover	2.5	2.4	2.5	2.1
Debtors ratio (month)	3.0	2.2	2.8	3.0
Creditors ratio (month)	9.6	9.7	8.4	9.0
Current ratio	3 : 1	2.1 : 1	3.1 : 1	1.4 : 1
Liquid ratio	2.5 : 1	1.59 : 1	2.57 : 1	0.76 : 1
Cost of sales/Sales	20%	18%	20%	30%
Salaries/Sales	15%	14.5%	14%	14.3%
Overheads/Sales	20%	20%	21%	21.4%
Administrative expenses/Sales	15%	14.5%	12%	13.2%
Selling expenses/Sales	10%	10%	10%	12.1%

30-10A con't

Profitability

NE Ltd has improved its return on assets employed from 20 per cent to 25 per cent and net profit margin from 20 per cent to 22.7 per cent. However, SW Ltd has reduction in return on assets employed from 23 per cent to 12.5 per cent and has substantial reduction in net profit margin from 23 per cent to 8.9 per cent. When compared with SW Ltd, NE Ltd has a much more impressive return.

On further analysis, it appears that decline in SW Ltd's return might be a mixture of lowering selling price so as to increase its sales turnover and the worsening of cost control in stocks.

Asset management

Both companies have improved capital turnover ratio, especially SW Ltd. More sales are generated by SW Ltd for \$1 of capital employed, which implies more efficient asset management.

Although the sales turnover of SW Ltd has grown by 40 per cent, the stock turnover dropped from 2.5 times to 2.1 times. As compared with SW Ltd, NE Ltd is able to maintain a stabler and higher level of stock turnover. A slower stock turnover means more stock-holding costs.

NE Ltd has improved its credit control by cutting the debt collection period from 3 months to 2.2 months. On the other hand, SW Ltd seems to have concentrated on sales growth without taking care of credit control. SW Ltd takes an additional 24 days to collect debts as compared with NE Ltd. A quicker collection period means less risk of bad debts and a smaller loss of purchasing power in terms of inflation.

Financial management

Both companies are able to take full advantage of the cheapest source of finance by continuing to pay their creditors over nine months period.

Liquidity

Both companies have not made good use of their working capital in 20X2 with excessive liquidity maintained. This is demonstrated by the three times current ratio and two times liquid ratio. Normally two times current ratio and one time liquid ratio will be sufficient. By end of 20X1, NE Ltd is able to eliminate the excessive liquidity but with adequate liquidity maintained. However, as SW Ltd's liquidity has been deteriorating, there is the danger that the business will be unable to meet its immediate debts unless stocks can be sold quickly or there is a new capital injection. A poor liquid ratio is sometimes a sign of approaching insolvency.

Cost control

From the selling expense/sales ratio, it appears that SW Ltd has spent more in increasing its sales. However, the cost of sales/sales ratio indicates that SW Ltd has lost control over cost, as the ratio climbed from 20 per cent to 30 per cent. Tightened controls should be in place by SW Ltd on purchases, unnecessary discounts should not be given. Other than the cost of sales, the biggest cost item is overheads, which both companies have kept under control.

Conclusion

The board of directors emphasises cost control and asset management. NE Ltd has shown greater efficiency than SW Ltd in this regard. Furthermore, NE Ltd's financial position is healthier than that of SW Ltd in terms of profitability and liquidity.

The financial controller of NE Ltd should be appointed as the financial controller of Asia Ltd.

Question 30-11A

(a) Anderson Development Limited (all dollars are in '000)

- (i) Current ratio : Current assets ÷ current liabilities
20X7 : $(6,905 \div 5,550) = 1.24$
20X6 : $(5,160 \div 3,365) = 1.53$
- (ii) Quick assets ratio : (Current assets – stock) ÷ current liabilities
20X7 : $(6,905 - 3,755) \div 5,550 = 0.57$
20X6 : $(5,160 - 2,860) \div 3,365 = 0.68$
- (iii) Debtors turnover in days : Trade debtors ÷ sales × 365 days
20X7 : $(3,000 \div 20,000) \times 365 \text{ days} = 54.75 \text{ days}$
20X6 : $(1,950 \div 15,000) \times 365 \text{ days} = 47.45 \text{ days}$
- (iv) Creditors turnover in days : Trade creditors ÷ cost of sales × 365 days
20X7 : $(4,320 \div 13,000) \times 365 \text{ days} = 121.30 \text{ days}$
20X6 : $(2,600 \div 9,000) \times 365 \text{ days} = 105.44 \text{ days}$
- (v) Gross profit percentage : Gross profit ÷ sales × 100%
20X7 : $(7,000 \div 20,000) \times 100\% = 35\%$
20X6 : $(6,000 \div 15,000) \times 100\% = 40\%$
- (vi) Net profit percentage (before taxation) : Profit before tax ÷ sales × 100%
20X7 : $(1,200 \div 20,000) \times 100\% = 6\%$
20X6 : $(1,100 \div 15,000) \times 100\% = 7.33\%$
- (vii) Return on owners' equity (before taxation) : Profit before tax ÷ owners' equity × 100%
20X7 : $(1,200 \div 14,855) \times 100\% = 8.08\%$
20X6 : $(1,100 \div 12,795) \times 100\% = 8.60\%$
- (viii) Dividend cover : Profit after tax ÷ dividend
20X7 : $(1,020 \div 960) = 1.06$
20X6 : $(935 \div 800) = 1.17$
- (ix) Interest cover : Profit before interest ÷ interest expenses
20X7 : $(2,000 \div 800) = 2.5$
20X6 : $(1,600 \div 500) = 3.2$
- (x) Gearing ratio : Debentures ÷ (owners' equity + debenture) × 100%
20X7 : $(8,000 \div (14,855 + 8,000)) \times 100\% = 35\%$
20X6 : $(5,000 \div (12,795 + 5,000)) \times 100\% = 28.1\%$

(b) *Profitability*

It seems that the company had lowered its selling price to boost sales as the gross profit percentage dropped from 40 per cent in 20X6 to 35 per cent in 20X7.

The increase in interest expenses was outweighed by the drop in operating expenses due possibly to better cost control. The net profit percentage was decreased slightly from 7.33 per cent in 20X6 to 6 per cent in 20X7.

The overall profitability to the company deteriorated which was also evidenced by the slightly drop in the return on owners' equity from 8.6 per cent to 8.08 per cent.

30-11A con't

Financial liquidity and stability

The liquidity of the company deteriorated as the current ratio dropped from 1.53 to 1.24 in 20X7 while the quick assets ratio dropped from 0.68 to 0.57 in 20X7.

The lengthening of the creditors turnover from 105 days to 121 days had a positive effect on the company's liquidity. Care had to be taken not to let the present relationship with suppliers deteriorate.

Care had to be paid on debtors turnover as there was an increase from 48 days to 55 days, which had an adverse effect on the liquidity and there might be a possibility of uncollectable debts due to looser credit control.

Though the gearing ratio rose from 28.1 per cent to 35 per cent and the interest cover dropped from 3.2 to 2.5, it was still considered as an acceptable level. Attention had to be paid not to let the gearing ratio deteriorate further.

Question 30-12A

- (a) Ratio analysis calculations 20X9
- | | |
|---|------------|
| (i) Return on shareholders' capital = Profit before tax/Share capital and reserves × 100% | 24.6% |
| (ii) Net assets turnover = Turnover/Net assets | 2.9 |
| (iii) Total assets turnover = Turnover/Total assets | 2.2 |
| (iv) Inventory turnover period = Average inventories/COGS × 365 days | 181.7 days |
| (v) Receivable collection period = Average trade receivables/Annual credit sales × 365 days | 55.6 days |
| (vi) Debt ratio = Total liabilities/Total assets × 100% | 23.8% |
| (vii) Equity ratio = Total owner's equity/Total assets × 100% | 76.2% |
| (viii) Interest cover = PBIT/Net finance costs | 2.3 |
| (ix) Dividend cover = Earnings per ordinary share/ Dividend per ordinary share | 1.0 |
| (x) P/E ratio = Current market price per share/EPS | 3.0 |
| (xi) Dividend yield = DPS/Current market price per share | 33.3% |
| (xii) Earnings yield = EPS/Current market price per share | 33.3% |
- (b) Report to Board of Directors (as a demonstrated example only)
- To : Directors — Gotech Company Limited
From : XYZ (name written down by the candidate)
Date : X-X-20Y0
Subject : Financial situation of the company in 20X9

The following comments are based on a financial ratio analysis of the financial statements of Gotech Company Limited for the two-year period 20X8 to 20X9. The relevant ratios for analysis are contained in the appendix to this report.

1 Liquidity

These ratios are important indicators of the short-term viability of the company. A company may go into insolvency because of liquidity problems rather than poor profitability.

Compared with 20X8, both the current ratio and quick ratio in 20X9 decreased. This may initially be considered as a sign of the deterioration in liquidity, and less liquid or near liquid assets in terms of its ability to meet its current liabilities. Management should investigate the reasons for the decline and try to keep current assets at an acceptable level. Otherwise the company may have difficulty in financing continuing operations.

2 Profitability

Gross profit and trading profit were leveling off in 20X9. The gross profit margin dropped while the trading profit margin remained relatively stable.

This may have been caused by effective internal cost controls of the company in terms of salaries and other expenses. Management should investigate method(s) to further control costs, and look into the factors causing the surge in costs of sales.

Returns on total assets and returns on shareholders' capital increased. This shows that the company is better utilising its assets.

However, the company should look into the impact of the change in the components of its assets, as its current assets dropped but fixed assets rose in 20X9. The drop in current assets may worsen liquidity and the working capital of the company. The rise in fixed assets may have come to an end. The fixed assets turnover ratio may have been pushed down. Detailed analyses should be conducted.

3 Management efficiency

Net assets turnover and total assets turnover rose slightly.

If we also compute the fixed assets turnover ratio, we see that the ratio dropped significantly in 20X9 (from 9.62 times to 6.45 times) as the result of a surge in fixed assets. The growth in fixed assets and total assets is justified by the potential growth in sales.

Concerning the working capital cycle, inventory levels had dropped since 20X8. The company may have tight inventory controls or management should keep and establish a safe inventory level system if necessary.

Receivable collection period was high in 20X8 and decreased in 20X9. Management should consider offering discounts or other alternatives in order to keep the receivable collection period as short as possible. The industrial average can be taken as a benchmark.

4 Debt and equity ratios

These ratios will be of interest to stakeholders in the company such as creditors and shareholders. These ratios may be referred to as 'gearing ratios' to reflect the relative amount of company funds provided by equity or liabilities. The higher gearing ratio may imply the use of cheaper long-term finance, or the higher financial risk of the company, which may suffer, especially during periods of volatile profitability.

Little change occurred in the debt and equity ratios in 20X8 and 20X9. This reflects stability of the company's capital structure.

5 Interest and dividend covers

Interest cover represents the coverage of trading profit to interest payments. The ratio rose slightly from 2.2 to 2.3 in 20X9. This may be in line with the drop in the average debt level. It reflects a larger coverage of trading profit to interest expenses.

Dividend cover indicates the coverage of earnings per share to dividend per share. The smaller the ratio, the higher the portion of the dividend paid out from the earnings in each share, and the less retained funds kept by the company for further growth.

6 Investment ratios

The P/E represents the ratio of the market price of the company's ordinary shares to earnings per share (alternatively, market capitalisation of the company to total earnings for the year). The surge in the ratio may be due to growing market demand for ordinary shares.

30–12A con't

The P/E rose in 20X9. This may be caused by the company's business nature (IT). The result was an increase in stock price. Management should investigate the increase to check for any abnormal transactions that may have caused the boost in the stock price.

Dividend yield increased but the earnings yield decreased in 20X9. The earnings yield represents the return received by investors with respect to the share price. The lower the ratio, the longer the time investors must wait for returns to be paid.

The rise in dividend yield may benefit the company if long-term funds are to be requested from equity investors. However, management may consider adopting a more conservative dividend policy in line with earnings and the forecast of the company's development. This will deteriorate shareholder confidence if the company's future revenues are not promising.

7 Conclusion

With regard to the ratios discussed above, management should consider the company's ratios in view of the industrial average, or the ratios of similar organisations.

The company is gradually growing in terms of its sales volume. Management may consider the diversification of business in order to eliminate the external economic environment risk.

It is also suggested that they pay greater attention to monitoring the high debt and inventory levels. As stock price movement and company performance are not correlated, management should look into the issue so as to meet shareholders' objectives in the long term.

Finally, the ratios were computed based on historical costs. In view of the inherent limitations of ratio analysis, detailed operation and market studies are recommended in order that the company may obtain a more accurate and clear picture of its current situation.

Question 30–13A

Any ten ratios could be selected, but it would be expected that the selection would include ratios from each of the groups given in the chapter. In this case, the company appears as if it may have liquidity problems, possibly due to excessively high stocks. The gross profit percentage is very high at 85%, but much of it is eroded by the time all the other expenses have been charged to profit and loss. The EPS and dividend cover ratios would need to be compared to those of other companies in the same sector, as would all the other ratios calculated before any further conclusions could be drawn. It would also be interesting to compare these ratios (and others) with the equivalent figures for 20X1.

Formula

Ratio category

Solvency

$$\text{Current ratio} \quad \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{660}{620} = 1.06 : 1$$

$$\text{Acid test ratio} \quad \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}} = \frac{60}{620} = 0.10 : 1$$

Profitability

$$\text{Gross profit : Sales} \quad \frac{\text{Gross profit}}{\text{Sales}} = \frac{6,800}{8,000} = 85\%$$

Return on capital employed	$\frac{\text{Profit before interest and tax}}{\text{Total assets} - \text{current liabilities}} = \frac{500}{4,000 + 600 - 620}$	= 12.4%
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Efficiency

Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{1,200}{(500 + 600) \times 0.5}$	= 2.18 times
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Debtor days	$\frac{\text{Debtors}}{\text{Sales}} \times 365 = \frac{60}{8,000} \times 365$	= 2.7 days
-------------	--	------------

Creditor days	$\frac{\text{Creditors}}{\text{Purchases}} \times 365 = \frac{90}{1,300} \times 365$	= 25.3 days
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Capital structure

Capital gearing ratio	$\frac{\text{Prior charge capital}}{\text{Total capital}} = \frac{500}{500 + 3,540}$	= 12.4%
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Shareholder ratios

Earnings per share	$\frac{\text{Net profit after tax and preference dividends}}{\text{Number of ordinary shares in issue}} = \frac{450}{2,500}$	= 0.225
--------------------	--	---------

Dividend cover	$\frac{\text{Net profit after tax and preference dividends}}{\text{Net dividend on ordinary shares}} = \frac{450}{80}$	= 5.6 time
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Question 30-14A

(a) (i) Use of financial ratios

Ratios can be grouped into certain categories, each of which reflects a particular aspect of financial performance or position.

Profitability

Profitability ratios are used to assess the company's performance and its efficiency of operation. These ratios show the relationship between profit and resources employed in the operation.

Management efficiency

Management efficiency ratios can be used as an evaluation of how effectively a company's management employs the assets to generate revenue.

Liquidity

Liquidity ratios are a set of ratios used to evaluate a company's ability to meet its short-term obligations and thus ensure short-term survival.

Capital structure

Capital structure is concerned with how the net assets of a company are financed by a mixture of shareholders' capital and long-term loan capital. Capital structure ratios test the long-term solvency of a company.

30-14A con't

(ii) Limitations of ratio analysis

Quality of financial statements

Ratios are based on financial statements, and the results of ratio analysis depend on the quality of these underlying statements. Ratios will inherit the limitations of the financial statements on which they are based. Poor quality and unreliable financial statements can only lead to poor quality analysis and interpretation.

Restricted vision of ratios

It is important not to rely on ratios exclusively and thereby lose sight of information contained in the underlying financial statements. Some items reported in these statements can be of vital importance in assessing a company's financial position. For example, the total sales, capital employed and profit figures may be useful in assessing changes in absolute size which occur over time, or differences in scale between businesses. Ratios do not provide such information.

Basis of comparison

Ratios require a basis of comparison in order to be useful, and it is important that one is comparing like with like. When comparing businesses, however, no two businesses will be identical, and the greater the differences between the businesses being compared, the greater the limitations of ratio analysis. Furthermore, when comparing businesses, differences in such matters as accounting policies, financing policies and financial year ends will add to the problem of evaluation.

Balance sheet ratios

Because the balance sheet is only a 'snapshot' of the business at a particular moment in time, any ratios based on balance sheet figures may not be representative of the financial position of the business for the year as a whole.

(Marks will be given for other relevant points)

(b) (i)	20X9	20Y0
Net profit margin	$1,828/18,904 = 9.7\%$	$2,084/22,730 = 9.2\%$
ROCE	$1,828/22,066 = 8.3\%$	$2,084/27,886 = 7.5\%$
Current ratio	$10,106/3,270 = 3.1$	$15,400/10,348 = 1.5$
Gearing ratio	$2,440/22,066 = 11.1\%$	$7,348/27,886 = 26.4\%$
Trade receivables turnover	$(5,080/18,904) \times 365 = 98.1 \text{ days}$	$(8,560/22,730) \times 365 = 137.5 \text{ days}$
Net asset turnover	$18,904/19,626 = 1.0 \text{ times}$	$22,730/20,538 = 1.1 \text{ times}$

(Marks will be awarded to acceptable alternative definitions of ratios.)

- (ii) The net profit margin was slightly lower in 20Y0 than in 20X9. Although there was an increase in sales in 20Y0, this was not sufficient to compensate and could not prevent a slight fall in the ROCE in 20Y0. The lower net profit margin and increase in sales may well be due to the new contract. The net assets of the company increased in 20Y0, but not in proportion to the increase in turnover. Hence, the net asset turnover ratio increased slightly over the period. The increase in assets during 20Y0 appears to have been funded largely by an increase in borrowing. However, the gearing ratio is still low, indicating possible unused debt capacity.

The major cause for concern has been the dramatic decline in liquidity during 20Y0. The current ratio has more than halved during the period. There has also been a similar decrease in the acid test ratio

from 1.6 in 20X9 to 0.8 in 20Y0. The balance sheet shows that the company now has a large overdraft, and the trade and other payables outstanding have nearly doubled in 20Y0.

The trade receivables outstanding and inventories have increased much more than appears to be warranted by the increase in sales. This may be due to the terms of the contract which has been negotiated and may be difficult to influence. If this is the case, the company should consider increasing the company's long-term funding to accommodate the contract's requirements.

Question 30-16A

(a)	<i>South East Limited</i>	<i>North West Limited</i>
(i) Current ratio	$720/400 = 1.8 : 1$	$520/532 = 0.98 : 1$
(ii) Quick ratio	$500/400 = 1.25 : 1$	$340/532 = 0.64 : 1$
(iii) Debtors' collection period	$420/1,120 \times 365 = 137$ days	$320/800 \times 365 = 146$ days
(iv) Return on capital employed	$252/1,260 \times 100\% = 20\%$	$96/480 \times 100\% = 20\%$
(v) Return on owner's equity	$241/1,150 \times 100\% = 21\%$	$64/160 \times 100\% = 40\%$
(vi) Gearing ratio	$110/1,260 \times 100\% = 8.7\%$	$320/480 \times 100\% = 66.7\%$
(vii) Interest cover	$252/11 = 22.9$ times	$96/32 = 3$ times
(viii) Dividend cover	$192/110 = 1.75$ times	$46/40 = 1.15$ times
(ix) Gross profit margin	$380/1,120 \times 100\% = 33.9\%$	$200/800 \times 100\% = 25\%$
(x) Net profit margin	$252/1,120 \times 100\% = 22.5\%$	$96/800 \times 100\% = 12\%$

(b) Profitability

Both companies are profitable. The return on total capital employed is exactly the same, i.e. 20 per cent. The return of owners' equity is much higher for North West, reflecting the higher gearing — North West borrowing at 10 per cent and earning 20 per cent on the amount borrowed.

South East has much higher gross and net profit margins, but those of North West are still at an acceptable level.

Liquidity

South East has no liquidity problems on the basis of these ratios. A current ratio of 1.8 : 1 is ample for a manufacturing company, as is the quick ratio of 1.25 : 1.

At first sight North West has considerable liquidity problems. Both current ratio and quick ratio are well below the norm for a manufacturing business. However, a major item in the current liabilities is a bank overdraft. Although this must count as a current liability, being repayable on demand, many companies regard their overdraft as a medium-term source of capital. If the overdraft is excluded, the ratios are perfectly acceptable (current ratio 2.17 : 1, quick ratio 1.42 : 1).

Risk

South East's balance sheet shows no sign of any instability. The company is low-g geared and profitable. North West, on the other hand, is very highly geared (66.7 per cent, and much higher if the overdraft is allowed for). At the moment the high gearing is operating in the shareholders' favour, because return on capital is high. North West, would, however, be very vulnerable to a down-turn in profits.

The depreciation rate on the plant and machinery appears to be low at 5 per cent straight line, and some of the plant is likely to need replacing in the near future as it is nearly 80 per cent written off (net book value on 21.6 per cent of cost). This will put greater strain on the company's capital resources.

Question 31–4A

Calculations

Profit and Loss Accounts for the year ended 31 May 20X6

	<i>6 months to 30 Nov</i>		<i>6 months to 31 May</i>		<i>Year to 31 May</i>	
	\$	%	\$	%	\$	%
Sales	140,000	100	196,000	100	336,000	100
Cost of sales	(42,000)	30	(70,000)	36	(112,000)	33
Gross profit	98,000	70	126,000	64	224,000	67
Expenses	(56,000)	40	(112,000)	57	(168,000)	50
Net profit	42,000	30	14,000	7	56,000	17
Opening stock	12,000		16,000		12,000	
Closing stock	16,000		25,000		25,000	
Average stock	14,000		20,500		18,500	

Stock average could be calculated for the year as ((opening stock \$12,000 + closing stock \$25,000) ÷ 2) \$18,500 or [(\$12,000 + \$16,000 + \$25,000) ÷ 3] \$17,666 or [(\$14,000 + \$20,500) ÷ 2] \$17,250.

$$\text{Stock turnovers} = \frac{\text{Cost of sales}}{\text{Average stock}} = \quad \quad \quad 3 \quad \quad \quad 3.4 \quad \quad \quad 6.0$$

Influence of New Premises

	<i>New premises</i>		<i>Existing business</i>		<i>6 months to 31 May</i>	
	\$	%	\$	%	\$	%
Sales	70,000	100	126,000	100	196,000	100
Cost of sales	(28,000)	40	(42,000)	33	(70,000)	36
Gross profit	42,000	60	84,000	67	126,000	64
Expenses	(21,000)	30	(91,000)	72	(112,000)	57
Net profit/(loss)	21,000	30	(7,000)	(5)	14,000	7
Opening stock	–		16,000		16,000	
Closing stock	10,000		15,000		25,000	
Average stock	5,000		15,500		20,500	
Stockturn	5.6		2.7		3.4	

Note: The New Premises average stock is probably understated since it is assumed that stock builds up gradually over the period from zero to \$10,000. In reality it may have held \$10,000 throughout the period of trading.

Report to Martha

The analysis of the results which are shown above indicates a major query associated with the expenses of the existing business in the second half of the year. Gross profit has declined by 3 per cent compared with the first half year but the expenses have increased from 40 per cent to 72 per cent of sales. Even if it is assumed that expenses are largely fixed for rent, rates, etc. the absolute level has increased from \$56,000 to \$91,000, i.e. by \$35,000 or 62.5 per cent in the six-month period. This is in a period when, for the existing business, sales reduced from \$140,000 to \$126,000, i.e. by 10 per cent.

The stockturn figure indicates some improvement in the second half which is mainly attributable to the new business. This may not be an entirely acceptable measure until a further full half-year's funding had been completed.

The return on capital employed is as follows (using the capital employed balances at the end of the period):

	<i>6 months to 30 Nov</i>	<i>6 months to 31 May</i>	<i>12 months to 31 May</i>
Capital employed	\$90,000	\$104,000	\$104,000
Net profit	\$42,000	\$14,000	\$56,000
Return	47%	13%	54%

Despite the decline in profits during the second half of the year, the return on capital employed is high at 54 per cent. Future trends in gross profit margins and the level of expenses need to be examined.

Question 31–5A

		<i>20X4</i>	<i>20X5</i>
(a) (i) Current ratio:	Current assets	\$35,000	\$45,000
	Current liabilities	\$25,000	\$50,000
	Ratio	1.4 : 1	0.9 : 1
(ii) Acid test ratio:	Current assets – stocks	\$15,000	\$20,000
	Current liabilities	\$25,000	\$50,000
	Ratio	0.6 : 1	0.4 : 1
(b) (i) The change in net working capital is as follows:			
	Items increasing working capital:	\$	\$
	Increase in stocks		5,000
	Trade debtors increase		7,000
	Reduction in proposed dividend		1,000
			<u>13,000</u>
	Items reducing working capital:		
	Increase in trade creditors		4,000
	Reduction in net liquid assets:		
	reduced cash balance	2,000	
	increase in overdraft	22,000	24,000
		<u>24,000</u>	<u>(28,000)</u>
	Net reduction in working capital		<u>(15,000)</u>

The information explains the detailed changes in working capital that have taken place. The reasons behind these changes cannot be given since information is not given.

- (ii) The main issue is the trend of declining liquidity over the year to 31 March 20X5. If this trend continues, the business will be unable to meet its liability to creditors. It could, of course, be that major new funding is imminent for the issue of new long-term capital or rising volume/projects. If this is not managed, the owner needs to be advised of the necessity of urgent action.
- (c) The balance sheet can be used to prepare a cash flow statement which indicates changes in source and application of cash balances. It will give some indication if comparisons are made over a period of time as to whether the business is investing and expanding or declining, and whether a proper capital structure is in place. The capital structure will depend on the nature of the business and the risks it is involved with, whether it is high or low geared for example. The balance sheet, being a position statement at one point in time, does not give a dynamic picture of future prospects which are essential in planning liquidity.

Question 31-7A

(a) Witton Way Ltd

The following six ratios could be calculated in answering this part of the question, but other relevant ratios would be acceptable:

	20X5	20X6
(i) <i>Gross profit ratio</i>		
$\frac{\text{Gross profit}}{\text{Sales}} \times 100$	$\frac{1,850}{7,650} \times 100 = 24.2\%$	$\frac{2,070}{11,500} \times 100 = 18\%$
(ii) <i>Return on capital employed</i>		
$\frac{\text{Profit before tax} + \text{Long-term interest}}{\text{Share capital} + \text{Reserves} + \text{Loans and other borrowings}} \times 100$	$\frac{1,650 + 50}{5,900 + 5,000 + 350} \times 100 = 15.1\%$	$\frac{1,550 + 350}{5,900 + 5,700 + 3,350} \times 100 = 12.7\%$
(iii) <i>Acid test or quick assets or liquidity ratio</i>		
$\frac{\text{Current assets} - \text{Stock}}{\text{Current liabilities}}$	$\frac{3,600 - 1,500}{2,400} = 0.9$	$\frac{6,300 - 2,450}{2,700} = 1.4$
(iv) <i>Trade debtor collection period</i>		
$\frac{\text{Trade debtors}}{\text{Credit sales}} \times 365$	$\frac{1,200}{7,650} \times 365 = 57 \text{ days}$	$\frac{3,800}{11,500} \times 365 = 121 \text{ days}$
(v) <i>Stock turnover ratio</i>		
$\frac{\text{Stock}}{\text{Cost of sales}} \times 365$	$\frac{1,500}{5,800} \times 365 = 94 \text{ days}$	$\frac{2,450}{9,430} \times 365 = 95 \text{ days}$
(v) <i>Gearing</i>		
$\frac{\text{Long-term borrowings}}{\text{Shareholders' interest} + \text{long-term borrowings}} \times 100$	$\frac{350}{10,900 + 350} \times 100 = 3.1\%$	$\frac{3,350}{11,600 + 3,350} \times 100 = 22.4\%$

(b) In making a comparison between the two years to 30 April 20X5 and 30 April 20X6 respectively (as required by part (a) of the question), the following points could be made:

1 Profitability

- In absolute terms, sales have increased by \$3,850,000 (50.3%), the cost of sales by \$3,630,000 (62.6%), and gross profit by \$220,000 (11.9%). The company's gross profit on sales has fallen from 24.2% to 18.0%, presumably because it reduced its selling price.
- Other expenses have increased by \$20,000 (13.3%), probably as a result of the increased sales activity.
- To fund the extra expansion, it would appear that the company has borrowed another \$3,000,000 of long-term loan. Hence, the interest charges have increased by \$300,000.
- Overall, the profit before tax has *decreased* by \$100,000 although the tax based on profits is down by \$50,000. Thus the company's retained profits were only \$700,000 compared with \$750,000 in the previous year with the dividend payable to shareholders being retained at \$300,000 — exactly the same as in 20X5.

- (e) Not surprisingly, the company's return on its long-term funds employed was down from 15.1% to 12.7%. This is a most disappointing result after experiencing such a marked increase in its sales activity. A decrease in the selling price of goods apparently led to an increase in sales volume, but at the expense of overall profitability.
- (f) In brief, it appears that the increase in the company's sales did not lead to a corresponding increase in profits. Indeed, the company was less profitable in 20X6 than it was in 20X5. It should also be noted that these results do not take into account the effects of inflation on the company's performance. Allowing for inflation would make the 20X6 results even more disappointing.

2 Liquidity

- (a) At the end of 20X5 the company has a healthy cash balance of \$900,000. By the end of 20X6, it was down to \$50,000 notwithstanding that the company had raised \$3,000,000 in long-term loans during the year.
- (b) However, its *liquidity* position appears to have improved in 20X6 even though its cash position has declined so dramatically during the year. The company's current assets (excluding its stocks) more than cover its current liabilities in 20X6, while in 20X5 its current liabilities exceeded the current assets (excluding stocks) by some \$300,000.

3 Efficiency

- (a) Bearing in mind the company's increased sales activity, its stock on hand at the end of 20X6 compared with 20X5 was proportionate to the increase in trading activity. At each year end the company held the equivalent of 95 days' sales in hand.
- (b) Its efficiency in dealing with its trade debtors has, however, worsened. At the end of 20X6, its trade debtors represented 121 days' sales, whereas at the end of 20X5 they represented just 57 days' sales (itself not a particularly low level). Of course this is not a surprising result since more generous credit terms were offered in 20X6 in order to stimulate sales. The company has been able to finance this policy by running down its cash reserves and by increasing its long-term loans. In subsequent years it may not be possible to carry on with this policy unless it is able to raise even more long-term funds.

4 Shareholders' interests

- (a) Although the volume of its business increased dramatically, its profitability was down. Hence the company was only able to *maintain* its dividend at the same level as in 20X5.
- (b) By borrowing an extra \$3,000,000, the company's interest charges have increased substantially, although interest charges on loans outstanding at the year end fell from 14.2% to 10.5%. Thus at a time when profits were falling, the ordinary shareholders' dividend may have to be reduced in order to help pay the interest on the long-term debt, especially if even more funds have to be raised in 20X7 and onwards.
- (c) In 20X5 the gearing ratio was only 3.1% but by the end of 20X6 it had risen to 22.4%. Nonetheless, Witton Way is still a low-gear company, and provided no more long-term loans are raised, the ordinary shareholders have little to fear — unless profitability continues to decline.

5 Conclusion

In the short-term the company's new policy appears to have failed. While its absolute level of sales has increased substantially, its overall profit is down, its liquidity is threatened and it has had to finance its increased sales activity by a considerable amount of extra borrowing. It would appear that the extra borrowing enabled it to finance its extended credit terms, as well as help to purchase new fixed assets — presumably to cope with the extra activity.

31-7A con't

(c) The following points could be made in answering part (c) of the question:

- 1 What was the effect of inflation upon the company's sales?
- 2 How many new customers were attracted to the company as a result of the extended credit terms and what extra volume of business did they bring?
- 3 What increase in sales was achieved by individual products?
- 4 Were the extended credit terms applied to all products?
- 5 Were all customers offered the extended credit terms?
- 6 Were more profitable products displaced by less profitable products?
- 7 Has the proportion of bad debts increased?
- 8 What effect has the increase in sales activity had on other costs?
- 9 To what extent has the expected depreciation rate on fixed assets been affected by the increased sales activity?
- 10 What facilities has the company arranged in order to finance the more generous credit terms in later years?

Question 31-9A

(a) To: The Chairman
From: The Accountant
Subject: State and progress of the business

1 *The last three years' trading may be summarised thus:*

	20X4		20X5		20X6	
	\$000	%	\$000	%	\$000	%
Sales	260	100.0	265	100.0	510	100.0
Cost of sales	(207)	79.6	(215)	81.1	(373)	73.1
Trading profit	53	20.4	50	18.9	137	26.9
Depreciation	(15)	5.8	(15)	5.7	(45)	8.8
Loan interest	—	—	—	—	(30)	5.9
Net profit before tax	38	14.6	35	13.2	62	12.2

Gross profit fell in 20X5 but rose sharply in 20X6 — was this caused by an increase in sales prices or a decrease in cost of sales? The additional investment in plant has brought a higher charge for depreciation and created a loan interest cost, but the amount of net profit is sharply up, almost in line with sales.

2 *Stocks*

Closing stocks represent the following days' cost of sales:

$$\frac{20}{207} \times 365 = 35 \text{ days}$$

$$\frac{45}{215} \times 365 = 76 \text{ days}$$

$$\frac{85}{373} \times 365 = 83 \text{ days}$$

Stocks now seem very high. Is this level necessary?

3 *Debtors*

$$\frac{33}{260} \times 365 = 46 \text{ days}$$

$$\frac{101}{265} \times 365 = 139 \text{ days}$$

$$\frac{124}{510} \times 365 = 89 \text{ days}$$

89 days seems high, even though a big improvement on 20X5 figure. What terms are customers given?

4 Creditors

Creditors' turnover should be calculated on purchases, not cost of goods sold. Purchases cannot be calculated for 20X4 but for the later years is:

	\$000	\$000
Cost of goods sold	215	373
Add Closing stock	45	85
	<u>260</u>	<u>458</u>
Less Opening stock	(20)	(45)
Purchases	<u>240</u>	<u>413</u>

Purchases for 20X4 are taken as cost of goods sold.

$$\frac{20}{207} \times 365 = 35 \text{ days}$$

$$\frac{80}{240} \times 365 = 122 \text{ days}$$

$$\frac{35}{413} \times 365 = 31 \text{ days}$$

The figures of 35 days and 31 days indicate a normal monthly credit period, but the figure of 122 days in 20X5 seems strange, unless some large purchases were made just before the balance sheet date.

5 Working capital or current ratio

$$\frac{63}{24} \times 100 = 263\%$$

$$\frac{161}{97} \times 100 = 166\%$$

$$\frac{209}{66} \times 100 = 317\%$$

6 Quick ratio or acid test

$$\frac{43}{24} \times 100 = 179\%$$

$$\frac{116}{97} \times 100 = 120\%$$

$$\frac{124}{66} \times 100 = 188\%$$

Both the above series of figures show a satisfactory position but the difference between the two 20X6 figures underlines the large investment in stock at that date.

7 Gearing

$$324 : 0$$

$$334 : 0$$

$$468 : 200$$

Gearing is comfortably low after loan taken up in 20X6.

8 Return on shareholders' funds

$$\frac{38}{317} \times 100 = 12.0\%$$

$$\frac{35}{325} \times 100 = 10.8\%$$

$$\frac{62}{345} \times 100 = 18.0\%$$

20X6 shows a welcome rise but all percentages are probably overstated as leasehold land and buildings in balance sheet are probably at original cost; if they have increased in value, shareholders' funds will be understated.

9 Conclusion

Business appears sound and profitable. The investment in the new plant, part financed by a loan, has caused liquidity problems but these are probably only a temporary feature.

31–9A con't

(b) Answers to specific questions

(i) A cash flow statement best shows how a company can make a profit but still be short of cash.

Cash Flow Statement for the year ended 30 June 20X6		
	\$000	\$000
Net cash inflow from operating activities (\$49 + \$45 + \$43 – \$40 – \$23 – \$47)		27
Returns on investments and servicing of finance		
Dividend paid	(12)	
Interest paid	(43)	(55)
Tax paid (\$17 + \$9 + \$15 – \$23 – \$6)		(12)
Investing activities:		
Purchase of plant		(300)
Net cash outflow before financing		(340)
<i>Financing</i>		
Issue of share capital	100	
Issue of loan	200	300
Decrease in cash and cash equivalents		(40)
Cash and cash equivalents at 1 July 20X5		15
Cash and cash equivalents at 30 June 20X6		(25)
Analysis of balance of cash and cash equivalents at 30 June 20X6:		
Bank overdraft		(25)

(ii) A balance sheet is not a valuation of a business but more like a historic record where fixed assets are concerned. Revaluations of fixed assets do take place in many companies, but these are usually based on the views of professional valuers (e.g. chartered surveyors) and it is not good practice to introduce guesses of current values. Any revaluation surplus would go to a revaluation reserve and would not affect the declaration of annual profits (unless there were consequential changes to the depreciation charge for the year).

Question 31–11A

(a) An Investor

Dear Sir

Report on AA Ltd and BB Ltd

1 In accordance with your instructions, I give below my report on these companies which I hope may help you in deciding whether to proceed with a purchase of shares in either.

Balance sheets

2 AA has substantial freehold property. The 20X5 revaluation may now be an underestimate of its value. Such freehold property gives a large measure of solidarity to an investment, and also provides a useful security on which to borrow money if required. BB appears to own no freehold or leasehold property — at least, no entry for either appears in its balance sheet.

- 3 If one assumes that plant is depreciated on a straight line basis with no residual value, AA's plant is 67% time-expired while BB's is much newer at only 22%. AA may therefore have to face the cost of replacement before long.
- 4 BB has an entry for goodwill, but the value of this is obviously dubious.
- 5 AA has more than twice as much as BB tied up in stocks. Expressed in relation to usage (and taking sales *less* operating profit as the measure of cost of sales), AA's finished goods are 10 weeks' sales, while BB's are only 5 weeks'. The work in progress of AA is equal to 7 weeks' sales, while that of BB is 3 weeks'. As both companies carry on a similar trade, it is surprising that AA appears to need a much larger investment in stocks — or is it just inefficiency?
- 6 Debtors of AA approximate to 17 weeks' sales, but those of BB are only 10 weeks'. Again, is this inefficiency on the part to AA?
- 7 AA needs a bank overdraft, while BB is comfortably liquid. The current or working capital ratio of AA is 188% against 133% of BB. The quick ratio in both companies is 100%. The working capital situation in both companies is satisfactory but the need for the overdraft in AA underlines the high stock and slow-paying debtors in that company.
- 8 Creditors in AA appear as 15 weeks' supplies and expenses, while in BB they are 25 weeks'. Both these figures are astonishingly high when one considers that monthly account is the normal basis of trade. How does BB get nearly half a year's credit?
- 9 Expressing gearing as Loans/Loans + Shareholders' funds, the gearing in AA is 1,400/3,700 or 38%, while that in BB is 1,000/2,500 or 40%. Neither of these figures is regarded as high gearing.

Profit and loss accounts

- 10 Turning to the profit and loss accounts, we find the following:

	<i>AA</i>	<i>BB</i>
Operating profit as a percentage of sales	16%	24%
Net profit before tax	\$70,000	\$360,000
Effective rate of tax	29%	25%
Dividend yield on market price	2.7%	9.6%
Dividend cover	1.25 times	2.1 times

- 11 BB appears both more efficient and more attractive to its shareholders, and of the two is clearly to be preferred as an investment.

Yours faithfully

IC Essay

- (b) The P/E ratio of 30 for AA is surprisingly high, since even blue chip companies usually reach only 26 to 28, and there the expected profit growth is seen to be realised every year. What is AA's attraction to investors? It is not to be seen in the 20X7 accounts. The market price of \$1.50 still compares badly with its net asset value of \$2.30, and one is left to guess that perhaps the trading results for 20X7 were unexpectedly bad, and that it is the asset backing rather than the profits which have kept the market price up.

By contrast, the P/E ratio of 5 for BB is exceptionally low and such a figure is normally a warning to prospective investors that the profits may be in danger of drying up shortly. The asset backing is \$3.00 per share. At 9.6% yield, does the market know something bad about the company which we do not? A dividend yield of only 4% or 5% is the normal expectation (and as low as 2% for many blue chip companies).

Question 31–13A

(a) Profitability ratios

	20X4	20X5
Gross profit as % sales	$528/2,400 = 22\%$	$588/2,800 = 21\%$
Net profit as % sales	$138/2,400 = 5.8\%$	$142/2,800 = 5.1\%$
Return on capital employed (using some basis of operating profit)	$138/900 = 15.3\%$	$174/1,362 = 12.8\%$
Operating profit/sales	$138/2,400 = 5.8\%$	$174/2,800 = 6.2\%$
Distribution costs/sales	$278/2,400 = 11.6\%$	$300/2,800 = 10.7\%$
Administration expenses/sales	$112/2,400 = 4.7\%$	$114/2,800 = 4.1\%$
Return on shareholders' funds	$138/900 = 15.3\%$	$142/1,042 = 13.6\%$

(b) Liquidity ratios

Current ratio	$936/256 = 3.7 : 1$	$1,414/338 = 4.2 : 1$
Acid test ratio	$392/256 = 1.5 : 1$	$754/338 = 2.2 : 1$
Stockturn*	$1,872/544 = 3.4$	$2,212/660 = 3.4$
Debtors/credit sales	$384/2,200 \times 52 = 9.1 \text{ weeks}$	$644/2,640 \times 52 = 12.7 \text{ weeks}$
Creditors/purchases*	$256/1,872 \times 52 = 7.1 \text{ weeks}$	$338/2,328 \times 52 = 7.5 \text{ weeks}$

* Opening stock not known for 20X4. Therefore 20X4 ratios calculated on closing stock figures, being only alternative. The 20X4 ratios should therefore be viewed with a great deal of scepticism.

Calculation of Purchases for 20X6 is Opening stock \$544 + Purchases ? – Opening stock \$660 = \$2,212. By arithmetical deduction, Purchases is therefore \$2,328. Purchases for 20X4 is taken (opening stock not being known) as same as Cost of sales.

Comments

(i) Profitability

Debentures of \$320,000 have been issued during the year. The profit and loss account has thus had to bear an extra charge of \$32,000 interest. If the rate of interest were 10 per cent this would mean the debentures were issued on 1 January 20X5, thus financing a full year's expansion.

The extra sales generated of 16.7 per cent have been at the cost of cutting the gross profit percentage from 22 per cent to 21 per cent.

The operating profit percentage has improved from 5.8 per cent to 6.2 per cent, possibly due partly to the fixed element in distribution and administration costs and also improved efficiency by the use of the extra loan capital being invested in better equipment.

The return on capital employed, based on operating profit, has fallen from 15.3 per cent to 12.8 per cent. This is because the profit generated from an increase in sales at a lower rate of profitability has not been sufficient to compensate for the extra capital employed.

Possibly the programme of expansion was only partly completed during 20X5 with benefits not capable of being shown up until 20X6 and later. Similar remarks also would apply to the return in shareholders' funds.

(ii) Liquidity

Both the current ratio and the acid test (or quick) ratio have improved. This will be largely due to cash received from the issue of debentures.

The debtors are taking much longer to pay: 12.7 weeks instead of 9.1 weeks as previously. This raises the question as to the creditworthiness of the firms to whom the extra sales have been made. Every sensible effort should be made to reverse the trend in the debtor ratio.

There is a large cash balance which does not seem to be making a return on its funds. This should be utilised more fully. It may of course be planned already to use it profitably.

Question 31–15A

From the ratios provided, you can obtain various indicators of whether the Kowloon East branch is being properly managed:

Return on capital employed: The better return of the Kowloon East branch suggests it is being well managed — it is earning \$6 more (i.e. 37.5 per cent more) per \$100 invested than the overall average. However, some caution is needed in that analysis — while a consistent basis for the figures in the ratio is probable (as all the branches are in the same company), there is no guarantee that all have similar assets, either in nature or in age. Unless all the branches have similar asset profiles, the ratio result will be distorted. Further information will be needed.

Gross profit: Over 15 per cent lower than the overall average (at 38 per cent compared with 45 per cent), this suggests Kowloon East is not being managed as well as other branches. However, this could have arisen because the Kowloon East branch has been competing locally and has had to cut prices and offer incentives to retain and/or expand its customer base. Further information will be needed.

Selling and promotion costs/sales: The Kowloon East branch is spending 50 per cent more per \$100 of sales on promotion. While this could be an indicator of poor management, it is consistent with the suggestion, made above under *gross profit*, that the branch may have been competing locally (but, of course, promotion costs do not directly impact gross profit). Further information will be needed.

Wages/sales: Kowloon East is spending 35.7 per cent more on wages per \$100 of sales than the average (19 per cent vs. 14 per cent) — another possible indicator of poor management. However, it is also consistent with an attempt to retain and/or expand its customer base through an increased level of service (as a result of employing more staff). Further information will be needed.

Debtors turnover: Kowloon East allows its customers 21 per cent more time to settle their accounts than the average (63 days vs. 52 days) — another possible indicator of poor management. However, it is also consistent with an attempt to retain and/or expand its customer base through an increased level of service (as a result of employing more staff). Further information will be needed.

Stock turnover: Turning over stock virtually 25 per cent quicker than the average (37 days vs. 49 days) suggests good management of this aspect of working capital. However, it may be caused by inefficient buying policies that are causing stock shortage and loss of customers. Further information will be needed.

Overall: The ratios indicate a higher cost and lower profit profile exists at Kowloon East compared with the average. This may indicate poorer management, or may be due to the environment in which the branch is operating — it may, for example, be in competition with a price-cutting competitor.

Control over debtors appears weak, but may be due to a need to compete. The only positive ratio result is the lower stock turnover period. However, it could actually be an indication that mismanagement is occurring.

The ratios in themselves are insufficient to draw any firm conclusions regarding the quality of management of the branch. However, they do indicate questions that should be asked and points that should be raised if an objective view on the quality of the branch's management is to be reached.

Question 31-16A

(a)			
Profit and Loss Account			
	<i>Revised 2nd Quarter</i>	<i>Revised 3rd Quarter</i>	
	\$000	\$000	
Sales	290	280	
Opening stock	150	140	
Purchases	190	210	
	340	350	
<i>Less</i> Closing stock	(140)	(180)	
Cost of sales	200	170	
Gross profit	90	110	
<i>Less</i> Overhead	(70)	(80)	
Net profit/(loss)	20	30	
Balance Sheet			
	<i>Revised 2nd Quarter</i>	<i>Revised 3rd Quarter</i>	
	\$000	\$000	
<i>Fixed assets</i>	120	140	
<i>Current assets</i>			
Stock	140	180	
Trade debtors	110	150	
Cash	20	—	
	270	330	
<i>Current liabilities</i>			
Trade creditors	70	70	
Bank overdraft	—	50	
	70	120	
Net current assets	200	210	
	320	350	
Share capital	100	100	
Profit and loss account	220	250	
	320	350	
(b)			
	<i>Revised 2nd Quarter</i>	<i>Revised 3rd Quarter</i>	
<i>Profitability</i>			
Gross profit ratio	31.0%	39.3%	
Net profit margin	6.9%	10.7%	
Return on share capital	20.0%	30.0%	
Return on fixed asset employed	16.7%	21.4%	
<i>Liquidity</i>			
Current ratio	3.9 : 1	2.8 : 1	
Liquid ratio	1.9 : 1	1.3 : 1	

	<i>Revised 2nd Quarter</i>	<i>Revised 3rd Quarter</i>
<i>Asset Management</i>		
Creditors payment period	28 days	30 days
Debtors collection period	29 days	42 days
Stock turnover	1.38 times	1.06 times

(c) *Profitability*

Gross profit of Azur Ltd has slightly declined from 33.3% to 31.0% in the second quarter despite an increase in sales by 20.8% (\$290,000 vs \$240,000). The inefficiency might be due to the staff not being familiar with the operation of the new machines.

The gross profit margin improved significantly in the third quarter from 31.0% to 39.3% with better utilisation of new machines.

The efficiency in the utilisation of fixed assets has been recovered to the normal range (i.e. above 20%) after a disruption in the second quarter.

Liquidity

Azur Ltd's liquidity was strong in the first quarter but it seems a bit excessive.

The liquidity has been reduced with the expansion of operations through purchases of new machines and stocks. It is evidenced by the occurrence of bank overdraft in the third quarter.

Asset Management

With an increase in sales in the second quarter, the debtors' collection period has not changed much. However, in the third quarter, the debtors' collection period lengthened from 29 days to 42 days. The management should tighten its control on debt collection to avoid the occurrence of bad debts.

With the increase in operating activities, Azur Ltd has increased its stock turnover from 1.19 times to 1.38 times in the second quarter, but declined in the third quarter. With an increase in stock balance and a declining stock turnover ratio, a careful review of the quality of stocks is required in order to get rid of obsolete stocks as soon as possible.

The company has been lengthening the period of payment to its creditors from 24 days in the first quarter to 30 days in the third quarter.

Question 34-2a

- (i) t, v
- (ii) n
- (iii) b, d, h, o, y
- (iv) c, g, i, p, q, u, z
- (v) e, f, j, l, m, r, s, w, x
- (vi) a, k

Question 34-3A

- (a) Cost behaviour refers to the manner in which costs arise, e.g. are they fixed for a period; do they change in proportion to the level of activity, etc. Analysis of total cost refers to the elements of specific total costs.
- (b)
- Factory power and lighting: would have a fixed element (light) and a variable element (power), and therefore semi-variable; however, would normally be classified as indirect factory expenses unless it was clear how much was incurred in producing each unit of the products, in which case, it could be split partly between direct costs and partly as indirect overheads.
 - Production line workers' wages: a variable cost; would be analysed as a direct cost.
 - Sales manager's salary: a fixed cost; would be analysed as a selling and distribution expense.
 - Office rent: a fixed cost; would be analysed as an indirect administrative expense.

Question 34-5A

	\$	\$
Raw materials consumed ($\$11,400 + \$209,000 - \$15,600$)		204,800
Carriage on raw materials		1,800
Direct labour ($\$150,000 \times 60\%$)		90,000
Royalties (this is a direct expense)		400
Prime cost (a)		<u>297,000</u>
<i>Factory overhead</i>		
Factory indirect labour ($\$150,000 \times 40\%$)	60,000	
Rent and rates (factory block)	4,900	
Travelling expenses of factory workers	200	
Depreciation of factory machinery	1,800	
Other factory indirect expenses	6,000	72,900
Production cost (b)		<u>369,900</u>
<i>Administrative expenses</i>		
Wages and salaries	26,000	
Rent and rates: administrative block	1,100	
Travelling expenses	300	
Depreciation: Cars of administrative staff	400	
Office machinery	200	
Other administrative expenses	4,000	32,000
<i>Selling and distribution expenses</i>		
Salaries: sales force	15,000	
Carriage costs on deliveries	1,100	
Rent and rates: Sales department and showrooms	1,000	
Travelling expenses: Sales staff	3,400	
Depreciation: Sales staff cars	500	
Delivery vehicles	300	
Other selling expenses	1,000	22,300
<i>Finance costs</i>		
Interest costs		800
Total cost (c)		<u><u>425,000</u></u>

Question 35-2A

Answers to be drafted by students in proper memo form.

Introduction:

Marginal cost is $\$2.8 + \$2.4 + \$0.8 = \6.0

Selling price - Marginal cost = Contribution to overheads and profit.

Projects which give negative contributions should be rejected.

A change in volume can only be favourable where total contributions with new project are greater than total contributions without new project.

(a) Total contributions with new project

$$\$7.4 - \$6.0 = \$1.4 \times 120,000 = \$168,000$$

Total contributions without new project

$$\$7.5 - \$6.0 = \$1.5 \times 100,000 = \$150,000$$

Therefore accept reduction in selling price to \$7.4

	At \$7.5	At \$7.4
Proof	\$	\$
Direct materials	280,000	336,000
Direct labour	240,000	288,000
Indirect manufacturing costs		
Variable	80,000	96,000
Fixed	40,000	40,000
Selling and distribution	20,000	20,000
Administrative expenses	30,000	30,000
Finance	10,000	10,000
	<u>700,000</u>	<u>820,000</u>
Sales	<u>750,000</u>	<u>888,000</u>
Net profit	<u>50,000</u>	<u>68,000</u>

(b) Total contributions with new project ($\$7.7 - \$6.0 = \$1.7 \times 80,000$)

Add saving in finance costs

Total contributions without new project ($\$7.5 - \$6.0 = \$1.5 \times 100,000$)

Therefore reject new project.

Proof

(i) At \$7.5 net profit is		<u>\$50,000</u>
(ii) At \$7.7	\$	\$
Direct materials (80,000 × \$2.8)	224,000	
Direct labour (80,000 × \$2.4)	192,000	
Indirect manufacturing costs: Variable (80,000 × \$0.8)	64,000	
Fixed	40,000	
Selling and distribution	20,000	
Administrative expenses	30,000	
Finance (\$10,000 - \$2,000)	8,000	
	<u>578,000</u>	
Sales (80,000 × \$7.7)	<u>616,000</u>	
Net profit		<u>38,000</u>

35-2A con't

- (c) Marginal cost is \$6.0: the extra order at \$6.3 would therefore be worthwhile.
 (d) Marginal cost is \$6.0: the extra order at \$5.9 should be rejected.

Question 35-4A

Year 1	(a) Marginal cost	(b) Absorption cost
	\$ \$	\$ \$
Sales (9,000 × \$16)	144,000	144,000
Less Variable costs		
Direct labour (\$4 × 10,000)	40,000	40,000
Direct materials (\$3 × 10,000)	30,000	30,000
Variable overheads (\$5 × 10,000)	50,000	50,000
Total variable cost	120,000	120,000
Less Closing inventory valuation (A)		
$\frac{1,000}{10,000} \times \$120,000$	(12,000)	
	108,000	
Fixed overhead	16,000	16,000
		136,000
Less Closing inventory valuation (B)		
$\frac{1,000}{10,000} \times \$136,000$		(13,600)
Total costs	(124,000)	(122,400)
Gross profit	20,000	21,600
 Year 2	 (a) Marginal cost	 (b) Absorption cost
	\$ \$	\$ \$
Sales (10,000 × \$16)	160,000	160,000
Less Variable costs		
Direct labour (\$4 × 12,000)	48,000	48,000
Direct materials (\$3 × 12,000)	36,000	36,000
Variable overheads (\$5 × 12,000)	60,000	60,000
Total variable cost	144,000	144,000
Less Closing inventory valuation (A)		
$\frac{3,000}{12,000} \times \$144,000$	(36,000)	
	108,000	
Fixed overhead	16,000	16,000
		160,000
Less Closing inventory valuation (B)		
$\frac{3,000}{12,000} \times \$160,000$		(40,000)
		120,000
Add Opening inventory b/d	12,000	13,600
Total costs	(136,000)	(133,600)
Gross profit	24,000	26,400

Year 3	(a) <i>Marginal cost</i>	(b) <i>Absorption cost</i>
	\$ \$	\$ \$
Sales (15,000 × \$16)	240,000	240,000
Less Variable costs		
Direct labour (\$4 × 16,000)	64,000	64,000
Direct materials (\$3 × 16,000)	48,000	48,000
Variable overheads (\$5 × 16,000)	80,000	80,000
Total variable cost	192,000	192,000
Less Closing inventory valuation (A)		
$\frac{4,000}{16,000} \times \$192,000$	(48,000)	
	144,000	
Fixed overhead	16,000	16,000
		208,000
Less Closing inventory valuation (B)		
$\frac{4,000}{16,000} \times \$208,000$		(52,000)
		156,000
Add Opening inventory b/d	36,000	40,000
Total costs	(196,000)	(196,000)
Gross profit	<u>44,000</u>	<u>44,000</u>

Question 35–6A

(a) *See* text.

(b)

	(i)	(ii)	(iii)
	<i>Normal</i>	<i>+A</i>	<i>+B</i>
	\$	\$	\$
Direct labour	8	8	8
Direct materials	17	17	17
Variable overheads	11	11	11
Labour: overtime		2	2
Special treatment			6
Total variable cost	36	38	44
Contribution	29		
Selling price	<u>65</u>		

(i) <i>Normal production</i>	\$
Contribution (2,000 × \$29)	58,000
Fixed costs	(29,400)
Profit	<u>28,600</u>

35-6A con't

(ii) <i>Order A accepted</i>	\$	\$
Normal production contribution		58,000
Order A contribution: sales	20,000	
<i>Less</i> Direct costs (600 × \$38)	(22,800)	(2,800)
Total contribution		55,200
Fixed costs		(29,400)
Profit		25,800

(iii) <i>Order B accepted</i>	\$	\$
Normal production contribution		58,000
Order B contribution: sales	34,000	
<i>Less</i> Direct costs (750 × \$44)	(33,000)	1,000
Total contribution		59,000
Fixed costs		(29,400)
Profit		29,600

(c) *See* text, but (iii) above demonstrates that.

Question 35-8A

(a) Contribution per product

	<i>A</i>	<i>B</i>	<i>C</i>
	\$	\$	\$
Variable costs:			
Labour	6	9	6
Materials	20	24	16
Variable overhead	4	3	2
	<u>30</u>	<u>36</u>	<u>24</u>
Selling price	45	44	37
Contribution per unit	<u>15</u>	<u>8</u>	<u>13</u>

However, September sees a shortage of materials, so work out contribution per kilo of materials. This shows:

- A* \$15 ÷ 5 kilos = \$3
B \$8 ÷ 6 kilos = \$1.33
C \$13 ÷ 4 kilos = \$3.25

Total kilos used per month:

- A* 6,000 × 5 kilos = 30,000
B 8,000 × 6 kilos = 48,000
C 5,000 × 4 kilos = 20,000
98,000

September delivery of material = 98,000 - 15% = 83,300 kilos; i.e. shortfall of 14,700 kilos.

B has the lowest contribution, therefore restrict production by (14,700 kilos ÷ 6 kilos) 2,450 units
 = (8,000 - 2,450) 5,550 units.

<i>Contributions:</i>		<i>July</i>	<i>August</i>	<i>September</i>
	\$	\$	\$	\$
<i>A</i>	6,000 × \$15	90,000	90,000	90,000
<i>B</i>	8,000 × \$8	64,000	64,000 (5,550 × \$8)	44,400
<i>C</i>	5,000 × \$13	65,000	65,000	65,000
		<u>219,000</u>	<u>219,000</u>	<u>199,400</u>

<i>Fixed overhead:</i>				
<i>A</i>	6,000 × \$5	30,000		
<i>B</i>	8,000 × \$5	40,000		
<i>C</i>	5,000 × \$6	30,000	(100,000)	(100,000)
		<u>119,000</u>	<u>119,000</u>	<u>99,400</u>

Maximum net profit possible:

\$337,400

NB: It is assumed that direct labour cut down for *B* in September does not have to be paid for.

Question 35–9A

(a) 20X4

	(i) <i>Marginal costing</i>	(ii) <i>Absorption costing</i>
	\$	\$
Sales	280,000	280,000
Less Variable costs		
Direct materials	60,000	60,000
Direct labour	48,000	48,000
Variable overheads	24,000	24,000
Total variable cost	<u>132,000</u>	
Less Closing stock		
$\frac{2,000}{16,000} \times \$132,000$	(16,500)	
	<u>115,500</u>	
Fixed costs	40,000	40,000
	<u>(155,500)</u>	
Total production costs		172,000
Less Closing stock		
$\frac{2,000}{16,000} \times \$172,000$		(21,500)
Gross profit	<u>124,500</u>	<u>129,500</u>

35-9A con't

20X5	(i) Marginal costing	(ii) Absorption costing
	\$	\$
Sales	280,000	280,000
Less Variable costs		
Direct materials	49,900	49,900
Direct labour	44,000	44,000
Variable overheads	30,000	30,000
Total variable cost	123,900	
Add Opening stock	16,500	
	140,400	
Less Closing stock $\frac{2,000}{14,000} \times \$123,900$	(17,700)	
	122,700	
Fixed costs	40,600	40,600
	(163,300)	
Total production costs		164,500
Add Opening stock		21,500
		186,000
Less Closing stock $\frac{2,000}{14,000} \times \$164,500$		(23,500)
		(162,500)
Gross profit	116,700	117,500
	(i) Marginal costing	(ii) Absorption costing
	\$	\$
20X6		
Sales	300,000	300,000
Less Variable costs		
Direct materials	52,200	52,200
Direct labour	45,000	45,000
Variable overheads	40,000	40,000
Total variable cost	137,200	
Add Opening stock	17,700	
	154,900	
Less Closing stock $\frac{1,000}{14,000} \times \$137,200$	(9,800)	
	145,100	
Fixed costs	41,300	41,300
	(186,400)	
Total production costs		178,500
Add Opening stock		23,500
		202,000
Less Closing stock $\frac{1,000}{14,000} \times \$178,500$		(12,750)
		(189,250)
Gross profit	113,600	110,750

(b) See text, Section 35.7.

Question 35-11A

Firelighters Ltd Workings

	20X0	20X1
Opening stock (units)	15,000 *	20,000
Manufactured	105,000	130,000
	<u>120,000</u>	<u>150,000</u>
Closing stock	(20,000)	(20,000)
Units sold	<u>100,000</u>	<u>130,000 *</u>

* Balancing figures

Firelighters Ltd Revenue Statement for the years ended

	20X0		20X1	
Sales	\$000	\$000	\$000	\$000
100,000 @ \$10 per unit		1,000		
130,000 @ \$10 per unit				1,300
Cost of sales				
Opening stock: 15,000 @ \$4	60			
20,000 @ \$4			80	
Manufactured: 105,000 @ \$4	420			
130,000 @ \$4			520	
	<u>480</u>		<u>600</u>	
Closing stock: 20,000 @ \$4	(80)		(80)	
	<u>400</u>		<u>520</u>	
Variable selling costs				
100,000 @ \$1.25	125	(525)		
130,000 @ \$1.50			195 *	(715)
Contribution		475		585
Fixed manufacturing costs	105		117	
Other fixed costs	155	(260)	176 *	(293)
Operating profit before interest		<u>215</u>		<u>292</u>
Interest charges		(70)		(82)*
Net profit for the year		<u>145</u>		<u>210</u>

* Balancing figure

Question 35–12A

(a) and (b) see text.

(c) (i)

	AS Teriod Ltd					
	<i>Ceres</i>	<i>Eros</i>	<i>Hermes</i>	<i>Icarus</i>	<i>Vesta</i>	<i>Total</i>
Unit price	\$	\$	\$	\$	\$	\$
Direct labour	14	8	22	18	26	88
Direct material	8	10	13	12	17	60
Variable overhead	11	9	16	15	19	70
Total variable cost	33	27	51	45	62	218
Fixed cost	17	13	19	15	18	82
Total cost	50	40	70	60	80	300
Profit 20%	10	8	14	12	16	60
Selling price	60	48	84	72	96	360

(ii) Produce only those where marginal cost is lower than selling price, i.e. produce Ceres, Hermes and Vesta.

(iii) All produced at new prices (100 of each):

	<i>Ceres</i>	<i>Eros</i>	<i>Hermes</i>	<i>Icarus</i>	<i>Vesta</i>	<i>Total</i>
	\$	\$	\$	\$	\$	\$
Total variable cost	3,300	2,700	5,100	4,500	6,200	21,800
Fixed cost	1,700	1,300	1,900	1,500	1,800	8,200
Total cost	5,000	4,000	7,000	6,000	8,000	30,000
Profit/(loss)	900	(1,500)	1,000	(1,600)	1,200	—
Selling price	5,900	2,500	8,000	4,400	9,200	30,000

If only Ceres, Hermes and Vesta produced:	\$
Sales (\$5,900 + \$8,000 + \$9,200)	23,100
Less Variable cost (\$3,300 + \$5,100 + \$6,200)	(14,600)
Contribution	8,500
Total fixed costs	(8,200)
Profit	300

Question 35–13A

(a) (i) **Contribution** per unit is the difference between the variable costs of producing a unit of a product and the selling price of that unit.

(ii) **Key factor** is anything that limits the activity of a business (also called the 'limited factor').

(b)

	<i>Products</i>		
	<i>A</i>	<i>B</i>	<i>C</i>
	\$	\$	\$
Direct raw material	147	87	185
Direct labour:			
Grade 1	64	56	60
Grade 2	24	27	21
Variable overheads	15	10	15
	<u>250</u>	<u>180</u>	<u>281</u>
Selling price	<u>400</u>	<u>350</u>	<u>450</u>
Contribution	150	170	169
Fixed overheads	(12)	(12)	(12)
Profit	<u>138</u>	<u>158</u>	<u>157</u>

(c) (i) Total production labour available

Grade 1 Full-time $28 \times 40 \times 4$	\$ 4,480	\$
Part-time	<u>2,240</u>	6,720
Grade 2 Full-time $12 \times 40 \times 4$	1,920	
Part-time	<u>1,104</u>	<u>3,024</u>
		<u>9,744</u>

(ii) Hours required to produce each unit

	<i>A</i>		<i>B</i>		<i>C</i>	
	\$	<i>Hrs</i>	\$	<i>Hrs</i>	\$	<i>Hrs</i>
Grade 1 labour cost per unit	64		56		60	
Divide by hourly rate	<u>8</u>	8	<u>8</u>	7.0	<u>8</u>	7.5
Grade 2 labour cost per unit	24		27		21	
Divide by hourly rate	<u>6</u>	4	<u>6</u>	4.5	<u>6</u>	3.5
Total hours per unit		<u>12</u>		<u>11.5</u>		<u>11.0</u>

(iii) Maximum possible production

There is a maximum number of hours available for each grade and therefore production will be limited to the smaller of the calculated figures as follows:

<i>Product</i>	<i>Total hours</i>	<i>Hours per unit</i>	<i>Possible units</i>	<i>Maximum possible</i>
A Grade 1	6,720	8	840	
Grade 2	3,024	4	756	756
B Grade 1	6,720	7	960	
Grade 2	3,024	4.5	672	672
C Grade 1	6,720	7.5	896	
Grade 2	3,024	3.5	864	864

35-13A con't

(iv) The product which will give the greatest contribution in Period 7 is C:

	<i>A</i>	<i>B</i>	<i>C</i>
Units	756	672	864
	\$	\$	\$
Direct costs (A \$250, B \$180, C \$281)	189,000	120,960	242,784
Selling price (A \$400, B \$350, C \$450)	302,400	235,200	388,800
Contribution	113,400	114,240	146,016

- (d) This part of the question would include material from a number of different parts of the book. It can be answered at a straightforward level from the material in Chapters 34 and 35. However, a more complete answer would need to include material from Chapters 36, 40 and 43. The answer requires that you indicate that relevant costs and revenues would be identified; costs would be classified as fixed or variable, possibly across a range of different activity levels; contribution per unit would be identified; break-even analysis would be undertaken; product mix may also be considered when a multi-product company is involved; etc.

Question 35-14A

	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>	<i>J</i>	<i>K</i>
	\$	\$	\$	\$	\$	\$
Direct labour and materials	15	17	38	49	62	114
Variable cost	6	11	10	21	22	23
Fixed cost	4	7	7	10	16	13
	25	35	55	80	100	150
Add Profit 20%	5	7	11	16	20	30
Selling price	30	42	66	96	120	180

- (b) Discontinue *G* and *J*. All other items are above marginal cost.

	(i) <i>Followed advice</i>	(ii) <i>Produced all items</i>
Sales	\$	\$
<i>F</i> 200 × \$26	5,200	5,200
<i>G</i> 200 × \$26	—	5,200
<i>H</i> 200 × \$66	13,200	13,200
<i>I</i> 200 × \$75	15,000	15,000
<i>J</i> 200 × \$80	—	16,000
<i>K</i> 200 × \$220	44,000	44,000
	77,400	98,600
Less Costs		
Direct labour and materials		
(i) \$(15 + 38 + 49 + 114) × 200	43,200	—
(ii) \$(15 + 17 + 38 + 49 + 62 + 114) × 200	—	59,000
Variable overhead		
(i) \$(6 + 10 + 21 + 23) × 200	12,000	—
(ii) \$(6 + 11 + 10 + 21 + 22 + 23) × 200	—	18,600
Fixed overhead	11,400	11,400
	66,600	89,000
Net profit	10,800	9,600

(d) Discontinue *I* and *K*. All other items are above marginal cost.

(e)

	(i) <i>Followed advice</i>	(ii) <i>Produced all items</i>
Sales	\$	\$
<i>F</i> 200 × \$30	6,000	6,000
<i>G</i> 200 × \$33	6,600	6,600
<i>H</i> 200 × \$75	15,000	15,000
<i>I</i> 200 × \$66	—	13,200
<i>J</i> 200 × \$145	29,000	29,000
<i>K</i> 200 × \$130	—	26,000
	<u>56,600</u>	<u>95,800</u>
Less Costs		
Direct labour and materials		
(i) \$(15 + 17 + 38 + 62) × 200	26,400	—
(ii) \$(15 + 17 + 38 + 49 + 62 + 114) × 200	—	59,000
Variable overhead		
(i) \$(6 + 11 + 10 + 22) × 200	9,800	—
(ii) \$(6 + 11 + 10 + 21 + 22 + 23) × 200	—	18,600
Fixed overhead	11,400	11,400
	<u>47,600</u>	<u>89,000</u>
Net profit	<u>9,000</u>	<u>6,800</u>

Question 35–16A

- (a) Activity-based costing focuses on activities as the fundamental cost objects. An activity is an event, task, or unit of work with a specified purpose. Overhead costs are absorbed using a range of cost drivers. Each activity has its own overhead absorption rate.
- (b) The overhead rates for each activity centre are as follows:

<i>Activity Centre</i>	<i>Estimated Overhead Costs</i> \$	<i>Expected Activity Volume</i>	<i>Overhead Rate</i> \$
Machine set-ups	13,520	260	52.00
Purchase orders	80,400	2,010	40.00
Factory maintenance	76,180	5,860	13.00

The overhead costs charged to each product is:

	<i>Product F</i>		<i>Product G</i>	
	<i>Activity</i>	<i>Amount</i> \$	<i>Activity</i>	<i>Amount</i> \$
Machine set-ups	80	4,160	180	9,360
Purchase orders	810	32,400	1,200	48,000
Factory maintenance	2,340	30,420	3,520	45,760
Total overhead costs		<u>66,980</u>		<u>103,120</u>

35-16A con't

Overhead costs per unit:

Product F: $\$66,980 / 2,600 \text{ units} = \25.76 per unit

Product G: $\$103,120 / 6,000 \text{ units} = \17.19 per unit

- (c) (i) The predetermined overhead rate under the traditional costing system is:

$\$170,100 / 5,860 \text{ direct labour hours} = \$29.03 / \text{direct labour hours}$

- (ii) The overhead costs per unit of product G under the traditional costing system is:

$\$29.03 \times 0.5 \text{ direct labour hours} = \14.52

The overhead costs per unit of product F under the traditional costing system is:

$\$29.03 \times 1.1 \text{ direct labour hours} = \31.93

- (d) The differences between management accounting and financial accounting are:

- i) Financial accounting : concerned with reports made to those outside the organisation
Management accounting : concerned with information for the internal use of management
- ii) Financial accounting : summarises the financial consequences of past activities
Management accounting : emphasises the future
- iii) Financial accounting : must follow GAAP since the reports are made to outsiders and are audited
Management accounting : no need to follow GAAP in reporting
- iv) Financial accounting : report is required by external regulatory bodies for publicly held companies and by lenders
Management accounting : report is not required by external regulatory bodies or by lenders

The major role of cost accounting is to collect cost information for closing stock valuation and for pricing; or to provide information to management for planning and control, and for decision-making.

Question 35-17A

- (a) (i) Variable cost = cost of goods sold + commission
 $= \$2,909,600 + \$7,360,000 \times 15\%$
 $= \$2,909,600 + \$1,104,000$
 $= \$4,013,600$

Variable cost per unit = $\$4,013,600 / 5,800$
 $= \$692$

(ii)		\$	\$
Cost of goods sold			2,909,600
Commission on sales ($\$7,360,000 \times 15\%$)			1,104,000
Fixed costs			
Store manager's salary	155,000		
Secretary's salary	90,000		
Operating costs (store)	198,000		
Sales personnel salaries ($\$63,000 \times 5$)	315,000		
Advertising and promotion	42,400		800,400
Total budgeted cost			<u>4,814,000</u>

Total budgeted cost per unit sold = $\$4,814,000 / 5,800 = \830

(iii) Estimated cost for 3,500 units	\$
Fixed costs (\$155,000 + \$90,000 + \$198,000 + \$63,000 × 5 + \$42,400)	800,400
Variable cost (\$692 × 3,500)	2,422,000
Total cost	<u>3,222,400</u>

Estimated cost per unit = \$3,222,400 / 3,500 units = \$920.69

(iv)	\$
Estimated sales (\$1,268.96 × 2,000 units)	2,537,920
<i>Less</i> variable cost (\$692 × 2,000)	(1,384,000)
Contribution	<u>1,153,920</u>
<i>Less</i> fixed costs	(800,400)
Estimated profit	<u>353,520</u>

Profit per unit = \$353,520 / 2,000 units = \$176.76

(b) (i)	<i>Absorption costing</i>	<i>Marginal costing</i>
	\$	\$
Opening stock	16,380	7,100
Closing stock (\$5,500 + \$800 + 160% × \$5,500)	(15,100)	(6,300)
Decrease in stock during March	<u>1,280</u>	<u>800</u>
Difference in profit: \$1,280 – \$800 = \$480		

- (ii) The main difference between marginal and absorption costing is the proper timing of the release of fixed manufacturing overheads as a cost of the period. For marginal costing, the fixed manufacturing overheads are treated as period cost at the time they are incurred. For absorption costing, this cost is included in the product costs at the time the finished units to which the fixed overheads relate are sold.
- (iii) Under absorption costing, there may be a heavy reduction of inventory during the accounting period when production is low and when there is a large production volume variance. This combination could result in a lower operating income even if the unit sales level rises.

Question 36-3A

	<i>Production departments</i>					<i>Service departments</i>	
	<i>P</i>	<i>Q</i>	<i>R</i>	<i>S</i>	<i>T</i>	<i>F</i>	<i>G</i>
	\$	\$	\$	\$	\$	\$	\$
Indirect labour	5,000	7,000	3,000	6,000	8,000	10,000	9,000
Other expenses	500	1,800	1,000	1,200	1,300	6,000	7,000
	<u>5,500</u>	<u>8,800</u>	<u>4,000</u>	<u>7,200</u>	<u>9,300</u>	<u>16,000</u>	<u>16,000</u>
<i>Apportionment of costs</i>							
Department F	1,600	3,200	—	4,800	2,400	(16,000)	4,000
						<u>20,000</u>	
Department G	2,500	4,000	5,000	6,000	2,500	—	(20,000)
	<u>9,600</u>	<u>16,000</u>	<u>9,000</u>	<u>18,000</u>	<u>14,200</u>	<u>—</u>	<u>—</u>

36–3A con't

(a) Overhead rates per direct labour hour:

$$\text{Department R} \quad \frac{\$9,000}{3,600} = \$2.5$$

$$\text{Department T} \quad \frac{\$14,200}{3,550} = \$4.0$$

(b) Overhead rates per machine hour:

$$\text{Department P} \quad \frac{\$9,600}{3,000} = \$3.2$$

$$\text{Department Q} \quad \frac{\$16,000}{4,000} = \$4.0$$

$$\text{Department S} \quad \frac{\$18,000}{8,000} = \$2.25$$

Question 36–4A

Job Cost Sheet, Job 701, Department R

		\$
Direct materials		115
Direct labour	35 × \$2.0	70
Factory overhead	35 × \$2.5	87.5
		<u>272.5</u>

Job Cost Sheet, Job 702, Department T

		\$
Direct materials		1,656
Direct labour	180 × \$2.4	432
Factory overhead	180 × \$4.0	720
		<u>2,808</u>

Job Cost Sheet, Job 703, Department P

		\$
Direct materials		546
Direct labour	100 × \$1.9	190
Factory overhead	90 × \$3.2	288
		<u>1,024</u>

Job Cost Sheet, Job 704, Department S

		\$
Direct materials		65
Direct labour	250 × \$2.7	675
Factory overhead	60 × \$2.25	135
		<u>875</u>

Job Cost Sheet, Job 705, Department Q

Direct materials		\$
Direct labour	$305 \times \$2.5$	4,778
Factory overhead	$280 \times \$4.0$	762.5
		1,120
		<u>6,660.5</u>

Job Cost Sheet, Job 706, Departments P and T

Department P	Direct materials		\$
	Direct labour	$200 \times \$1.9$	555
	Factory overhead	$180 \times \$3.2$	380
Department T	Direct materials		576
	Direct labour	$18 \times \$2.4$	11
	Factory overhead	$18 \times \$4.0$	43.2
			72
			<u>1,637.2</u>

Question 36-5A

(a) See text, Section 36.5.

(b) Earith Industries

(i) *Equivalent production during April:*

	<i>Units completed</i>	<i>75% completed</i>	<i>65% completed</i>	<i>55% completed</i>
Units	6,000	800	800	800
Equivalent production:				
Material		6,600		
Labour			6,520	
Overheads				6,440

(ii) *Cost per complete unit:*

	<i>Total cost</i>	<i>Equivalent production</i>	<i>Cost per unit</i>
	\$	\$	\$
Material	12,540	6,600	1.90
Labour	8,476	6,520	1.30
Overheads	7,084	6,440	1.10
Cost per complete unit			<u>4.30</u>

(iii) *Value of work in progress:*

Materials	$600 \times \$1.90$	\$
Labour	$520 \times \$1.30$	1,140
Overheads	$440 \times \$1.10$	676
Total value of WIP		<u>484</u>
		<u>2,300</u>

Question 36-8A

- (a) Current factory overhead rate

$$= \frac{\text{Total factory overheads}}{\text{Total direct labour costs}} \times \frac{100}{1} = \frac{\$180 + \$225 + \$75}{\$450 + \$500 + \$250} \times \frac{100}{1}$$

$$= \frac{\$480}{\$1,200} = 40\% \text{ factory overhead rate}$$

<i>Job 131190</i>	\$
Direct labour costs (\$2,500 + \$2,200 + \$4,800)	9,500
Add Materials (\$100 + \$400 + \$500)	1,000
	<u>10,500</u>
Add Factory overheads (40% × \$9,500)	3,800
Total factory costs	14,300
Add General administration (20% × \$14,300)	2,860
Total cost	<u>17,160</u>
Add Profit (25% total cost)	4,290
Selling price	<u><u>21,450</u></u>

- (b) (i) Direct labour hour rate per department:

Assembly	\$180,000 ÷ 150,000 hours = \$1.20 per hour
Painting	\$225,000 ÷ 140,625 hours = \$1.60 per hour
Packing	\$75,000 ÷ 100,000 hours = \$0.75 per hour

- (ii) Overhead per department as percentage of direct labour costs

Assembly	\$180,000 ÷ \$450,000 = 40%
Painting	\$225,000 ÷ \$500,000 = 45%
Packing	\$75,000 ÷ \$250,000 = 30%

- (i) *Job 131190* (using direct labour hour rate)

	\$	\$
Assembly: Labour	2,500	
Add 1,000 hours × \$1.20	1,200	3,700
Painting: Labour	<u>2,200</u>	
Add 900 hours × \$1.60	1,440	3,640
Packing: Labour	4,800	
Add 960 hours × \$0.75	<u>720</u>	5,520
Add Materials (\$100 + \$400 + \$500)		1,000
		<u>13,860</u>
Add General administration (20% × \$13,860)		2,772
Total cost		16,632
Add Profit 25% × \$16,632		4,158
Selling price		<u><u>20,790</u></u>

(ii) <i>Job 131190</i> (using percentage direct labour costs)	\$	\$
Assembly: Labour	2,500	
<i>Add 40%</i>	1,000	3,500
Painting: Labour	2,200	
<i>Add 45%</i>	990	3,190
Packing: Labour	4,800	
<i>Add 30%</i>	1,440	6,240
		<u>12,930</u>
<i>Add General administration</i> ($20\% \times \$12,930$)		2,586
Total cost		<u>15,516</u>
<i>Add Profit</i> $25\% \times \$15,516$		3,879
Selling price		<u><u>19,395</u></u>

- (c) It depends on where there are direct relationships to overheads. Number of hours worked is more appropriate in (b) (i) and (ii). However, machine hours method for its two departments has not yet been investigated.
- (d) There is no set answer. Basically, the absorption rate may be too high, making for an uncompetitive selling price; or too low, making the product too cheap and uneconomic.

Question 36-10A

(a)	<i>A</i>	<i>B</i>	<i>C</i>	<i>Total</i>
	\$	\$	\$	\$
Power 55 : 30 : 15	66,000	36,000	18,000	120,000
Rent, etc. 30 : 20 : 10	45,000	30,000	15,000	90,000
Insurance 22 : 16 : 2	11,000	8,000	1,000	20,000
Depreciation 22 : 16 : 2	44,000	32,000	4,000	80,000
Indirect materials	23,000	35,000	57,000	115,000
Indirect wages	21,000	34,000	55,000	110,000
	<u>210,000</u>	<u>175,000</u>	<u>150,000</u>	<u>535,000</u>
Direct wages	140,000	200,000	125,000	
Percentage absorption rate	<u>150%</u>	<u>87.5%</u>	<u>120%</u>	

36-10A con't

(b)	<i>Selling price of Job No. 347</i>	\$
Dept A	Materials	152
	Direct wages	88
	Overhead 150% of \$88	132
		<u>372</u>
Dept B	Materials	85
	Direct wages	192
	Overhead 87.5% of \$192	168
		<u>817</u>
Dept C	Materials	52
	Direct wages	105
	Overhead 120% of \$105	126
		<u>1,100</u>
	Total production cost	1,100
	Add 30%	330
		<u>1,430</u>
	Selling price	<u>1,430</u>

- (c) (i) Absorption rate based direct labour hours
- Dept A \$210,000 divided by 25,000 hours = \$8.4 per hour
- Dept B \$175,000 divided by 50,000 hours = \$3.5 per hour
- Dept C \$150,000 divided by 60,000 hours = \$2.5 per hour
- (ii) Absorption rate based on machine hours
- Dept A \$210,000 divided by 100,000 hours = \$2.1 per hour
- Dept B \$175,000 divided by 40,000 hours = \$4.375 per hour
- Dept C \$150,000 divided by 10,000 hours = \$15 per hour
- (d) (i) Allotment: this term is not generally used in relation to overheads. Presumably, the examiner wanted students to demonstrate that they realised it was not another term for either 'allocation' or 'apportionment'.
- (ii) Allocation: attribution of costs to a cost centre or product based on some base that clearly identifies the expenditure that was incurred on that cost centre or product. This is used for the attribution of costs that can be specifically identified with a cost centre or product.
- (iii) Apportionment: attribution of costs between a number of cost centres or products on the basis of some common base. For example, rates could be allocated to cost centres on the basis of the dimensions of their floor space. This is used for the attribution of costs that cannot be specifically identified as arising from the activities of one cost centre or product.

Question 36-11A

- (a) (i) See text, Section 36.6.
- (ii) See text, Section 36.6.
- (iii) See text, Section 36.5.
- (iv) See text, Section 36.10.
- (v) Split-off point: the point at which joint products are separately identifiable.

- (b) (i) True: scrap has value, waste has none.
- (ii) True: a joint product is one that is produced by the same process and at the same time as another; a by-product is one that is produced incidentally as a result of manufacturing the main product. They are further distinguished by their value. By-products have relatively little value compared with the main products whose manufacturing process created them. Joint products are each of significant value compared with their own joint product(s).

Question 36-13A

- (a) Fabricating department

$$\text{Overhead rate} = \frac{\$675,200}{21,100} \text{ machine hours} = \$32 \text{ per machine hour}$$

Painting department

$$\text{Overhead rate} = \frac{\$495,250}{17,500} \text{ direct labour hours} = \$28.30 \text{ per direct labour hour}$$

- (b) Total cost of pottery produced for Fancy Goods Ltd

	<i>Fabricating Department</i>	<i>Painting Department</i>	<i>Total</i>
	\$	\$	\$
Direct materials	55,810	22,170	77,980
Direct labour cost	39,716	40,950	80,666
Overhead absorbed	42,240 ^a	47,544 ^b	89,784
Total cost	<u>137,766</u>	<u>110,664</u>	<u>248,430</u>

Unit cost: $\$248,430 / 4,550 \text{ units} = \54.60 per unit

Workings

a) $\$32 \text{ per machine hour} \times 1,320 \text{ machine hours} = \$42,240$

b) $\$28.30 \text{ per direct labour hour} \times 1,680 \text{ direct labour hours} = \$47,544$

- (c)

	<i>Fabricating Department</i>	<i>Painting Department</i>
	\$	\$
For the month of January		
Overheads absorbed	62,720 ^c	59,713 ^d
Overhead incurred	63,415	55,290
Under-absorbed	695	—
Over-absorbed	—	4,423

Workings

c) $\$32 \text{ per machine hour} \times 1,960 \text{ machine hours} = \$62,720$

d) $\$28.30 \text{ per direct labour hour} \times 2,110 \text{ direct labour hours} = \$59,713$

- (d)

	\$	\$
(i) Finished goods inventory	248,430	
Work-in-process inventory		248,430
To record completion of Job no. 68 (unit cost \$54.60)		
(ii) Fancy Goods Ltd	315,000	
Sales		315,000
To record credit sales of \$315,000 to Fancy Goods Ltd		
Cost of goods sold	248,430	
Finished goods inventory		248,430
To record the cost of goods sold to Fancy Goods Ltd		

36–13A con't

- (e) Process costing: oil refinery
soft drink manufacturers
- Job costing: accountancy firms
car repair company

Question 36–14A

(a) Product	<i>X</i>	<i>Y</i>	<i>Z</i>
	\$	\$	\$
Sales value after further processing	489,820	638,500	375,800
Sales value at split-off	315,600	387,900	188,750
Incremental revenue	174,220	250,600	187,050
Further processing costs	213,650	186,000	77,000
Incremental income (loss)	(39,430)	64,600	110,050

Products *Y* and *Z* should be sold after further processing beyond the split-off point.

Product *X* should be sold at the split-off point without any further processing.

- (b) (i) Relevant range
(ii) Sunk cost
(iii) Overhead absorption rate
(iv) Fixed costs
(v) Joint products
(vi) Cost of finished goods manufactured
(vii) Break-even point
(viii) Equivalent units.
- (c) (i) Overheads are indirect costs and cannot be traced conveniently to specific jobs or units. Therefore, a predetermined overhead absorption rate is used to assign appropriate amounts of overhead costs to output.
- (ii) When actual overhead costs incurred are greater than overhead absorbed by jobs, an underabsorbed overhead will occur. Overabsorbed overheads will result when overheads absorbed by jobs exceed actual overhead costs.

Question 37–3A

- (a) (i) Always able to satisfy customers' demands; strike in firm's production could stop production of new stock; strike at suppliers of part could stop production of new stock.
- (ii) So as not to have to lay off workers; lower costs of production; administratively easier and cheaper.

(b)	<i>J</i>	<i>A</i>	<i>S</i>	<i>O</i>	<i>N</i>	<i>D</i>
Opening stock	270	290	390	430	370	270
Produced	300	300	300	300	300	300
	<u>570</u>	<u>590</u>	<u>690</u>	<u>730</u>	<u>670</u>	<u>570</u>
Less Sales	(280)	(200)	(260)	(360)	(400)	(420)
Closing stock	<u>290</u>	<u>390</u>	<u>430</u>	<u>370</u>	<u>270</u>	<u>150</u>
Stock (by deduction) 1 July : 270 units.						

- (c) Where higher sales could be made but there is a shortage of: skilled labour, or materials, or finance.

Question 37–5A

- (a) (i) Assuming 6 working days in a week, the three control levels are:

$$\begin{aligned}\text{Reorder level} &= \text{maximum usage in lead time} \\ &= 2,400/6 \text{ days} \times 5 \text{ days} \\ &= 2,000 \text{ units}\end{aligned}$$

$$\begin{aligned}\text{Maximum stock level} &= 2,000 \text{ units} + 28,500 + (1,100/6 \times 5 \text{ days}) \\ &= 31,417 \text{ units}\end{aligned}$$

$$\begin{aligned}\text{Minimum stock level} &= 2,000 \text{ units} - (1,600/6 \times 5 \text{ days}) \\ &= 667 \text{ units}\end{aligned}$$

- (ii) The Economic Order Quantity (EOQ) is the order quantity which minimises the total of stock holding costs and reordering costs. The basic EOQ formula is:

$$EOQ = \sqrt{\frac{2 \times \text{Ordering cost per order} \times \text{Demand quantity per annum}}{\text{Carrying cost per item per annum}}}$$

- (b) (i) Based on labour hours

$$\begin{aligned}O.A.R. &= \frac{\$72,500}{6,250} \\ &= \$11.60 \text{ per hour}\end{aligned}$$

$$\text{Overheads absorbed by production} = 6,820 \times \$11.60 = \$79,112$$

$$\text{Over absorption} = \$79,112 - \$77,840 = \$1,272$$

- (ii) Based on machine hours

$$\begin{aligned}O.A.R. &= \frac{\$72,500}{4,600} \\ &= \$15.76 \text{ per hour}\end{aligned}$$

$$\text{Overheads absorbed by production} = 4,950 \times \$15.76 = \$78,012$$

$$\text{Over absorption} = \$78,012 - \$77,840 = \$172$$

- (iii) Based on production unit

$$\begin{aligned}O.A.R. &= \frac{\$72,500}{98,000} \\ &= \$0.74 \text{ per unit}\end{aligned}$$

$$\text{Actual production } 100,230 \text{ units}$$

$$\text{Overhead absorbed} = 100,230 \times \$0.74 = \$74,170$$

$$\text{Underabsorption} = \$77,840 - \$74,170 = \$3,670$$

Question 38-3A

(a)

Belinda Raglan Cash Budget

	<i>May</i> \$000	<i>Jun</i> \$000	<i>Jul</i> \$000	<i>Aug</i> \$000
Opening overdraft	(5)	(8)	(54.6)	(22.2)
Receipts	85.2	72.8	82.4	56
	<u>80.2</u>	<u>64.8</u>	<u>27.8</u>	<u>33.8</u>
<i>Payments</i>				
Purchases	58.2	116.4	40	43
Rent	12	—	—	12
Other	8	3	10	14
Compensation	10	—	—	—
	<u>88.2</u>	<u>119.4</u>	<u>50</u>	<u>69</u>
Closing overdraft	<u>(8)</u>	<u>(54.6)</u>	<u>(22.2)</u>	<u>(35.2)</u>

(b) See text.

- (c) Items in the letter should include reference to the 3% discount on purchases in May and June. It is probably unwise to attempt to take advantage of the discount. The increase in the overdraft facility required is entirely due to it and the increased overdraft costs would make the actual saving much less than at first appeared. If June purchases were kept to around \$76,000 it appears that the overdraft limit would not need to be raised. It may be worthwhile for Belinda to consider negotiating purchasing on credit from her suppliers. She may also consider offering less credit to her customers, etc.

Question 38-4A

(a)

Mtoto Ltd Cash Budget for the four months ending 31 December 20X1

	<i>Sept</i> \$	<i>Oct</i> \$	<i>Nov</i> \$	<i>Dec</i> \$	<i>Total</i> \$
<i>Receipts</i>					
Cash sales: Main store	18,000	26,300	19,200	24,700	88,200
Depot 1	19,700	18,000	17,600	17,900	73,200
Depot 2	26,300	19,700	21,000	19,100	86,100
Credit sales: Main store*	21,000	32,500	26,000	25,400	104,900
Plant surplus	26,500	—	—	—	26,500
Shop-soiled stock	—	17,000	—	—	17,000
	<u>111,500</u>	<u>113,500</u>	<u>83,800</u>	<u>87,100</u>	<u>395,900</u>

* Per balance sheet, debtors pay 1 month after sale.

	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Total</i>
	\$	\$	\$	\$	\$
<i>Payments</i>					
Purchases	55,800	61,200	64,300	41,000	222,300
Fixed overheads	9,500	9,500	9,500	9,500	38,000
Wages and salaries	17,000	19,000	13,000	12,000	61,000
Redundancy	—	—	—	12,000	12,000
Variable costs	5,600	6,800	6,100	7,400	25,900
	<u>87,900</u>	<u>96,500</u>	<u>92,900</u>	<u>81,900</u>	<u>359,200</u>
Surplus/(deficit)	23,600	17,000	(9,100)	5,200	36,700
Balance b/d	(240,000)	(216,400)	(199,400)	(208,500)	(240,000)
Balance c/d	<u>(216,400)</u>	<u>(199,400)</u>	<u>(208,500)</u>	<u>(203,300)</u>	<u>(203,300)</u>

(b) Briefly: full answer to be in report form.

(i) Current ratio 31.8.20X1 is \$420,900 : \$350,500 = 1.2 : 1.

However, acid test ratio shows 21,000 : 350,500 = 0.06 : 1.

This latter ratio reveals considerable liquidity problems.

Forecast shows a fall in a bank overdraft of \$36,700 over the period. The overdraft is still far too high.

(ii) Find out contributions made by each depot.

Reduce stock.

Sell off some fixed assets?

Reduce overhead costs.

See if gross profit margins can be increased, either by increasing prices or by better buying policies at cheaper prices.

Question 38-6A

(a)

	Periods	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
		\$	\$	\$	\$
<i>Receipts</i>					
Capital	34,000	—	—	—	—
Hire charges paid in cash (W1)	1,248	1,664	1,664	1,664	1,664
Hire charges (chauffeured cars) (W2)	—	—	2,400	2,400	2,400
	<u>35,248</u>	<u>1,664</u>	<u>4,064</u>	<u>4,064</u>	<u>4,064</u>
<i>Payments</i>					
Cars bought (6 × \$5,340)	32,040	—	—	—	—
Cars bought (3 × \$5,850)	—	—	—	—	17,550
Petrol	—	—	360	360	360
Servicing	—	300	300	300	300
Fixed costs	200	200	200	200	200
Drawings	400	400	800	800	800
Initial staff	960	960	960	960	960
Chauffeurs	—	720	720	720	720
	<u>33,600</u>	<u>2,580</u>	<u>3,340</u>	<u>20,890</u>	<u>20,890</u>
Balance at period end	1,648	732	1,456	—	—
Deficit at period end	—	—	—	—	15,370

38-6A con't

Workings:

(W1)			\$
Per week:	Weekdays $5 \times \$10 \times 4$ cars	=	200
	Weekends $2 \times \$18 \times 6$ cars	=	216
			<u>416</u>

3 weeks in period 1; 4 weeks other periods.

(W2) Assumed additional to cars in (W1):

Per period: $\$60 \times 5 \times 4 \times 2$ cars = \$2,400

(b) Per text.

(c) Internal: Profits, factoring debts, revising payment and receipt schedules where possible, extra own capital.

External: Loans from individuals, bank loans and overdrafts, buying cars on hire purchase.

Question 39-2A

(a)	Cash Budget 20X7			
	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>
<i>Receipts</i>	\$000	\$000	\$000	\$000
Debtors: Previous month's sales $\frac{1}{3}$	134.2	136.8	141.2	153.6
Sales two months ago $\frac{2}{3}$	265.6	268.4	273.6	282.4
Sale of old factory equipment	—	—	—	9.6
	<u>399.8</u>	<u>405.2</u>	<u>414.8</u>	<u>445.6</u>
<i>Payments:</i>				
Materials: Current production $\frac{1}{4}$	20.4	21.2	23.4	22.8
Previous production $\frac{3}{4}$	58.8	56.1	61.2	63.6
New equipment	—	—	19.0	—
Wages: Last month $\frac{1}{3}$	5.3	5.4	5.6	6.1
Current month $\frac{2}{3}$	10.8	11.2	12.2	12.4
Overheads: Payable same month	50.0	50.0	50.0	50.0
Last month's portion	215.2	223.6	232.4	256.7
	<u>360.5</u>	<u>367.5</u>	<u>403.8</u>	<u>411.6</u>
Closing bank balance	+28.7	+66.4	+77.4	+111.4
(b) Assets: Debtors — April		456.3		
— March ($\$460.8 \times \frac{2}{3}$)		<u>307.2</u>	763.5	
Liabilities: Items owing				
Materials ($\$93.6 \times \frac{3}{4}$)		70.2		
($\$91.2 \times \frac{3}{4}$)		<u>68.4</u>	138.6	
Equipment			19.0	
Wages			6.2	
Overheads			254.5	

Question 39-4A

(a)

Cash Budget

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
	\$	\$	\$	\$	\$	\$
Opening balance	10,000	1,170	—	—	540	1,260
Opening overdraft	—	—	(1,200)	(4,680)	—	—
Received (<i>see</i> schedule)	—	—	—	9,500	5,000	5,000
	<u>10,000</u>	<u>1,170</u>	<u>(1,200)</u>	<u>4,820</u>	<u>5,540</u>	<u>6,260</u>
Payments (<i>see</i> schedule)	(8,830)	(2,370)	(3,480)	(4,280)	(4,280)	(4,420)
Closing balance	<u>1,170</u>	<u>—</u>	<u>—</u>	<u>540</u>	<u>1,260</u>	<u>1,840</u>
Closing overdraft	—	(1,200)	(4,680)	—	—	—

Cash Receipts Schedule

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
	\$	\$	\$	\$	\$	\$
Receipts from debtors	—	—	—	4,000	5,000	5,000
Legacy	—	—	—	5,500	—	—
				<u>9,500</u>	<u>5,000</u>	<u>5,000</u>

Cash Payments Schedule

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
	\$	\$	\$	\$	\$	\$
Payments to creditors	—	2,000	3,200	4,000	4,000	4,000
Wages and salaries	150	150	150	150	150	150
General expenses	—	50	50	50	50	50
Insurance	—	—	—	—	—	140
Rates	—	90	—	—	—	—
Drawings	80	80	80	80	80	80
Machinery	2,000	—	—	—	—	—
Motor vehicles	1,600	—	—	—	—	—
Premises	5,000	—	—	—	—	—
	<u>8,830</u>	<u>2,370</u>	<u>3,480</u>	<u>4,280</u>	<u>4,280</u>	<u>4,420</u>

39-4A con't

(b)

B Chung

Forecast Trading and Profit and Loss Account for the 6 months to 30 June 20X8

	\$	\$	\$
Sales			29,000
<i>Less</i> Cost of goods sold			
Purchases		25,200	
<i>Less</i> Closing inventory		(2,000)	(23,200)
Gross profit			5,800
<i>Less</i> Expenses			
Wages and salaries		900	
General expenses		300	
Insurance		70	
Rates		180	
Depreciation: Motor vehicles	160		
Machinery	100	260	(1,710)
Net profit			4,090

Balance Sheet as at 30 June 20X8

	<i>Cost</i>	<i>Depreciation</i>	<i>Net</i>
	\$	\$	\$
<i>Fixed assets</i>			
Premises	5,000	—	5,000
Machinery	2,000	100	1,900
Motors	1,600	160	1,440
	<u>8,600</u>	<u>260</u>	<u>8,340</u>
<i>Current assets</i>			
Inventory-in-trade		2,000	
Debtors		15,000	
Prepayments (insurance)		70	
Cash and bank		1,840	
		<u>18,910</u>	
<i>Less Current liabilities</i>			
Creditors for goods	8,000		
General expenses	50		
Rates	90	(8,140)	
Working capital			10,770
			<u>19,110</u>
<i>Financed by:</i>			
Capital			15,500
<i>Add</i> Net profit			4,090
			<u>19,590</u>
<i>Less</i> Drawings			(480)
			<u>19,110</u>

Question 39-5A

(a) See text.

(b)

Madingley Ltd

Forecast Operating Statement for the six months ending 30 November 20X0

	\$000	\$000
Sales		1,185.20
Cost of sales:		
Opening stock (\$91.7 + \$142.4)	234.1	
Materials	205.6	
	<u>439.7</u>	
Less Closing stock (\$91.7 + \$136.2)	(227.9)	
	<u>211.8</u>	
Wages	36.7	
Variable overheads	340.2	
Depreciation: Plant	0.47	(589.17)
Gross profit		<u>596.03</u>
Fixed overheads	226.8	
Depreciation: Fixtures	0.27	(227.07)
Profit		<u><u>368.96</u></u>

Forecast Balance Sheet as at 30 November 20X0

	<i>Cost</i>	<i>Aggregate Depreciation</i>	<i>Net</i>
	\$000	\$000	\$000
Fixed assets			
Land and buildings	134.00	—	134.00
Plant and machinery	9.40	4.23	5.17
Fixtures and fittings	2.30	1.32	0.98
	<u>145.70</u>	<u>5.55</u>	<u>140.15</u>
Current assets			
Stocks: Raw materials	91.70		
Finished goods	136.20		
Debtors	574.50		
Bank	282.20	1,084.60	
	<u>282.20</u>		
Less Current liabilities			
Creditors: Raw materials	41.00		
Overheads	42.60	(83.60)	1,001.00
	<u>42.60</u>	<u>(83.60)</u>	<u>1,141.15</u>
Financed by:			
Share capital			500.00
Profit and loss account b/d		272.19	
Profit for year		<u>368.96</u>	<u>641.15</u>
			<u><u>1,141.15</u></u>

39-5A con't

Workings

Debtors Control		
	\$000	\$000
Opening balance	594.4	
Sales	1,185.2	
Cash		1,205.1
Balance c/d		574.5
	<u>1,779.6</u>	<u>1,779.6</u>
Purchases Ledger Control		
	\$000	\$000
Opening balance		82.2
Materials		205.6
Cash	246.8	
Balance c/d	41.0	
	<u>287.8</u>	<u>287.8</u>
Overheads		
	\$000	\$000
Opening balance		127.4
Incurred		567.0
Cash	651.8	
Balance c/d	42.6	
	<u>694.4</u>	<u>694.4</u>
Cash Book		
	\$000	\$000
Opening balance	12.4	
Receipts	1,205.1	
Payments: Suppliers		246.8
Wages		36.7
Overheads		651.8
Balance c/d		282.2
	<u>1,217.5</u>	<u>1,217.5</u>

Question 39-10A

- (a) (i) Sales: June, July, August, November, $12\frac{1}{2}\%$ of total $\times 4 = 50\%$
September and October, 25% of total $\times 2 = 50\%$

	\$
Sales budgets: June	100,000
July	100,000
August	100,000
September	200,000
October	200,000
November	100,000
	<u>800,000</u>

- (ii) Cost of sales $\$800,000 - 25\% = \$600,000$

Opening stock $\$210,000 + \text{Purchases ?} - \text{Closing stock } \$252,000 = \text{Cost of sales } \$600,000.$

Therefore by deduction purchases = $\$642,000$.

	\$
June	75,000
July	75,000
August	75,000
September	150,000
October	150,000
November ($\$75,000 + \$42,000$)	117,000
Total purchases	<u>642,000</u>

Newland Traders

Budgeted Trading and Profit and Loss Account for the 6 months ended 30 November 20X7

	\$000	\$000
Sales		800
<i>Less</i> Cost of goods sold		
Stock 31.5.20X7	210	
Purchases	642	
	<u>852</u>	
<i>Less</i> Stock 30.11.20X7	(252)	(600)
Gross profit		<u>200</u>
<i>Less</i> Expenses		
Wages and expenses	120	
Depreciation ($6 \times \$5,000 + \$80,000 \times 10\% \times \frac{3}{12}$)	32	(152)
Net profit		<u><u>48</u></u>

(b) Budgeted Balance Sheet as at 30 November 20X7

	\$000	\$000
<i>Fixed assets at cost</i>	690	
<i>Less</i> Depreciation	(296)	394
<i>Current assets</i>		
Stocks	252	
Debtors	300	
Cash at bank and in hand	10	
	<u>562</u>	
<i>Less Current liabilities</i>		
Creditors	(117)	445
		<u><u>839</u></u>
<i>Capital and reserves</i>		
Issued capital		600
General reserve		150
Profit and loss account ($\$48 + \41)		89
		<u><u>839</u></u>

Remarks: Best to tackle (c) cash budget before (b) balance sheet.

39-10A con't

(c)

Cash Flow Budget

	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>
	\$000	\$000	\$000	\$000	\$000	\$000
Opening bank balance	48	50	120	125	130	(20)
Debtors paid	150	165	100	100	100	200
	<u>198</u>	<u>215</u>	<u>220</u>	<u>225</u>	<u>230</u>	<u>180</u>
<i>Payments</i>						
Creditors	128	75	75	75	150	150
Wages and expenses	20	20	20	20	20	20
Fixed assets	—	—	—	—	80	—
	<u>148</u>	<u>95</u>	<u>95</u>	<u>95</u>	<u>250</u>	<u>170</u>
Closing bank balance	50	120	125	130	(20)	10

Extra finance needed in October. Assumed that capital expenditure paid one month after incurred. As it appears short term, a bank overdraft or extra capital would be the best options.

Question 39-11A

(a)

Len Auck and Brian Land, trading as Auckland Manufacturing Co Forecast Profit and Loss Account for the 4 months ended 30 April 20X6

	\$	\$
Sales		86,000
<i>Less</i> Cost of raw materials:		
Stocks 31.12.20X5	10,500	
Purchases (\$43,000 + \$1,500)	44,500	
	<u>55,000</u>	
<i>Less</i> Stocks 30.4.20X6	(12,000)	
	<u>43,000</u>	
Direct wages	17,200	
Overhead expenses	15,050	(75,250)
Stock of finished goods 31.12.20X5	18,500	
Stock of finished goods 30.4.20X6	18,500	—
	<u>10,750</u>	
Net profit		10,750
Shared:		
Len Auck		5,375
Brian Land		5,375
		<u>10,750</u>

Forecast Balance Sheet as at 30 April 20X6

<i>Fixed assets</i>	\$	\$	\$
Plant and machinery at cost		90,000	
<i>Less</i> Depreciation		(30,800)	59,200
<i>Current assets</i>			
Stocks: Raw materials		12,000	
Finished goods		18,500	
Debtors		46,000	
		<u>76,500</u>	
<i>Less Current liabilities</i>			
Creditors	25,500		
Bank overdraft (<i>see</i> part (b))	23,650	(49,150)	27,350
			<u>86,550</u>
<i>Financed by:</i>			
Capital accounts:	<i>Len Auck</i>	<i>Brian Land</i>	
Balance 1.1.20X6	40,000	39,000	
<i>Add</i> Share of profit	5,375	5,375	
	<u>45,375</u>	<u>44,375</u>	
<i>Less</i> Drawings	(1,600)	(1,600)	
	<u>43,775</u>	<u>42,775</u>	86,550

(b)

Cash Budget

	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>
20X6	\$	\$	\$	\$
Receipts: Debtors	<u>18,000</u>	<u>18,000</u>	<u>18,000</u>	<u>22,000</u>
<i>Payments:</i>				
Raw materials	13,000	13,000	10,500	11,000
Direct wages	3,600	4,400	4,400	4,800
Overheads: Wages and salaries	900	1,000	1,000	1,000
Other overheads	1,550	1,550	2,150	2,150
Drawings	800	800	800	800
Plant	25,000	—	—	—
	<u>44,850</u>	<u>20,750</u>	<u>18,850</u>	<u>19,750</u>
Opening balance	4,550	(22,300)	(25,050)	(25,900)
Closing balance	(22,300)	(25,050)	(25,900)	(23,650)

Maximum amount of finance needed \$25,900 in March.

(c) Repayment of overdraft:

	<i>May</i>	<i>June</i>
Cash flows:	\$	\$
Debtors	22,000	24,000
<i>Less</i> Materials	11,000	12,000
Wages	4,800	4,800
Overheads	2,500	2,500
Wages overheads	1,000	1,000
Drawings	800	(21,100)
Net cash inflows	<u>1,900</u>	<u>2,900</u>

39-11A con't

	\$
Overdraft 30.4.20X6	23,650
Less Net cash inflow in May	(1,900)
Overdraft 31.5.20X6	<u>21,750</u>

As following months are at the rate of \$2,900 net cash inflows then it will take $7\frac{1}{2}$ months to clear overdraft:

$$\frac{21,750}{2,900} = 7\frac{1}{2} \text{ months, i.e. cleared by middle of January 20X7.}$$

Question 39-12A

(a)	Purchases Budget		
	January	February	March
	\$	\$	\$
Closing inventory	40,000	20,000	48,000
Cost of goods sold	40,000	56,000	8,000
Opening inventory	40,000	40,000	20,000
Purchases	<u>40,000</u>	<u>36,000</u>	<u>36,000</u>

Note: Cost of goods sold = sales $\times \frac{2}{3}$

	Cash Budget		
	January	February	March
	\$	\$	\$
<i>Inflow</i>			
Opening balance	18,000	40,000	60,800
Sales	60,000	84,000	12,000
	<u>78,000</u>	<u>124,000</u>	<u>72,800</u>
<i>Outflow</i>			
Purchases	16,000	40,000	36,000
Salaries	16,000	16,000	16,000
Expenses	6,000	7,200	7,200
	<u>38,000</u>	<u>63,200</u>	<u>59,200</u>
Closing balance	<u>40,000</u>	<u>60,800</u>	<u>13,600</u>

	Profit and Loss Account	
	(b)	(c)
	January to March 20X9	March 20X9
	\$	\$
Sales	156,000	12,000
Cost of sales ($33\frac{2}{3}\%$ of sales)	(104,000)	(8,000)
Gross profit ($33\frac{1}{3}\%$ of sales)	<u>52,000</u>	<u>4,000</u>
Expenses	21,600	7,200
Salaries	48,000	16,000
Depreciation (Note: $\$60,800 \times 0.25 \times \frac{3}{12}$)	3,800 ^{Note}	1,267
Profit / (Loss)	<u>(21,400)</u>	<u>(20,467)</u>

(d) <i>Current assets</i>	\$
Inventory	48,000
Bank and cash	13,600
	<u>61,600</u>
<i>Current liabilities</i>	
Accounts payable (\$7,200 + \$36,000)	(43,200)
Working capital	<u>18,400</u>

Question 39-13A

- (a) Smartie Company Ltd
Flexible Budget Data for December 20X7

Units	<i>Budgeted amount per unit</i>		<i>Various levels of volume</i>		
			5,000	6,000	7,000
	\$		\$	\$	\$
Revenues (sales)	88	<i>a</i>	440,000	528,000	616,000
Variable costs:					
Direct material	11	<i>b</i>	55,000	66,000	77,000
Direct labour	25	<i>c</i>	125,000	150,000	175,000
Variable factory overhead	2	<i>d</i>	10,000	12,000	14,000
Variable selling expense	13.20	<i>e</i>	66,000	79,200	92,400
Total variable costs	51.20		256,000	307,200	358,400
Contribution margin	36.80		184,000	220,800	257,600
Fixed costs:					
Manufacturing			89,500	<i>f</i> 89,500	89,500
Selling and administrative			69,150	<i>g</i> 69,150	69,150
Total fixed costs			158,650	158,650	158,650
Total costs			414,650	465,850	517,050
Operating income/(loss)			25,350	62,150	98,950

Workings

- $\$80 + 10\% (80) = \88
 - $\$85,000 / 8,500 = \10 ; $\$10 + 10\% (\$10) = \$11$
 - $\$212,500 / 8,500 = \25
 - given
 - $15\% (\$88) = \13.20
 - $\$88,500 + (\$12,000/12) = \$88,500 + \$1,000 = \$89,500$
 - $\$67,650 + (\$18,000/12) = \$67,650 + \$1,500 = \$69,150$
- (b) (i) Under a job costing system, the following characteristics can be found:
- the segregation of 'direct' from 'indirect' costs;
 - the existence of expenses which are direct to particular jobs;
 - the need for detailed time-bookings records, as well as material-usage records;
 - the problem of setting realistic overhead-recovery rates.

39–13A con't

- (ii) The characteristics under a system of process costing are:
- all input costs to the process will be treated as costs of the *final output*. Process losses will not be costed separately, though abnormal product spoilage will be taken to the profit and loss account, not to finished product stock;
 - any sales of waste material will be treated as reductions from costs of the final output;
 - where there are changes in the amount of unfinished product in the course of processing, such work in process will be costed in terms of 'equivalent units' of production;
 - the finished product of one process may be transferred as raw material to a subsequent process.

Question 40–2A

- (i) Standard costing: a technique that compares standard costs and revenues with actual costs and revenues to obtain variances.
- (ii) Standard cost: the cost that should have been incurred.
- (iii) Standard hours: the amount of work achievable at standard efficiency levels in an hour.
- (iv) Variance: the difference between a standard cost or revenue and the actual cost or revenue incurred.

Question 41–2A

		\$
(i)	Actual cost per unit	85 × \$6
	Standard cost per unit	510
	Materials usage variance (favourable)	528
		<u>18</u>
(ii)	Actual cost per unit	30 × \$123
	Standard cost per unit	3,690
	Materials price variance (adverse)	3,510
		<u>180</u>
(iii)	Actual cost per unit	165 × \$16
	Standard cost per unit	2,640
	Materials usage variance (adverse)	2,528
		<u>112</u>
(iv)	Actual cost per unit	92 × \$19
	Standard cost per unit	1,748
	Materials price variance (adverse)	1,472
		<u>276</u>
(v)	Actual cost per unit	50 × \$300
	Standard cost per unit	15,000
	Materials price variance (adverse)	14,700
		<u>300</u>
(vi)	Actual cost per unit	156 × \$27.5
	Standard cost per unit	4,290
	Materials usage variance (favourable)	4,620
		<u>330</u>

Question 41–4A

		\$
(i)	Favourable labour efficiency variance	$8 \times \$2$
	Adverse wage rate variance	$142 \times \$0.2$
	Net adverse labour variance	<u>12.40</u>
(ii)	Favourable wage rate variance	$220 \times \$0.20$
	Adverse labour efficiency variance	$14 \times \$1.70$
	Net favourable labour variance	<u>20.20</u>
(iii)	Favourable wage rate variance	$48 \times \$0.10$
	Favourable labour efficiency variance	$2 \times \$2$
	Total favourable labour variance	<u>8.80</u>
	This compares with: Standard cost	$50 \times \$2$
	Actual cost	$48 \times \$1.90$
		<u>100.00</u>
		<u>91.20</u>
		<u>8.80</u>
(iv)	Adverse wage rate variance	$176 \times \$0.20$
	Adverse labour efficiency variance	$6 \times \$2$
	Total adverse labour variance	<u>47.20</u>
(v)	Favourable wage rate variance	$140 \times \$0.30$
	Adverse labour efficiency variance	$9 \times \$1.80$
	Net favourable labour variance	<u>25.80</u>
(vi)	Favourable labour efficiency variance	$7 \times \$1.60$
	Adverse wage rate variance	$263 \times \$0.40$
	Net adverse labour variance	<u>94.00</u>

Question 41–6A

Central Grid plc

It can be assumed that there has been a planning change concerning the volume of production, reducing it from 16,000 units to 12,000. Flexible budgeting can be adopted (*see* Section 39.5 in the text) and a revised original budget of 12,000 units used. Assume that all the various standard costs and usage level relationships would be unchanged at the lower level of output and calculate the variances requested on the basis that the budgeted volume was 12,000. This produces the following:

- (a) Total direct material variance for April 20X8
 $(\$5 \times 12,000) - \$60,390 = \$390$ *Adverse*
- (i) Material usage variance
 $(\$5 \times 12,000) - \$64,150 = \$4,150$ *Adverse*
- (ii) Material price variance
 $\$64,150 - \$60,390 = \$3,760$ *Favourable*

41–6A con't

- (b) Total direct labour variance for April 20X8
 $\$144,000 - \$153,000 = \$9,000$ *Adverse*
- (i) Labour efficiency variance
 $(36,000 - 34,000) \times \$4 = \$8,000$ *Favourable*
- (ii) Labour rate variance
 $(\$4.00 - \$4.50) \times 34,000 = \$17,000$ *Adverse*

Workings: Standard labour cost for output: $\$12 \times 12,000 = \$144,000$
Standard labour cost per hour: $\$12 \div (48,000 \div 16,000) = \4

- (c) Material: Shows an overall adverse variance of \$390.

Usage: Adverse \$4,150. Used more material than expected for this level of output. Could have been because the material was of poorer quality (it was cheaper than expected).

Price: Favourable variance \$3,760. Purchasing obtained material at a lower price than expected.

Labour: Shows an overall adverse variance of \$9,000.

Efficiency: Favourable \$8,000. Perhaps using a different machine from usual? Or, perhaps working harder in order to receive the higher than expected wage rate.

Rate: Adverse \$17,000. Higher labour hourly cost, possibly because the amount of work was lower than expected.

Polishing labour efficiency variance: The \$3,000 adverse variance may have been due to the possibly poorer quality material used in machining having caused polishing to take longer than expected.

- (d) Briefly:

Material: Possibly poorer quality material was used (it was cheaper than expected), resulting in waste. If so, it appears it cost more (in waste) than it saved (in reduced purchasing costs). It also appears that it may have led to the adverse polishing labour efficiency variance.

Labour: Higher wage rates than were expected led to a significant increase in cost. These increased wage rates may have resulted from the change in the planned level of activity from 16,000 units to 12,000.

Question 41–8A

- (a) *See text.*
- (b) (i) Total materials variance:
 $(\text{Standard price} \times \text{standard quantity}) - (\text{actual price} \times \text{actual quantity})$
 $= (\$8.42 \times 1,940) - (\$8.24 \times 2,270) = \$16,334.80 - \$18,704.80 = \$2,370$ adverse.
- (ii) Materials price variance:
 $(\text{Standard price} - \text{actual price per unit}) \times \text{actual quantity}$
 $= (\$8.42 - \$8.24) \times 2,270 = \$408.60$ favourable.
- (iii) Materials usage variance:
 $(\text{Standard quantity required} - \text{actual quantity}) \times \text{standard price}$
 $= (\$1,940 - 2,270) \times \$8.42 = \$2,778.60$ adverse.

(iv) Total labour variance:

$$\begin{aligned} & (\text{Standard rate} \times \text{standard hours}) - (\text{actual rate} \times \text{actual hours}) \\ & = (\$6.53 \times 800) - (\$6.14 \times 860) = \$5,224 - \$5,280.40 = \$56.40 \text{ adverse.} \end{aligned}$$

(v) Wage rate variance:

$$\begin{aligned} & (\text{Standard rate} - \text{actual rate}) \times \text{actual hours worked} \\ & = (\$6.53 - \$6.14) \times 860 = \$335.40 \text{ favourable.} \end{aligned}$$

(vi) Labour efficiency variance:

$$\begin{aligned} & (\text{Standard hours} - \text{actual hours}) \times \text{standard rate} \\ & = (800 - 860) \times \$6.53 = \$391.80 \text{ adverse.} \end{aligned}$$

Question 41–9A

Direct material variances

Boards

Price variances: \$ \$

Gamesmaster

Actual	5,050	26,000	
Budget	$5,050 \times 5$	25,250	
Adverse			(750)

Gotchya

Actual	2,010	28,390	
Budget	$2,010 \times 10$	20,100	
Adverse			(8,290)

Usage variances:

Gamesmaster

Actual	$5,050 \times 5$	25,250	
Budget	$5,000 \times 5$	25,000	
Adverse			(250)

Gotchya

Actual	$2,010 \times 10$	20,100	
Budget	$2,000 \times 10$	20,000	
Adverse			(100)

Components

Price variances:

Gamesmaster

Actual	5,060	75,000	
Budget	$5,060 \times 20$	101,200	
Favourable			26,200

41–9A con't

Gotchya

Actual	2,025	56,409	
Budget	$2,025 \times 30$	<u>60,750</u>	
Favourable			4,341

Usage variances:

Gamesmaster

Actual	$5,060 \times 20$	101,200	
Budget	$5,000 \times 20$	<u>100,000</u>	
Adverse			(1,200)

Gotchya

Actual	$2,025 \times 30$	60,750	
Budget	$2,000 \times 30$	<u>60,000</u>	
Adverse			(750)

Total direct material variance: Favourable

19,201

Direct labour variances

Assembly \$ \$

Wage rates

Actual		49,000	
Budget	$10,000 \times 5$	<u>50,000</u>	
Favourable			1,000

Efficiency

Actual	$10,000 \times 5$	50,000	
Budget	$7,000 \times 5$	<u>35,000</u>	
Adverse			(15,000)

Testing

Wage rates

Actual		35,700	
Budget	$7,000 \times 5$	<u>35,000</u>	
Adverse			(700)

Efficiency

Actual	$7,000 \times 5$	35,000	
Budget	$9,000 \times 5$	<u>45,000</u>	
Favourable			10,000

Total direct labour variance: adverse

(4,700)

Budgeted assembly labour hours

$$= 5,000 \times (5 \div 5) + 2,000 \times (5 \div 5)$$

= 7,000 hours

Budgeted testing labour hours

$$= 5,000 \times (5 \div 5) + 2,000 \times (10 \div 5)$$

= 9,000 hours

Question 41–11A

- (a) Budgeted profit based on the above standard costs and an output of 16,000 units

	\$	\$
Sales (16,000 units at \$250 per unit)		4,000,000
Direct materials: X: 48,000 kg at \$12 per kg	576,000	
Y: 32,000 kg at \$23 per kg	736,000	(1,312,000)
Direct labour (48,000 hours at \$21 per hour)		(1,008,000)
Variable overheads (48,000 hours at \$11 per direct labour hour)		(528,000)
Budgeted contribution		1,152,000
Fixed overheads		(520,000)
Budgeted profit		632,000

- (b)
- | | |
|--|---------------|
| Variable overheads absorbed (45,000 hours at \$11) | \$ 495,000 |
| Actual variable overheads | 518,560 |
| Under-absorbed overheads | <u>23,560</u> |
- (c) (i) Direct materials usage variance = (Standard quantity – Actual quantity) × Standard price
Material X = $(15,000 \times 3 \text{ kg} - 48,800 \text{ kg}) \times \$12 = \$45,600 \text{ A}$
Material Y = $(15,000 \times 2 \text{ kg} - 31,600 \text{ kg}) \times \$23 = \$36,800 \text{ A}$
- (ii) Direct wages cost variance = (Standard labour cost for actual production – Actual labour cost)
= $(15,000 \times 3 \times \$21 - \$1,008,370) = \$945,000 - \$1,008,370 = \$63,370 \text{ A}$
- (iii) Direct wage rate variance = (Standard rate – Actual rate) × Actual hours
= $(\$21 - \$20.60) \times 48,950 \text{ hours} = \$19,580 \text{ F}$
- (iv) Direct labour efficiency variance = (Standard hours – Actual hours) × Standard rate
= $(15,000 \times 3 - 48,950) \times \$21 = \$82,950 \text{ A}$

Question 41–12A

- (a) (i) Standard cost per bottle = $\$123,900 / 826 = \150
Standard number of pounds per bottle = $\$150 / \$25 = 6 \text{ pounds per unit}$
- (ii) Actual material used = $(\$123,900 + \$300) / \$25 = 4,968 \text{ pounds}$
- (iii) Material price variance = $\$124,600 - (\$123,900 + \$300) = \400 unfavourable
- (iv) Total standard labour cost at actual hours worked
 $(826 \times 1.5 \times \$15) + \$240 = \$18,825$
Actual hours = $\$18,825 / \$15 = 1,255 \text{ hours}$
Total actual cost = $1,255 \times \$15.5 = \$19,452.50$
- (v) Labour rate variance
 $\$19,452.50 - \$18,825 = \$627.50 \text{ unfavourable}$

41–12A con't

- (b) (i) Materials usage variance
- (ii) Labour efficiency variance
- (iii) Labour cost variance
- (iv) Overhead apportionment
- (v) Standard cost

Question 42–2A

(a)		\$
	Actual fixed overhead	36,420
	Budgeted fixed overhead	37,000
	Favourable fixed overhead expenditure variance	<u>580</u>
(b)	Actual hours × standard rate (242 × \$6)	1,452
	Budgeted hours × standard rate (250 × \$6)	1,500
	Favourable variable overhead efficiency variance	<u>48</u>
(c)	Actual overhead	18,000
	Overhead applied to production (8,820 × \$2)	17,640
	Adverse variable overhead expenditure variance	<u>360</u>
(d)	Actual overhead	8,790
	Overhead applied to production	9,000
	Favourable variable overhead expenditure variance	<u>210</u>
(e)	Actual fixed overhead	129,470
	Budgeted fixed overhead	120,000
	Adverse fixed overhead expenditure variance	<u>9,470</u>
(f)	Actual hours × standard rate (30,000 × \$8)	240,000
	Budgeted hours (9,880 × 3) × standard rate \$8	237,120
	Adverse variable overhead efficiency variance	<u>2,880</u>

Question 42–4A

The variable overhead rate is:

$$\frac{\$100,000}{50,000} = \$2 \text{ per direct labour hour or } \frac{\$100,000}{250,000} = \$0.40 \text{ per unit}$$

The fixed overhead rate is:

$$\frac{\$125,000}{50,000} = \$2.5 \text{ per direct labour hour or } \frac{\$125,000}{250,000} = \$0.50 \text{ per unit}$$

The variances are:

Variable overhead

(i) <i>Expenditure variance</i>	\$
Actual overhead	96,500
Overhead applied to production $52,000 \times \$2$	104,000
Favourable expenditure variance	<u>7,500</u>

(ii) *Efficiency variance*

Actual hours \times standard rate $52,000 \times \$2$	104,000
Budgeted hours \times standard rate (244,000 units which should be produced in $244,000 \div 5 = 48,800$ hours $\times \$2$)	97,600
Adverse efficiency variance	<u>6,400</u>
	<u>1,100</u>

Fixed overhead

(i) *Budget (or spending) variance*

Actual overhead	129,400
Budgeted overhead	125,000
Adverse expenditure variance	<u>4,400</u>

(ii) *Efficiency variance*

Actual units produced \times standard rate ($244,000 \times \$0.50$)	122,000
Actual labour hours \times standard rate per hour ($52,000 \times \$2.5$)	130,000
Adverse efficiency variance	<u>8,000</u>

(iii) *Capacity variance*

Actual volume \times standard rate ($52,000 \times \$2.5$)	130,000
Budgeted volume \times standard rate ($50,000 \times \$2.5$)	125,000
Favourable capacity variance	<u>5,000</u>
	<u>7,400</u>

The variance can be explained further:

Variable overhead

Actual overhead	\$ 96,500
Budgeted overhead for actual production 244,000 units $\times \$0.40$ per unit	97,600
Net favourable variance (made up of favourable expenditure variance \$7,500 less adverse efficiency variance \$6,400)	<u>1,100</u>

Fixed overhead

Actual overhead	129,400
Overhead based on units of production $244,000 \times \$0.50$	122,000
Net adverse variance (made up of adverse efficiency \$8,000 + adverse expenditure \$4,400 less favourable capacity variance \$5,000)	<u>7,400</u>

Question 42-6A

Actual units sold	$170,000 \times \text{Budget price}$	\$3.00 =	\$ 510,000
	$170,000 \times \text{Actual price}$	\$3.10 =	527,000
Favourable price variance		<u>\$0.10</u>	<u>17,000</u>
Actual units sold	$170,000 \times \text{Budget gross profit}$	\$1.00 =	170,000
Budget units sold	$180,000 \times \text{Budget gross profit}$	\$1.00 =	180,000
Adverse volume variance			<u>10,000</u>

Question 42-8A

Product	Actual units sold	Budget price \$	Actual price \$	Unit price variance	Total price variance
A	500	30	29	-1	-500
B	400	25	27	+2	+800
C	1,500	40	39	-1	-1,500
	<u>2,400</u>			Adverse price variance	<u>-1,200</u>

	Actual units sold	Actual units in budget (%)	Budget sales units	Variance in units	Budget gross profit per unit \$	Total variance \$
A	500	343	400	-57	5	-285
B	400	514	600	-86	4	-344
C	1,500	1,543	1,800	-257	10	-2,570
	<u>2,400</u>	<u>2,400</u>	<u>2,800</u>	<u>-400</u>	Adverse volume variance	<u>-3,199</u>

	Actual units in budget (%)	Actual units sold	Variance in units	Budget gross profit per unit \$	Total variance \$
A	343	500	+157	5	+785
B	514	400	-114	4	-456
C	1,543	1,500	-43	10	-430
	<u>2,400</u>	<u>2,400</u>	<u>-</u>	Adverse mix variance	<u>-101</u>

Summary of sales variance

Adverse price variance	\$ 1,200
Adverse volume variance	3,199
Adverse mix variance	101
Net adverse variance	<u>4,500</u>

Question 42-9A

(i)

Flint Palatignium Ltd
Trading Account for the month of April 20X8

		<i>Actual (\$)</i>	<i>Budget (\$)</i>
Sales units ($\$534,750 \div \17.25)	<u>31,000</u>		
Sales ($\$534,750 + \$8,691$)		543,441	534,750
Materials ($\$155,000 - \$4,662 + \$1,743$)		152,081	155,000
Labour ($\$77,500 - \$600 + \$292$)		77,192	77,500
Overhead ($\$232,500 - \$147 + \$9$)		232,362	232,500
		<u>461,635</u>	<u>465,000</u>
Operating profit		<u>81,806</u>	<u>69,750</u>

Valuation of stock

1.4.20X8 1,000 at \$5 = \$5,000

30.4.20X8 1,750 at \$5 = \$8,750

- (ii) Standard costing uses standards of performance and of prices derived from studying operations and of estimating future prices. Each unit produced attracts a standard materials, labour and overhead cost.

Flint Palatignium negotiates fixed-price contracts utilising standard costing which enables it to set standards that will remain unchanged for long periods. For example, the average cost method of pricing material issues needs a price recalculation each time there are additional receipts. The standard cost of materials will remain unchanged for a long period.

Using the standard costing system would enable the company to check on the efficiency of the service provided. It would also enable faster reporting to be carried out.

Question 42-10A

(a)

HGW Limited
Profit and Loss Statement for March 20X4

	\$	\$
Sales		46,750
<i>Less</i> Materials	9,734	
Labour	18,720	
Overheads	<u>12,500</u>	
		(40,954)
Profit		<u>5,796</u>

42-10A con't

(b)

(i) *Sales variance*

Price		\$	\$
Actual	$550 \times \$85$	46,750	
Budget	$550 \times \$86$	47,300	
Adverse			(550)
Volume			
Actual	$550 \times \$86$	47,300	
Budget	$520 \times \$86$	44,720	
Favourable			2,580
Total sales variance: Favourable			<u>2,030</u>

(ii) *Direct materials variance*

Price		\$	\$
Actual	$785 \times \$12.40$	9,734	
Budget	$785 \times \$12$	9,420	
Adverse			(314)
Usage			
Actual	$785 \times \$12$	9,420	
Budget	$825 \times \$12$	9,900	
Favourable			480
Total direct material variance: Favourable			<u>166</u>

(iii) *Direct labour variance*

Rate		\$	\$
Actual	$2,400 \times \$7.80$	18,720	
Budget	$2,400 \times \$7.50$	18,000	
Adverse			(720)
Efficiency			
Actual	$2,400 \times \$7.50$	18,000	
Budget	$2,420 \times \$7.50$	18,150	
Favourable			150
Total direct labour variance: adverse			<u>570</u>

(c) *Reconciliation*

	\$	\$
Budgeted profit on actual sales [$550 \times 13(86 - 73)$]		7,150
Variances		
Sales (price variance only)	(550)	
Direct material	166	
Direct labour	(570)	
Overheads	(400)	
		(1,354)
Profit as per (a) above		<u>5,796</u>

(d) *See text, Section 40.2.*

Question 43-3A

- (a) (i) \$24,000 (ii) \$36,000 (iii) \$44,000 (iv) \$30,000
 (b) (i) \$18,000 (ii) \$48,000 (iii) \$33,000

Question 43-5A

- (i) Loss \$2,000
 (ii) Profit \$12,000
 (iii) Neither profit nor loss
 (iv) Profit \$6,000
 (v) Profit \$9,000

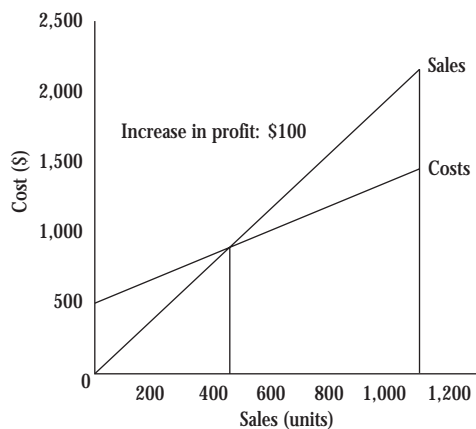
Question 43-7A

(a) *Workings:*

	<i>Current</i>	<i>Changes</i>			
		<i>(i)</i>	<i>(ii)</i>	<i>(iii)</i>	<i>(iv)</i>
Sales volume – units	1,000	1,100	1,000	1,000	1,000
Selling price (\$)	2	2	2.20	2	2
Sales (\$)	2,000	2,200	2,200	2,000	2,000
Variable cost (\$)	1,000	1,100	1,000	900	1,000
Fixed cost (\$)	500	500	500	500	450
Profit (\$)	500	600	700	600	550

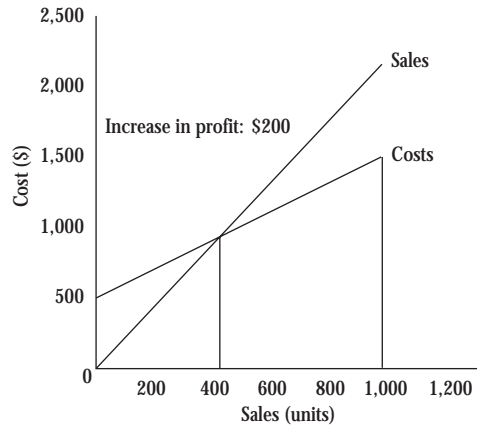
Break-even charts:

- (i) 10% increase in volume

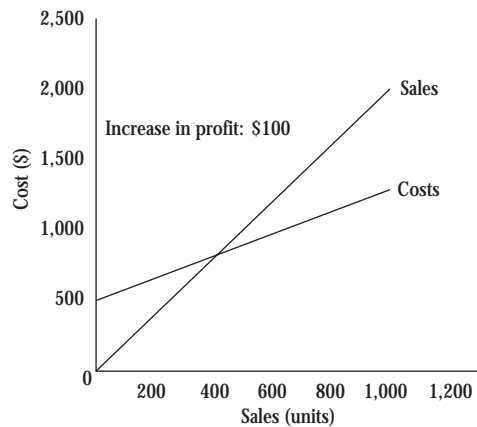


43-7A con't

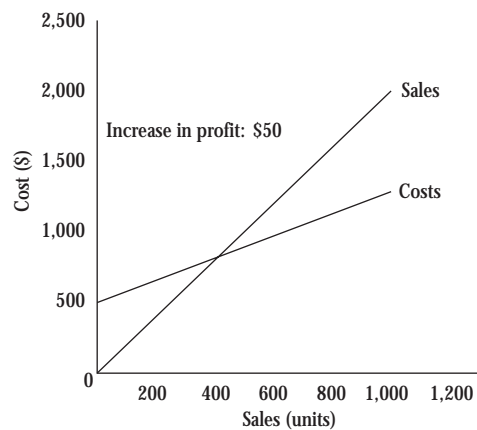
(ii) 10% increase in unit selling price



(iii) 10% decrease in unit variable cost



(iv) 10% reduction in fixed costs



Question 43–9A

(a)

Monarch Ltd Profit Statement

	<i>Original statement</i>	<i>(i)</i>	<i>Options (ii)</i>	<i>(iii)</i>
Sales units (W1)	60,000	78,000	62,000	75,000
Unit selling price	\$30	\$27	\$30	\$30
	\$000	\$000	\$000	\$000
Sales	1,800	2,106	1,860	2,250
Direct material	480	585	496	577.5
Direct labour	240	312	248	300
Variable overhead	240	312	248	300
	960	1,209	992	1,177.5
Contribution	840	897	868	1,072.5
Production cost	260	290	260	285
Administration	90	95	90	94
Selling, marketing and distribution	100	110	127	147
	450	495	477	526
Profit	390	402	391	546.5
Contribution per unit (\$)	14	11.50	14	14.3

(W1) Contribution = \$840,000 for 60,000 units = \$14 each.

Contribution + total variable cost = selling price, therefore \$14 + \$16 = \$30.

Monarch Ltd Profit Statement

	<i>Original statement</i>		<i>Managing director's option (iv)</i>
Sales units	60,000		78,000
Unit selling price	\$30		\$29
	\$000		\$000
Sales	1,800	(F)	2,262
Direct materials	480	(+ 30% × 93.75%)	585
Direct labour	240		312
Variable overhead	240		312
	960	(E)	1,209
Contribution	840	(C)	1,053
Production costs	260		417
Administration	90		—
Selling, marketing and distribution	100		150
	450	(B)	567
Profit	390	(A)	486
Contribution per unit (\$)	14	(D)	13.5

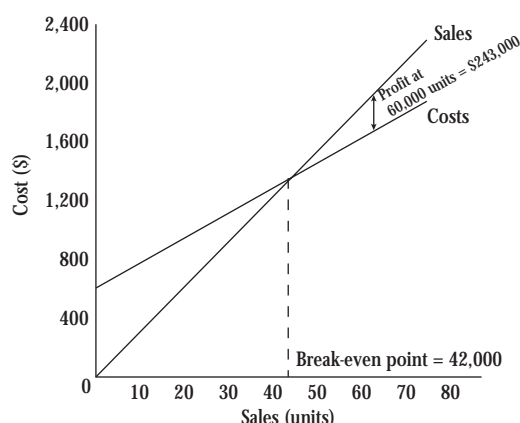
43-9a con't

- (b) Break-even point = $\$567,000 \div \$13.5 = 42,000$ units

First insert (A) and (B). This means that $(A) + (B) = (C)$. Given sales increase in units of $30\% = 78,000$ sales.

Means that $(C) \div 78,000 =$ contribution per unit of $\$13.50$. (E) calculated so that $(C) + (E) = (F)$.

Contribution/sales graph



- (c) The report should include the following:
- 1 Marginal costing takes account of the variable costs of products.
 - 2 It states that fixed factory overhead is a function of time and should not be carried forward into the next period by including it in stock valuations.
 - 3 To apply marginal costing means splitting up fixed and variable costs. This is not always straight-forward.
 - 4 Not all variable costs are a hundred per cent variable.
 - 5 Intelligent cost planning and control is dependent on the knowledge of how costs behave in a particular firm.
 - 6 Raw materials are examples of variable costs. Labour costs usually move in steps.

Question 43-11a

- (a) See text, Section 43.1. (It should be remembered that a break-even point is relevant only to a specific range of activity and within a specific timescale. If the volume of activity shifts onto a new level, some fixed costs may alter — for example, a second warehouse may need to be rented. This will result in a different break-even point. Also, the break-even point will alter over time as the nature of all costs change.)
- (b) (i)
- | | | |
|--------------------------------|-------------------------|---------------|
| Cost of 2,000 additional units | \$ | \$ |
| Direct materials | $(\$36,000 - \$30,000)$ | 6,000 |
| Direct labour | $(\$33,000 - \$28,000)$ | 5,000 |
| Overheads | $(\$24,100 - \$20,500)$ | 3,600 |
| | | <u>14,600</u> |
- (ii) Based on the cost for 2,000 units calculated in (i), the variable costs of 10,000 units would be $\$73,000$.
- (iii) There appears to be a fixed element in both direct labour and overheads. In the case of direct labour, this would appear to be $\$3,000$ [$\$28,000 - (5 \times \$5,000)$]. In the case of overheads, it appears to be $\$2,500$ [$\$20,500 - (5 \times \$3,600)$].
- (iv) On the basis of (ii) the variable cost of one unit is $\$7.30$ and the contribution per unit is $\$5$ [$\$12.30 - \7.30]. Break-even point is 1,100 units [$(\$3,000 + \$2,500) / \$5$].

Question 43–13A

	\$	\$
(a) (i) Revenue per ton of material X processed		250
<i>Less</i> Variable costs:		
Material X	118	
Processing	35	
Marketing	27	(180)
Contribution margin per unit		<u>70</u>
(ii) Contribution margin ratio (70 / 250)		28%
(b) (i) Break-even dollar sales volume		\$
Fixed costs (\$320,000 + \$290,000 + \$160,000)		770,000
Contribution margin ratio (part (a))		28%
Break-even dollar sales volume (\$770,000 / 0.28)		2,750,000
(ii) Break-even sales volume (in tons)		
Fixed costs		770,000
Unit contribution margin		70
Break-even sales volume in tons of output (\$770,000 / 70)*		11,000
(c) (i) Required dollar sales volume:		\$
Fixed costs		770,000
<i>Add</i> Target profit		299,600
Required contribution margin		<u>1,069,600</u>
Contribution margin ratio		28%
Required dollar sales volume (\$1,069,600/0.28)		3,820,000
(ii) Required unit sales volume:		
Required dollar sales volume		3,820,000
Unit sales price		250
Required sales volume in tons (\$3,820,000/\$250)#		15,280
(d)	\$	\$
Total revenue (20,000 tons × \$250)		5,000,000
<i>Less</i> Costs other than materials:		
Processing (20,000 tons × \$35)	700,000	
Marketing (20,000 tons × \$27)	540,000	
Fixed costs	770,000	(2,010,000)
Maximum amount		<u>2,990,000</u>
Maximum amount that can be paid per ton of material X, while allowing company to break-even (\$2,990,000/20,000 tons)		149.50

* alternative computation: $\$2,750,000 / \$250 = 11,000$ tons

#alternative computation: $\$1,069,600 / \$70 = 15,280$ tons

Question 44-2A

The amount borrowed is \$5,802.74 and the interest charged is \$197.26.
Therefore, the real rate of interest:

$$r = \frac{197.26}{5,802.74 \times \frac{80}{365}} = 0.1551 \text{ or } 15.51\%$$

Question 44-5A

\$1,000 will accumulated to $\$1,000 \times (1 + 0.06)^{10} = \$1,791$

Interest is $\$1,791 - \$1,000 = \$791$

Question 44-6A

$$r = \sqrt[4]{\frac{3,158}{2,000}} - 1 = 12.1\%$$

Question 44-8A

2% $\$4,000 \times 3.808 = \$15,232$

3% $\$4,000 \times 3.717 = \$14,868$

$\$15,232 - \$14,868 = \$364$

$\$15,232 - \$15,000 = \$232$

\$15,000 is \$232 below the present value of a 2% annuity. The difference in the present values at 2% (\$15,232) and 3% (\$14,868) is \$364. The offer therefore represents an interest rate of $2\% + (232 \div 364)\% = 2.64\%$. This is well below the 10% compound interest you could obtain by investing the \$15,000. You should accept the offer.

Question 44-10A

$$\begin{aligned} \text{Paid in per year} &= \frac{\text{Value} \times (r)}{(1+r)^n - 1} \\ &= \frac{\$20,000 \times 0.10}{(1.10)^{10} - 1} \\ &= \$1,255 \text{ per year} \end{aligned}$$

Question 45-6A

Year	Amount	Balance
	\$	\$
0	(60,000)	(60,000)
1	40,000	(20,000)
2	25,000	—
3	15,000	—

Payback at 1 plus $20,000/25,000$ years = 1.8 years.

Question 45-7A

<i>Year</i>	<i>Cash flow</i> \$	<i>Discount factor</i> (10%)	<i>Present value</i> \$
0	(60,000)		(60,000)
1	40,000	0.909	36,360
2	25,000	0.826	20,650
3	15,000	0.751	11,265
Net present value of the project			<u>8,275</u>

Question 45-8A

<i>Year</i>	<i>Amount</i> \$	<i>Discount factor</i> (18%)	<i>Present value</i> \$	<i>Discount factor</i> (20%)	<i>Present value</i> \$
0	(60,000)	1.000	(60,000)	1.000	(60,000)
1	40,000	0.847	33,880	0.833	33,320
2	25,000	0.718	17,950	0.694	17,350
3	15,000	0.609	9,135	0.579	8,685
			<u>965</u>		<u>(645)</u>
18% discount rate gives NPV of			965		
20% discount rate gives negative NPV of			645		
			<u>1,610</u>		

$$\begin{aligned}\text{The IRR is } \frac{965}{1,610} \times 2\% + 18\% &= 1.2\% + 18\% \\ &= \underline{\underline{19.2\%}}\end{aligned}$$

Question 45-9A

The present value of an annuity of \$1 for three years at 10% is 2.487. The NPV according to 45-7A is \$8,275, therefore the annualised amount is: $\frac{8,275}{2,487} = \$3,327.30$.

Question 45-10A

	\$
Average return	45,000
Average investment (\$65,000 + \$5,000) ÷ 2	35,000
Accounting rate of return	$= \frac{45,000}{35,000}$
	$= \underline{\underline{129\%}}$

Question 45–11A

<i>Period</i>	<i>Amount</i>	<i>Discount factor</i>	<i>Present value</i>	<i>Discount factor</i>	<i>Present value</i>
	\$	(80%)	\$	(90%)	\$
0	(65,000)	1.000	(65,000)	1.000	(65,000)
1	60,000	0.556	33,360	0.526	31,560
2	60,000	0.309	18,540	0.277	16,620
3	60,000	0.171	10,260	0.146	8,760
4	65,000	0.095	6,175	0.077	5,005
			3,335		(3,055)
			3,335		
			3,055		
			6,390		

80% discount rate gives NPV of

90% discount rate gives negative NPV of

The IRR is $\frac{3,335}{6,390} \times 10\% + 80\% = 5.22\% + 80\% = \underline{\underline{85.22\%}}$

Question 45–14A

<i>Period</i>	<i>Discount factor</i>	<i>Project A net cash flows</i>	<i>Present value</i>	<i>Project B net cash flows</i>	<i>Present value</i>
	(12%)	\$	\$	\$	\$
0	1.000	(34,000)	(34,000)	(29,000)	(29,000)
1	0.893	16,000	14,288	22,000	19,646
2	0.797	—	—	—	—
3	0.712	26,000	18,512	12,000	8,544
			(1,200)		(810)

Neither should be selected on the basis of this criterion — both projects have a negative net present value.

Question 45–15A

<i>Period</i>	<i>Discount factor</i>	<i>Project A net cash flows</i>	<i>Present value</i>	<i>Project B net cash flows</i>	<i>Present value</i>
	(10%)	\$	\$	\$	\$
0	1.000	(34,000)	(34,000)	(29,000)	(29,000)
1	0.909	16,000	14,544	22,000	19,998
2	0.826	—	—	—	—
3	0.751	26,000	19,526	12,000	9,012
			70		10

The IRRs for the two projects can be calculated by interpolating between the NPVs at 10% and those calculated in question 45–14A at 12%:

$$\text{Project A} = \frac{70}{1,270} \times 2\% + 10\% = 10.11\%$$

$$\text{Project B} = \frac{10}{820} \times 2\% + 10\% = 10.11\%$$

Project A would be preferred (just).

Question 45–17A

<i>Period</i>	<i>Discount factor (8%)</i>	<i>Project A net cash flows \$</i>	<i>Present value \$</i>	<i>Project B net cash flows \$</i>	<i>Present value \$</i>
0	1.000	(3,000)	(3,000)	(7,000)	(7,000)
1	0.926	(500)	(463)	(800)	(741)
2	0.857	(3,000)	(2,571)	(800)	(686)
3	0.794	(500)	(397)	(800)	(635)
4	0.735	(500)	(368)	(1,000)	(735)
			(6,799)		(9,797)

The present value of an annuity of \$1 for 4 years at 8% = 3.312

$$\therefore \text{the annualised cost of Project A} = \frac{6,799}{3,312} = \$2,053$$

$$\text{and the annualised cost of Project B} = \frac{9,797}{3,312} = \$2,958$$

As the cost of project A is cheaper than that of project B, project A should be selected.

Question 45–19A

Hirwaun Pig Iron Co.				
(a) <i>Exco</i>	<i>20X5</i>	<i>20X6</i>	<i>20X7</i>	<i>20X8</i>
Tonnes	120,000	120,000	120,000	120,000
Price:	\$	\$	\$	\$
80% @	150	150	150	150
20% @	150	140	140	160
	\$000	\$000	\$000	\$000
Sales	18,000	17,760	17,760	18,240
Labour	(1,200)	(1,200)	(1,200)	(1,200)
Other payments	(15,600)	(15,600)	(16,200)	(16,200)
Net cash flow	1,200	960	360	840
<i>Ohio</i>	<i>20X5</i>	<i>20X6</i>	<i>20X7</i>	<i>20X8</i>
Tonnes	240,000	240,000	240,000	240,000
Price	\$	\$	\$	\$
	130	130	140	170
	\$000	\$000	\$000	\$000
Sales	31,200	31,200	33,600	40,800
Labour	(2,500)	(2,500)	(2,500)	(2,500)
Other payments	(28,800)	(28,800)	(30,000)	(30,000)
Net cash flow	(100)	(100)	1,100	8,300

45-19A con't

(b) <i>Exco</i>			<i>PV factor for 12%</i>	<i>NPV</i>
<i>Period</i>		\$000		\$000
0	Capital outlay	(2,000)	1.000	(2,000)
20X5	Net cash flow	1,200	0.893	1,072
20X6	Net cash flow	960	0.797	765
20X7	Net cash flow	360	0.712	256
20X8	Net cash flow	840	0.636	534
Net present value				<u>627</u>

<i>Ohio</i>			<i>PV factor for 12%</i>	<i>NPV</i>
<i>Period</i>		\$000		\$000
0	Capital outlay	(3,500)	1.000	(3,500)
20X5	Net cash flow	(100)	0.893	(89)
20X6	Net cash flow	(100)	0.797	(80)
20X7	Net cash flow	1,100	0.712	783
20X8	Net cash flow	8,300	0.636	5,279
Net present value				<u>2,393</u>

- (c) The calculations of net present values indicate that the Ohio investment produces a higher NPV over the four-year period. In order to determine whether this represents a reasonable decision, the management would need to consider the reliability of estimates used — on volumes, sales forces and costs. Exco involves a lower capital outlay, which is expected to produce a payback just before the end of 20X6. Ohio does not achieve payback until over 6 months through the fourth year. Ohio only really comes into profit in the fourth year. If these fourth year estimates are reliable, and may extend into the future period after 20X8, then Ohio is clearly preferable. The method using net present value is entirely appropriate, assuming that the cost of capital figure has been reliably estimated. However, the NPV can only be valued if the information on which it is based is accurate. Great care must be taken to assess the sensitivity of the data to changes in the inputs in order to be aware of the underlying risks involved.

Question 45-21A

- (a) Calculation of the net present value at

- (i) 10% discount rate

	Machine X			Machine Y		
	<i>Net year end inflow</i>	<i>discounting factor</i>	<i>Present value</i>	<i>Net year end inflow</i>	<i>discounting factor</i>	<i>Present value</i>
Year	\$000	@ 10%	\$000	\$000	@ 10%	\$000
1 Jan 20X1	(250)	1.000	(250.00)	(200)	1.000	(200.00)
20X1	60	0.909	54.54	40	0.909	36.36
20X2	120	0.826	99.12	80	0.826	66.08
20X3	100	0.751	75.10	100	0.751	75.10
20X4	60	0.683	40.98	50	0.683	34.15
20X5	40	0.620	24.80	40	0.620	24.80
Salvage value	50	0.620	31.00	30	0.620	18.60
Net present value			<u>75.54</u>			<u>55.09</u>

(ii) 15% discount rate

	Machine X			Machine Y		
	<i>Net year end inflow</i>	<i>discounting factor</i>	<i>Present value</i>	<i>Net year end inflow</i>	<i>discounting factor</i>	<i>Present value</i>
Year	\$000	@ 15%	\$000	\$000	@ 15%	\$000
1 Jan 20X1	(250)	1.000	(250.00)	(200)	1.000	(200.00)
20X1	60	0.870	52.20	40	0.870	34.80
20X2	120	0.756	90.72	80	0.756	60.48
20X3	100	0.657	65.70	100	0.657	65.70
20X4	60	0.571	34.26	50	0.571	28.55
20X5	40	0.497	19.88	40	0.497	19.88
Salvage value	50	0.497	24.85	30	0.497	14.91
Net present value			<u>37.61</u>			<u>24.32</u>

(b) Calculation of the internal rate of return

Machine X

$$\begin{aligned}
 \text{IRR} &= 10 + \frac{75,540 \times (15 - 10)}{75,540 - 37,610} \\
 &= 10 + \frac{377,700}{37,930} \\
 &= 10 + 9.96 \\
 &= \underline{\underline{19.96\%}}
 \end{aligned}$$

Machine Y

$$\begin{aligned}
 \text{IRR} &= 10 + \frac{55,090 \times (15 - 10)}{55,090 - 24,320} \\
 &= 10 + \frac{275,450}{30,770} \\
 &= 10 + 8.95 \\
 &= \underline{\underline{18.95\%}}
 \end{aligned}$$

(c) From answers (a) and (b), Machine X should be acquired because it gives a higher present value and internal rate of return than Machine Y.

At discounting rate of 12%

	Purchase of Machine X			Lease of Machine Y	
	<i>DF</i>	<i>Net year end inflow</i>	<i>PV</i>	<i>NCF*</i>	<i>PV</i>
Year	@ 12%	\$000	\$000	\$000	\$000
1 Jan 20X1	1.000	(250)	(250.00)	—	—
20X1	0.892	60	53.52	(15)	(13.380)
20X2	0.797	120	95.64	45	35.865
20X3	0.712	100	71.20	25	17.800
20X4	0.635	60	38.10	(15)	(9.525)
20X5	0.567	40	22.68	(35)	(19.845)
Salvage value	0.567	50	28.35	—	—
Net present value			<u>59.49</u>		<u>10.915</u>

Conclusion: Machine X should be purchased for cash instead of acquiring under leasing because it gives a higher net present value.

* After the deduction of $\$250,000 \times 30\% = \$75,000$ per annum for the annual rental of the machine if under lease agreement.

Question 45–23A

Rovers Football Club

Exhibit A: Jimmy Jam

Year	0	1	2	3	4	5
	\$	\$	\$	\$	\$	\$
Incremental receipts	—	200,000	200,000	200,000	200,000	200,000
Salary	—	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
Transfer fee	(200,000)	—	—	—	—	—
	<u>(200,000)</u>	<u>150,000</u>	<u>150,000</u>	<u>150,000</u>	<u>150,000</u>	<u>150,000</u>

Exhibit B: Johnny Star

Year	0	1	2
	\$	\$	\$
Incremental receipts	—	400,000	400,000
Salary	—	(200,000)	(200,000)
Transfer fee	(100,000)	—	—
	<u>(100,000)</u>	<u>200,000</u>	<u>200,000</u>

Exhibit C:

	Cash flow	Jimmy Jam PV factor	NPV	Cash flow	Johnny Star PV factor	NPV
Year	\$		\$	\$		\$
0	(200,000)	1.000	(200,000)	(100,000)	1.000	(100,000)
1	150,000	0.893	133,950	200,000	0.893	178,600
2	150,000	0.797	119,550	200,000	0.797	159,400
3	150,000	0.712	106,800			
4	150,000	0.636	95,400			<u>238,000</u>
5	150,000	0.567	85,050			
			<u>340,750</u>			

Report to Rovers Football Club

The proposed transactions have been evaluated in Exhibits A, B and C to calculate the likely returns from the two players. On the figures quoted, both transactions produce a positive net present value using 12% interest, with the Jimmy Jam proposal providing the higher of the two. However, the club should consider the fact that the J Star proposal provides a payback in the first year whereas the J Jam transfer would not achieve payback until after six months through year 2.

If J Jam is successful, his five-year contract will provide benefits for three years more than J Star. In both cases the whole proposal hinges on the validity of the assumed increase in revenue and the probability that the players will be fit to play and be popular with the crowds.

Answers to Appendix 1

Question 2A

(i) Memorandum Joint Venture Account for Kam and Tong				
		\$	\$	\$
Bicycles purchased		96,460	Sales	83,630
Carriage		324	Kam: Bicycles taken over	26,000
Net profit: Kam $\frac{1}{2}$	6,423			
Tong $\frac{1}{2}$	6,423	12,846		
		<u>109,630</u>		<u>109,630</u>

(ii) Kam's books			
Joint Venture with Tong			
	\$		\$
Bicycles purchased	88,900	Bank	40,000
Carriage	273	Sales	73,400
Bank: Tong	30,000	Bicycles taken over	26,000
Share of net profit	6,423		
Balance c/d	13,804		
	<u>139,400</u>		<u>139,400</u>
Bank: to settle	<u>13,804</u>	Balance b/d	<u>13,804</u>

Tong's books			
Joint Venture with Kam			
	\$		\$
Bicycles purchased	7,560	Bank	30,000
Carriage	51	Sales	10,230
Bank: Kam	40,000	Balance c/d	13,804
Share of net profit	6,423		
	<u>54,034</u>		<u>54,034</u>
Balance b/d	<u>13,804</u>	Bank: to settle	<u>13,804</u>

Question 4A

Memorandum Joint Venture Account for Wan, Woon and Lin

	\$	\$		\$
Antiques (\$650 + \$1,200 + \$440)		2,290	Sales (\$3,790 + \$780 + \$990)	5,560
Lighting and heating		120	Goods taken over	2,100
Rent		150		
Loss on van		600		
Use of Lin's van		400		
General expenses		800		
Net profit:				
Wan $\frac{1}{3}$	1,100			
Woon $\frac{1}{2}$	1,650			
Lin $\frac{1}{6}$	550	3,300		
		<u>7,660</u>		<u>7,660</u>

Wan's Books

Joint Venture with Woon and Lin

20X8		\$	20X8		\$
Mar 1	Rent	150	Apr 13	Sale of van	2,100
" 28	Antiques	1,200	May 31	Balance c/d	750
May 4	General expenses	400			
" 31	Share of profit to profit and loss	1,100			
		<u>2,850</u>			<u>2,850</u>
May 31	Balance b/d	750	May 31	Cash received from Lin	750

Woon's Books

Joint Venture with Wan and Lin

20X8		\$	20X8		\$
Mar 2	Van	2,700	Apr 15	Sales	780
" 4	Antiques	650	May 31	Good taken over	2,100
May 31	Share of profit to profit and loss	1,650	" 31	Balance c/d	2,120
		<u>5,000</u>			<u>5,000</u>
May 31	Balance b/d	2,120	May 31	Cash received from Lin	2,120

Lin's Books

Joint Venture with Wan and Woon

20X8		\$	20X8		\$
Apr 11	Use of van	400	Mar 15	Sales	3,790
" 18	Lighting and heating	120	May 19	Sales	990
" 30	Antiques	440			
May 4	General expenses	400			
" 31	Share of profit to profit and loss	550			
" 31	Balance c/d	2,870			
		<u>4,780</u>			<u>4,780</u>
May 31	Cash paid to Wan	750	May 31	Balance b/d	2,870
" 31	Cash pad to Woon	2,120			
		<u>2,870</u>			<u>2,870</u>

Question 5A

Preliminary calculations
Inventory of Javes Account

	<i>Units</i>	\$
Purchases 1 Jan at \$5.00 each	1,000	5,000
Purchases 1 March at \$6.00 each	2,000	12,000
Purchases to 30 June	<u>3,000</u>	<u>17,000</u>
Sales to 30 June	(2,700)	
Inventory at 30 June	<u>300</u>	
This would be valued on a FIFO basis at \$6.00 each		<u>1,800</u>
	<i>Units</i>	\$
Purchases 1 Aug at \$5.50 each	1,500	8,250
Purchases 1 Oct at \$5.00 each	2,000	10,000
Purchases to 31 Dec	<u>3,500</u>	<u>18,250</u>
Inventory at 30 June	300	
	<u>3,800</u>	
Sales to 31 Dec	(3,400)	
Inventory at 31 Dec	<u>400</u>	
This would be valued on a FIFO basis at \$5.00 each		<u>2,000</u>

As the joint venturers are settling the balance due at 30 June it is necessary to calculate the value of the sundry net assets of the venture at 30 June. The calculation is as follows:

Sundry Net Assets at 30 June		
		\$
Inventory (see Inventory of Javes Account)		1,800
Prepaid rent $\$500 \times \frac{1}{2}$		250
		<u>2,050</u>
This is divided in profit/loss ratio: Chan $\frac{3}{5}$		1,230
	Lee $\frac{2}{5}$	820
		<u>2,050</u>

The Memorandum Joint Venture Account to 30 June			
	\$	\$	\$
Purchases 3,000 Javes		17,000	
Inventory 300 Javes		(1,800)	
		<u>15,200</u>	
Gross profit c/d		14,500	
		<u>29,700</u>	
Rent for half-year		250	
Selling expenses for half-year		1,400	
Net profit: Chan $\frac{3}{5}$	7,710		
Lee $\frac{2}{5}$	5,140	12,850	
	<u>12,850</u>	<u>14,500</u>	
			<u>29,700</u>
			14,500

The Memorandum Joint Venture Account to 31 December			
	\$	\$	\$
Opening inventory 3,000 Javes		1,800	
Purchases 3,500 Javes		18,250	
		<u>20,050</u>	
Closing inventory 400 Javes taken over by Chan		(2,000)	
		<u>18,050</u>	
Gross profit c/d		17,650	
		<u>35,700</u>	
Rent for half-year		250	
Selling expenses for half-year		450	
Net profit: Chan $\frac{3}{5}$	10,170		
Lee $\frac{2}{5}$	6,780	16,950	
	<u>16,950</u>	<u>17,650</u>	
			<u>35,700</u>
			17,650