INTRODUCTION TO

Accounting

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3rd Edition

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Introduction to accounting solutions manual

This manual contains solutions to even-numbered questions, except 6.2, 6.4 and 6.6 which appear in the main text.

QUESTION 2.2

(a) **Balance sheet of John's business, 1 April 20X1**

	£		£
Cash at bank	4,000	Capital	4,000

(b) **Balance sheet of John's business, 2 April 20X1**

	£		£
Cash at bank	4,600	Capital	4,000
		Loan from John's father	600
	4,600		4,600

(c) **Balance sheet of John's business, 4 April 20X1**

	£		£
Cash at bank	4,600	Capital	4,000
Cash-in-hand	150	Loan from John's father	600
		Loan from Peter	150
	4,750		4,750

QUESTION 2.4

(a) **Balance sheet of Jeff's business, 2 October 20X0**

	£		£
Machine	2,200	Capital	5,300
Stock (£2,870 – £120 – £240)	2,510	Add: Profit (£80 + £75)	155
Debtors (£800 + £315)	1,115		5,455
Bank (£120 + £200)	320	Trade creditors	690
	6,145		6,145

(b) **Balance sheet of Jeff's business, 3 October 20X0**

	£		£
Machinery	2,200	Capital	5,455
		Trade creditors	
Stock (£2,510 + £190)	2,700	(£690 + £190)	880
Debtors (£1,115 – £150)	965		
Bank (£320 + £150)	470		
	6,335		6,335

(c) **Balance sheet of Jeff's business, 4 October 20X0**

	£		£
Machines (£2,200 + £600)	2,800	Capital	5,455
		Trade creditors	
Stock	2,700	(£880 – £75)	805
Debtors	965	Bank overdraft	
		(£470 – £75 – £600)	205
	6,465		6,465

QUESTION 2.6 **Balance sheet at 31 December 20X1**

	A	B	C	D	E	F
Sources of finance	£	£	£	£	£	£
Capital at 1 January 20X1	2,500	2,000	3,000	4,000	3,800	7,400
Add: Profit	1,000	3,200	1,400	5,700	2,300	7,000
Less: Drawing	(800)	(3,000)	(1,000)	(4,900)	(2,500)	(4,500)
	2,700	2,200	3,400	4,800	3,600	9,900
Current liabilities	750	400	600	1,300	1,700	2,100
	3,450	2,600	4,000	6,100	5,300	12,000
Assets	£	£	£	£	£	£
Fixed assets	1,800	1,750	2,800	4,200	3,700	8,500
Current assets	1,650	850	1,200	1,900	1,600	3,500
	3,450	2,600	4,000	6,100	5,300	12,000

QUESTION 2.8 *Current liabilities: 4 and 9. Current assets: 2 and 7. Fixed assets: 1 and 3. Items not indicated:*

5 *Capital investment.* This is reported in the capital section, i.e. the first item on the sources of finance side of the balance sheet.

6 *Pearl necklace and gold wristwatch.* These are the personal belongings of Mrs Greasy and must be excluded from the balance sheet.

8 *Loan.* This is a non-current liability and is reported between the capital and current liability sections of the balance sheet.

10 *Shop.* This must be excluded from the balance sheet since it belongs to the property company.

QUESTION 3.2 (a) Calculation of capital

Statement of assets, liabilities and capital at 31 December

	20X3		*20X4*	
	£	£	£	£
Gross assets				
Fixed assets		9,000		12,144 W1
Stocks		2,650		3,710
Trade debtors		5,200		5,600
Bank balance		–		50
		16,850		21,504
Less: Liabilities				
Trade creditors	1,710		1,210	
Bank overdraft	360	2,070	–	1,210
Capital		14,780		20,294

	£
Calculation of profit	
Closing capital	20,294
Less: Opening capital	14,780
Increase in capital	5,514
Add: Drawings	8,100 W2
Less: Capital introduced	(600)
Profit	13,014

W1 £9,000 + £3,144 = £12,144

W2 (£150 × 52) + £300 = £8,100

(b) **Balance sheet at 31 December 20X4**

	£	£	
Fixed assets		12,144	
Current assets:			
Stock	3,710		
Trade debtors	5,600		
Bank balance	50		
	9,360		
Current liabilities;			
Trade creditors	(1,210)		
		8,150	
		20,294	
Capital			
Opening capital			14,780
Additional capital			600
			15,380
Add: Net profit		13,014	
Less: Drawings: Cash		(7,800)	
goods		(300)	
			4,914
			20,294

Bennett **QUESTION 4.2**

Trading and profit and loss account for 20X1

	£	£
Sales (W1)		40,440
Opening stock	3,750	
Purchases (W2)	21,140	
	24,890	
Less: Closing stock	(4,600)	
Cost of goods sold		20,290

Gross profit			20,150
Add: Bank interest received			50
			20,200
Less: General expenses (W3)	7,490		
Depreciation	2,800		
Loan interest (£2,000 × 15%)	300		
			10,590
Net profit			9,610

Balance sheet at 31 December 20X1

	£	£
Fixed assets		
Motor vehicles at cost		14,000 W4
Less: Accumulated depreciation		4,800 W5
		9,200
Current assets		
Stock	4,600	
Debtors	1,840	
Bank deposit account (£650 + £50)	700	
Prepaid expenses	520	
	7,660	
Less: current liabilities		
Creditors	1,140	
Loan interest	300	
Accruals	310	
Bank overdraft	4,630 W6	
	6,380	
Working capital		1,280
		10,480
Financed by:		
Opening capital		8,720
Add: Capital injection – legacy		2,650
Net profit		9,610
Less: Drawings		(12,500)
		8,480
Loan at 15%		2,000
		10,480

W1 Sales	£	W4 Vehicles	£
Proceeds from: Credit sales	7,560	Balance at 1 January	10,000
Cash sales	32,100	Add: Purchases	4,000
	39,660		14,000
Less: Opening debtors	(1,060)		
Add: Closing debtors	1,840		
	40,440		

		W5 Vehicles: Accum Dep.	
		Balance at 1 January	2,000
		Add: Charge for year	2,800*
			4,800
W2 Purchases			
Payments to suppliers	20,850		
Less: Opening creditors	(850)	W6 Bank overdraft	
Add: Closing creditors	1,140	Opening balance	2,030
	21,140	Add: Payments	44,910
		Less; Receipts	(42,310)
			4,630
W3 General expenses			
Payments	7,560		
Add: Opening prepayments	400		
Less: Opening accruals	(260)		
Less; Closing prepayments	(520)		
Add; Closing accruals	310		
	7,490		

*£14,000 (cost of vehicles owned at year end) × 20% = £2,800.

Mr Negus **QUESTION 4.4**

Trading and profit and loss account period ending 30 April 1996

	£000	£000
Sales (295.7+7.9+3.8)		307.4
Purchases (244.6+5.4+0.6)	250.6	
Less: Closing stock	(37.5)	
Cost of goods sold		213.1
Gross profit		94.3
Discounts received		0.6
Bank interest received		0.5
		95.4
Wages (9.2+7.9)	17.1	
Postage and stationery	0.4	
Advertising	4.8	
Heat, light and water (4.1+0.2)	4.3	
Insurance and telephone	1.8	
Miscellaneous expenses	8.7	
Depreciation of property (80/5)	16.0	
Depreciation of shop fittings (7/5)	1.4	
Depreciation of motor vehicle	0.6	
		(55.1)
Net profit		40.3

Mr Negus
Balance sheet as at 30 April 1996

	£	£	£
Tangible fixed assets			
Property		64,000	
Fittings		5,600	
Car		5,100	
			74,700
Investments			30,000
Current Assets			
Stock		37,500	
Debtors		3,800	
Cash		34,900	
		76,200	
Current Liabilities			
Creditors		(5,600)	
			70,600
			175,300
Capital			150,000
Add: Profit			40,300
			190,300
Less: Drawings			(15,000)
			175,300

QUESTION 4.6 Ridlingham Recreation Club

(a) **Bar trading account and general income expenditure account for 20X1**

	£		£
Opening stock	4,400	Sales	69,660
Purchases	48,980 W4		
Closing stock	(5,280)		
Cost of goods sold	48,100		
Wages	7,800		
	55,900		
Bar profit	13,760		
	69,660		69,660
General expenses	17,440 W5	Bar profit	13,760
Rates	1,100	Tennis surplus	6,080 W2
Depreciation of furniture	500	Rugby surplus	180 W3
	19,040		
Surplus	980		
	20,020		20,020

Ridlingham Recreation Club

(b) **Balance sheet at 31 December 20X1**

	£	£		£
Fixed assets			Accumulated fund at 1 Jan.	68,680 W1
Clubhouse at cost		38,000	Add: Surplus	980
				69,660
Tennis courts at cost			Subscriptions in advance	10,800
less depreciation		35,200		
Furniture and equipment			Current liabilities	
at book value		4,500	Creditors: Bar purchases	4,300
		77,700	General expenses	640
Current assets				
Bar stocks	5,280			
Bank balance	2,420	7,700		
		85,400		85,400

W1 Accumulated fund	£
Assets	
Clubhouse	38,000
Tennis courts	24,000
Furniture and equipment	5,000
Bar stocks	4,400
Bank balance	1,500
	72,900
Less: Liabilities	
Creditors £3,720 + £500	4,220
	68,680

W2 Tennis section		
Tournament fees		240
10-year subscriptions		1,200*
Other subscriptions		6,400
Court fees		5,700
		13,540
Less: Repairs	£2,520	
Prizes	140	
Depreciation	4,800†	7,460
Surplus		6,080

W3 Rugby section		£
Subscriptions		1,300
Collections		180
		1,480
Less: Kit	£900	
Rental	£400	
		1,300
Surplus		180

W4 Bar purchases	
Payments	48,400
Less: Opening creditors	(3,720)
Add: Closing creditors	4,300
	48,980

W5 General expenses	
Payments	17,300
Less: Opening creditors	(500)
Add: Closing creditors	640
	17,440

*One-tenth of the ten-year tennis membership subscriptions is credited to the income and expenditure account; the remainder is reported in the balance sheet as subscriptions received in advance. The ten-year subscription might alternatively have been credited, in full, direct to the accumulated fund.

†(£40,000 × 10%) + (£16,000 × 10% × 0.5).

QUESTION 5.2

Blue Land plc – cash book

	£		£
Balance b/d	20,206	T Singh (error on original entry)	10,000
Bank interest	38	Lease	16,654
Transfer from investment account	100,000	Bank charges	730
		Balance c/d	92,860
	120,244		120,244

Bank reconciliation statement

	£	£
Balance as per bank statement		(28,949)
Add: Outstanding receipts		
Riolettan Inc	119,432	
Solway	9,371	
Trancing Ltd	10,000	
Clavern	4,237	
		143,040
		114,091
Less: Outstanding payments		
Busses Ltd (Cheque no. 10991)	1,496	
M Sand & Co (Cheque no. 10992)	8,500	
Auster (Cheque no. 10993)	11,235	
		(21,231)
Balance as per cash book		92,860

QUESTION 5.4 **Analysed cash book**

Day	Detail	Total	Sales	Sundry	Day	Detail	Total	Purchases	Wages	Sundry
		£	£				£	£	£	£
1	Sales	1,790	1,790		1	Balance b/d	6,510			
2	Sales	2,190	2,190		1	Purchases	2,250	2,250		
3	Sales	1,250	1,250		2	Wages	380		380	
	Sales of fixed asset	1,000		1,000	4	Interest	400			400
4	Sales	3,720	3,720		5	Purchases	3,140	3,140		
5	Sales	1,540	1,540		6	Wages	450		450	

6	Sales	2,710	2,710		6 Balance c/d	1,070			
6	Balance b/d	14,200	13,200	1,000		14,200	5,390	830	400
		1,070							

Note To agree the cross-statement of the payment columns, the opening and closing balances have to be subtracted from the total column as they do not have a corresponding entry in the analysis columns.

QUESTION 5.6

Sales day book

Day	*Details*	*Total*	*Typewriters*	*Stationery*	*Repairs*
		£	£	£	£
1	Gum Ltd	375	300	75	
	Glue Ltd	100			100
2	Stick Ltd	70		70	
3	Fast Ltd	450	450		
	Stick Ltd	50			50
		1,045	750	145	150

QUESTION 6.8

The accountant uses the trial balance:

(a) to check the accuracy of the entries in the ledger (but note that some of the errors are not revealed); and
(b) as the basis for preparing the trading and profit and loss accounts and balance sheet.

QUESTION 6.10

(i) **Error Co. Ltd – Journal**

		Dr.	*Cr.*
		£	£
(a)	Suspense account	1,000	
	Creditors control account		1,000
	Sum due to Zed omitted from control account		
(b)	Debtors control account	2,400	
	Sales account		2,400
	Correction of understated sales day book		
(c)	Discounts allowed account	4,890	
	Suspense account		4,890
	Discounts for June not posted to nominal ledger		

(d)	Purchases account	24,100	
	Accruals		24,100
	Invoice for goods in stock not invoiced at 30 June 20X2		
(e)	Sales account	1,920	
	Debtors control account		1,920
	Correction of wrong posting		

(ii) **Effect on profit for year**

	£
Decreases in profit:	
Discounts allowed (c)	4,890
Purchases omitted (d)	24,100
Cash posted to sales account in error (e)	1,920
	30,910
Increase in profit:	
Understated sales day book (b)	2,400
Reduction in profit	28,510

(iii) **Calculation of suspense account balance**

Suspense account

	£		£
Creditors control account (a)	1,000	Discounts allowed (c)	4,890
Original balance*	3,890		
	4,890		4,890

Note *Balancing figure.

QUESTION 6.12

(a) **Sales ledger control account, year ended 31 May 1991**

	£		£
Balance b/d	27,490	Discounts allowed	4,170
Sales	167,800	Cash and cheques rec'd	144,700
		Bad debts	1,730
		Set-offs	3,600
		Returns inwards	4,220
		Balance c/d	36,870
	195,290		195,290

(b) (i) **Purchase ledger control account, year ended 31 May 1991**

	£		£
Discounts received	3,910	Balance b/d	21,810
Cash and cheques paid	156,770	Purchases	175,510
Set-offs	3,600		

	Returns outwards	6,330		
	Balance c/d	26,710		
		197,320		197,320

(ii)

Item	Source
Discounts allowed	Cash book
Cash and cheques received	Cash book
Discounts received	Cash book
Cash and cheques paid	Cash book
Bad debts written off	Journal
Set-offs	Journal
Credit sales	Sales day book
Credit purchases	Purchases day book
Returns inwards	Returns inwards day book
Returns outwards	Returns outwards day book
Trade debtors at 1 June 1990	Debtors control account 31 May 1990
Trade creditors at 1 June 1990	Creditors control account 31 May 1990

ANSWER 6.14

1. (a)

Purchases day book

		Total	Appliances for resale	Repair materials	Tools
19X5		£	£	£	£
Jan.	Dee & Co.	337.74			337.74
	A. B. Supplies	528.20		528.20	
Feb.	Simpson	141.34		141.34	
	Cotton Ltd	427.40	427.40		
	Dee & Co.	146.82		146.82	
Mar.	A. B. Supplies	643.43		643.43	
	Simpson	95.60		95.60	
		2,320.53	427.40	1,555.39	337.74

(b)

Sales day book

		Total	Repair Work	Appliance Sales
19X5		£	£	£
Jan.	D. Hopkins	362.80	362.80	
	P. Bolton	417.10	417.10	
Feb.	G. Leivers	55.00		55.00
	M. Whitehead	151.72	151.72	
	N. John Ltd	49.14		49.14
	A. Linneker	12.53		12.53

Mar.	E. Horton	462.21	462,21	
	S. Ward	431.08	431.08	
	W. Scothem & Co.	319.12	319.12	
	N. Annable	85.41	85.41	
		2,346.11	2,229.44	116.67

2.

Cash book – receipts

1985		Disc All'd £	Total £	Debtors £	Sales Repair Work £	Sales Appliances £	Misc. £
Jan.	Capital		250.00				250.00
	Loan		2,000.00				2,000.00
	Sales – reps.		69.44		69.44		
Feb.	D. Hopkins	5.80	357.00	357.00			
	Sales – reps.		256.86		256.86		
Mar.	P. Bolton		417.10	417.10			
	G. Leivers		55.00	55.00			
	A. Linneker		12.53	12.53			
	S. Ward	5.08	426.00	426.00			
	Sales – reps.		182.90		182.90		
	Sales – appl's		112.81			112.81	
		10.88	4,139.64	1,267.63	509.20	112.81	2,250.00

Cash book – receipts

	Disc Re'd	*Total*	*Repair Mats.*	*Rent/ Rates*	*Stationery*	*Car Expenses*	*Sundries*	*Creditors*	*Drawings*	*Bank*
	£	£	£	£	£	£	£	£	£	£
January										
Cash purchases		195.29	195.29							
Rent		400.00		400.00						
Rates		150.00		150.00						
Stationery		32.70			32.70					
Car expenses		92.26				92.26				
Drawings		160.00							160.00	
February										
Cash purchases		161.03	161.03							
Sundries		51.54					51.54			
Car expenses		81.42				81.42				
Drawings		160.00							160.00	
March										
Dee & Co.	7.74	330.00						330.00		
A. B. Supplies		528.20						528.20		
Simpson	3.34	138.00						138.00		
Cotton Ltd		130.00						130.00		

Dee & Co.	6.82	140.00						140.00		
Cash purchases		22.06	22.06							
Sundries		24.61					24.61			
Car expenses		104.52				104.52				
Transfer to bank		500.00								500.00
Drawings		160.00							160.00	
	17.90	3,561.63	378.38	550.00	32.70	278.20	76.15	1,266.20	480.00	500.00
Balance c/d		578.01								
		4,139.64								

3.

Creditors ledger control account

	£		£
Cash book – payments	1,266.20	Purchases day book	2,320.53
Cash book – disc. rec'd	17.90		
Balance c/d	1,036.43		
	2,320.53		2,320.53

Sales ledger control account

	£		£
Sales day book	2,346.11	Cash book – receipts	1,267.63
		Cash book – discs. all'd	10.88
		Balance c/d	1,067.60
	2,346.11		2,346.11

4.

Sales account

	Repairs £	Appl's £		Repairs £	Appl's £
Balance to trading a/c	2,738.64	229.48	Sales day book	2,229.44	116.67
			Cash book	509.20	112.81
	2,738.64	229.48		2,738.64	229.48

Cost of sales account

	Repairs £	Appl's £		Repairs £	Appl's £
Purchase day book	1,555.39	427.40	Tfr to trading a/c	1,242.75	106.82
Cash book	378.38		Stock c/d	691.02	320.58
	1,933.77	427.40		1,933.77	427.40

5.

Trading account for the three months to 31 March 19X5

	Repairs £	Appliances £	Total £
Sales	2,738.64	229.48	2,968.12
Less: Cost of sales	1,242.75	106.82	1,349.57
Gross profit	1,495.89	122.66	1,618.55

6.

General profit and loss account for the three months to 31 March 19X5

	£	£
Gross profit		1,618.55
Discounts received		17.90
		1,636.45
Less:		
Rent	200.00	
Rates	150.00	
Stationery	32.70	
Car expenses	278.20	
Sundries	76.15	
Loan interest	50.00	
Depreciation: Car	100.00	
Tools	37.74	
Discounts allowed	10.88	
		935.67
Net profit		700.78

7.

Balance sheet at 31 March 19X5

	£	£	£
Fixed assets	CAR	TOOLS	TOTAL
At cost	700.00	337.74	1,037.74
Less: Depreciation	100.00	37.74	137.74
	600.00	300.00	900.00
Current assets			
Stock of repair materials		691.02	
Stock of appliances		320.58	
Debtors		1,067.60	
Bank		500.00	
Cash		578.01	
Prepaid rent		200.00	
		3,357.21	
Credit liabilities			
Creditors	1,036.43		
Accrued interest	50.00		
		1,086.43	
			2,270.78
			3,170.78
LESS: Loan			2,000.00
			1,170.78
Financed by:			
Capital introduced			950.00

Plus: Profit	700.78
	1,650.78
Less: Drawings	480.00
	1,170.78

QUESTION 7.2

(a)

Fixed assets at cost

	£		£
1 Jan. X1 Asset A	5,000	31 Dec. X1 Balance c/d	7,500
Asset B	2,500		
	7,500		7,500
1 Jan. X2 Balance b/d	7,500	1 Jan. X3 Disposal of asset B	2,500
1 Feb. X3 Asset C	7,000	Balance c/d	12,000
	14,500		14,500

Accumulated depreciation

	£		£
31 Dec. X2 Balance c/d	3,000	31 Dec. X1 Profit and loss	1,500
		31 Dec. X2 Profit and loss	1,500
	3,000		3,000
1 Jan. X3 Disposal of asset B	1,000	1 Jan. X3 Balance b/d	3,000
31 Dec. X3 Balance c/d	4,400	31 Dec. X3 Profit and loss	2,400
	5,400		5,400

Disposal of fixed assets

	£		£
1 Jan. X3 Fixed assets	2,500	1 Jan. X3 Depreciation	1,000
		Proceeds	900
		Profit and loss	600
	2,500		2,500

(b) **Balance sheet extracts**

	31 Dec. X1	31 Dec. X2	31 Dec. X3
	£	£	£
Fixed assets at cost	7,500	7,500	12,000
Less: Accumulated depreciation	1,500	3,000	4,400
Written-down value	6,000	4,500	7,600

QUESTION 7.4

(a)

Motor vehicles at cost account

	£		£
Balance per trial balance	127,000	Van scrapped (1)	2,000
Disposals – trade in (2)	1,500	Disposal – car (2)	5,000

Disposal of van (4)	2,500	Disposal – car (3)	4,000
		Disposal – van (4)	10,000
		Balance c/d	110.000
	131,000		131,000

Motor vehicles depreciation account

	£		£
Van scrapped (1)	2,000	Balance per trial balance	76,000
Disposal – car (2)	3,000	Profit and loss	
Disposal – car (3) (W1)	2,750	Account – charge for	
Disposal – van (4) (W2)	6,750	20X3	25,000
Balance c/d	86,500		
	101,000		101,000

Disposal of motor vehicles account

	£		£
Car at cost (2)	5,000	Balance per trial balance	1,600
Car at cost (3)	4,000	Trade-in allowance (2)	1,500
Van at cost (4)	10,000	Depreciation (2)	3,000
		Depreciation (3) (W1)	2,750
		Proceeds on sale of van (4)	2,500
		Depreciation (4) (W2)	6,750
		Loss on disposal of vehicles transferred to profit and loss account	900
	19,000		19,000

W1 Disposal of car
Using the formula:
Written down value = Cost – Accumulated depreciation
then 1,250 = 4,000 – Accumulated depreciation
∴ Accumulated depreciation = £2,750

W2 Disposal of delivery van
Using the formula:
Proceeds – (Cost – Accumulated depreciation) = Profit (loss) on disposal
then 2,500 – (10,000 – Accumulated depreciation) = (750)
∴ Accumulated depreciation = £6,750

(b) **Balance sheet extract at 31 December 20X3**

	£
Motor vehicles at cost	110,000
Less: Accumulated depreciation	86,500
	23,500

Note The number in brackets after some of the entries in the accounts refers to the number of the note given in the question on which the entry is based.

QUESTION 7.6

(a) Journal Entries

(i)	DR.	Zeta Limited's purchase ledger balance	1,080	
	CR.	Zeta Limited's sales ledger balance		1,080
		Being contra entries in relation to Zeta Limited's		
(ii)	DR.	Bad debt expense	3,590	
	CR.	Sales ledger: P		840
		Q		120
		R		360
		S		2,090
		T		180
		Being write-off of debtor balances.		
(iii)	DR.	Bad debt expense	2,140	
	CR.	Provision for doubtful debts		2,140
		Being increase in the doubtful debt provision.		
(iv)	DR.	Vau Limited's sales ledger balance	200	
	CR.	Tau Limited's sales ledger balance		200
		Being correction of sales ledger account misposting.		

(b)

Debtors:	£
Balance b/f	384,600
Purchase ledger debit balances	1,860
Zeta contra	(1,080)
Bad debt write-off	(3,590)
	381,790
Less: Provision for doubtful debts	(5,200)
	376,590

Creditors:	
Balance b/f	222,230
Sales ledger credit balances	2,900
Zeta contra	(1,080)
Total creditors	224,050

Of which: £196,050 payable within one year
£28,000 payable after more than one year

QUESTION 8.2 (a)

Bank account for 20X3

	£		£
Bank balance for 1 Jan. 20X3	19,400	General expenses	2,500
Receipts	76,500	Cost of properties	85,250
		Legal expenses on purchases	2,550
		Legal expenses on sales	1,250
		Improvements	1,780
		Closing balance	2,570
	95,900		95,900

(b) **Profit and loss account for 20X3***

	£	£
Sales		107,750
Less: Cost of properties sold:		
No.1	30,250	
3 36,250+1,000+260	37,510	
4 24,000+750+1,000	25,750	
	93,510	
Selling expenses	1,250	
General expenses	2,500	
Net profit		97,260
		10,490

Balance sheet at 31 December 20X3

	£	£
Properties at hand:		
2		29,350
5 25,000+800+520		26,320
		55,670
Debtors	31,250	
Bank balance	2,570	
		33,820
		89,490
Opening capital		79,000
Profit		10,490
		89,490

*An alternative presentation;	£	£
Sales		107,750
Opening stock	59,600	

Purchases (including legal expenses,		
on purchase and improvements)	89,580	
Closing stock	(55,670)	93,510
Gross profit		14,240
Less: Legal expenses on sales	1,250	
General expenses	2,500	3,750
Net profit		10,490

QUESTION 8.4

		£	£
(a)	Goodwill		
	Price paid		120,000
	Less: Net assets acquired		
	Fixed assets	71,500	
	Stocks	20,000	
	Debtors	10,000	
		101,500	
	Deduct trade creditors	5,000	96,500
			23,500
(b)	Goodwill at cost		23,500
	Less: Amount written off (£23,500 ÷ 5)		4,700
			18,800

QUESTION 8.6

(a) (i) **Profit Statement January–March 1994: marginal cost basis**

	January	February	March
	£	£	£
Sales (£21 per unit)	8,400	9,450	10,920
Less: Variable manufacturing			
cost (£12 per unit)	5,400	5,760	6,000
Opening stock	–	600	960
Closing stock	(600) W1	(960) W2	(720) W3
	4,800	5,400	6,240
Manufacturing overheads	1,800	1,800	1,800
Total manufacturing cost	6,600	7,200	8,040
Gross profit	1,800	2,250	2,880
Fixed admin. expenses	600	600	600
Net profit	1,200	1,650	2,280

(ii) **Profit Statement January–March 1994: total cost basis**

	January	February	March
	£	£	£
Sales (£21 per unit)	8,400	9,450	10,920
Less: Variable manufacturing cost (£12 per unit)	5,400	5,760	6,000
Manufacturing overheads	1,800	1,800	1,800
	7,200	7,560	7,800
Opening stock	–	800	1,260
Closing stock	(800) W4	(1,260) W5	(936) W6
	6,400	7,100	8,124
Gross profit	2,000	2,350	2,796
Fixed admin. expenses	600	600	600
Net profit	1,400	1,750	2,196

W1 450 (production) − 400 (sales) = 50 × £12 = 600.

W2 50 + 480 (production) − 450 (sales) = 80 × £12 = £960.

W3 80 + 500 (production) − 520 (sales) = 60 × £12 = £720.

W4 £600 + [50(stock)/450 (production) × £1,800 (manufacturing overheads)] = £800.

W5 £960 + (80/480 × £1,800) = £1,260.

W6 £720 + (60/500 × £1,800) = £936.

(b) The valuation of stock based on the marginal costing approach results in the inclusion of only the variable manufacturing cost per unit of £12. The absorption costing approach requires the inclusion of a fair proportion of manufacturing overheads in the stock valuation.

For example, in the month of January, 400 units were produced for sale and 50 units for stock. In other words, 50 of the 450 units, or one-ninth of total production, remained in stock at the end of January, and so one-ninth of the manufacturing overheads of £1,800 (i.e. £200) must be included in the valuation of stock, producing an absorption cost valuation of £800 compared with a marginal cost valuation of £600.

The outcome is that additional expenditure amounting to £200 is carried forward under the total cost method, and the net profit for that month is therefore £200 higher than under the marginal cost approach. This situation will continue so long as production exceeds sales, with the result that the level of stock and related overheads carried forward increases. This happens in the month of February. In the month of March, however, the stock level is reduced and the relative profit levels reversed; the reason is that, with the level of stocks reduced, the amount of overheads *carried forward* under the total cost approach is less than the level of overheads *brought forward.*

QUESTION 8.8

(a) (i) **LIFO basis – stock card**

	Receipts			*Issues*			*Balance*		
	Units	Price	Total	Units	Price	Total	Units	Price	Total
		£	£		£	£		£	£
1 June	1,500	90	135,000				1,500	90	135,000
June				340	90	30,600			
July				700	90	63,000	460	90	41,400
1 Aug.	2,000	92	184,000				2,000	92	184,000
August				800	92	73,600			
Sept.				450	92	41,400	460	90	41,400
							750	92	69,000
1 Oct.	3,000	93	279,000				3,000	93	279,000
Oct.				900	93	83,700			
Nov.				630	93	58,590	460	90	41,400
							750	92	69,000
							1,470	93	136,710
	6,500		598,000	3,820		350,890	2,680		247,110

(ii) **FIFO basis**

Receipts	6,500
Issues	3,820
Balance	2,680 units

Balance of stock valued at most recent prices:

Stock £93 × 2,680 = £249,240

Trading account June–November 1992

	FIFO	*LIFO*
	£	£
Sales: £140 × 1,040	145,600	
£144 × 2,150	309,600	
£145 × 630	91,350	
	546,550	546,550
Purchases	598,000	598,000
Closing stock	249,240	247,110
Cost of goods sold	348,760	350,890
Gross profit	197,790	195,660

There is no need to prepare a full stock card in order to discover the cost of sales under FIFO. The balance of stock should always be valued at most recent purchase price and the cost of goods sold can then be discovered by deducting closing stock from purchases.

(b) The use of LIFO as the basis of stock valuation does not mean that Mr Hart is left with the oldest intake of stock at the end of the period. LIFO is merely an assumption made in order to facilitate the valuation of stock for the purpose of calculating profit. The actual items remaining in stock is, to a great extent, a matter of chance depending upon which items happen to have been issued during the period.

QUESTION 8.10

(a) (i) *Down.* LIFO uses older prices than FIFO and gives a higher value for the same volume of goods. Also net realizable value at 31 December 20X1 is lower than the FIFO value calculated on the basis of purchases immediately prior to the year end.

(ii) *Up.* FIFO values stock at the most recent purchase price, and this is higher than the LIFO value.

(b) *LIFO* gives the highest value for closing stock and hence the lowest value for cost of goods sold.

(c) *Lower of FIFO and net realizable value.* Cost of goods sold is calculated by applying the formula

Opening stock + Purchases − Closing stock

Cost of goods sold will be lowest, and hence profit highest, when closing stock is greater than opening stock, and the difference between them is maximized.

(d) *LIFO.* This method gives the lowest stock value at 31 December 20X3, and hence the highest cost of goods sold figure for the three-year period.

Answers (b)–(d) may alternatively be based on the following calculations:

	20X1	*20X2*	*20X3*	*Totals*
LIFO	£	£	£	£
Opening stock	–	96,480	87,360	–
Purchases	240,000	252,000	324,000	816,000
Closing stock	(96,480)	(87,360)	(100,320)	(100,320)
Cost of goods sold	143,520	261,120	311,040	715,680
FIFO				
Opening stock	–	96,000	86,400	–
Purchases	240,000	252,000	324,000	816,000
Closing stock	(96,000)	(86,400)	(105,600)	(105,600)
Cost of goods sold	144,000	261,600	304,800	710,400

Lower of FIFO and net realizable value				
Opening stock	–	88,800	81,600	–
Purchases	240,000	252,000	324,000	816,000
Closing stock	(88,800)	(81,600)	(105,600)	(105,600)
Cost of goods sold	151,200	259,200	300,000	710,400

QUESTION 8.12

(a) **Trading account for 20X1**

	£	£
Sales		100,000
Less: Opening stock	10,000	
Purchases	80,000	
Closing stock	(11,000)	
Cost of goods sold		79,000
Gross profit		21,000

(b) The effect of the revision is to reduce gross profit and, therefore, net profit by £3,000.

QUESTION 8.14

(a) (i) The LIFO method of stock valuation assumes that the most recent items purchased or produced are issued first. If items were purchased in January, February and March then under this method the March items would be issued first, followed by February and then January's purchases.

(ii) Three methods of stock valuation that are acceptable under SSAP 9 are:
FIFO, which assumes that the oldest items purchased of produced are issued first. This is acceptable as stock is valued at current prices.
Average cost, which assumes that any stock item is likely to be issued next and so a weighted average cost is calculated. This is acceptable as it is a more realistic situation.
Unit cost, which values stock at the amount it cost to produce or purchase. This is acceptable as it uses historic cost as the basis of valuation.
LIFO is not acceptable as it values stock at out-of-date prices and therefore current assets would be understated.

(iii) Finished goods stock would include cost of materials, direct labour and production overheads (allocated according to normal levels of production).

(b) (i) LIFO

Date	Narrative	No. of Units	Unit Cost £	Items in stock	Stock Value £
28 Feb	Stock b/f	4,000	12	4,000 @ £12	48,000
8 Mar	Issues	3,800	15	4,000 @ £12 3,800 @ £15	105,000
12 Mar	Sale	(3,800) (1,200)	15 12	2,800 @ £12	33,600
18 Mar	Sale	(2,000)	12	800 @ £12	9,600
22 Mar	Issues	6,000	18	800 @ £12 6,000 @ £18	118,400
24 Mar	Sale	(3,000)	18	800 @ £12 3,000 @ £18	63,600
28 Mar	Sale	(2,000)	18	800 @ £12 1,000 @ £18	27,600

(ii) Average cost

Date	Narrative	No. of Units	Unit Cost £	Items in Stock	Weighted Average £
28 Feb	Stock b/f	4,000	12.00	4,000 @ £13.00	52,000
8 Mar	Issues	3,800	15.00	7,800 @ £13.97	108,966
12 Mar	Sale	(5,000)	13.97	2,800 @ £13.97	39,116
18 Mar	Sale	(2,000)	13.97	800 @ £13.97	11,176
22 Mar	Issues	6,000	18.00	6,800 @ £17.53	119,204
24 Mar	Sale	(3,000)	17.53	3,800 @ £17.53	66,614
28 Mar	Sale	(2,000)	17.53	1,800 @ £17.53	31,554

8 Mar

4,000 × £13	52,000	
3,800 × £15	57,000	
7,800	109,000	Average cost (109,000/7,800 = £13.97)

22 Mar

800 × £13.97	11,176	
$\frac{6,000}{6,800} \times$ £18	108,000	
119,176		Average cost (119,176/6,800 = £17.53)

QUESTION 9.2

Trading and profit and loss account, year to 31 December 20X4

	£	£
Sale (200,000 + 6,400 + 5,460)		211,860
Purchases: 160,000 (bank)		
2,500 (cash)		
3,800 (creditors)		
– 2,260 (drawings)		
	164,040	
Less: Closing stock	9,200	
Cost of goods sold		154,840
Gross profit		57,020
Less:		
Rent and rates (3,500 – 100)	3,400	
Light and heat (1,260 + 140)	1,400	
Depreciation (19,000 – 3,000)/5	3,200	
Wages	17,000	
Petrol	2,000	
Maintenance	1,000	
Advertising	900	
Net profit		28,900
		28,120
Appropriation:		
Minute	14,060	
Second	14,060	
		28,120

Balance sheet at 31 December 20X4

	£	£	£
Van: Cost			19,000
Depreciation			3,200
			15,800
Current assets			
Stock		9,200	
Debtors			5,460
Prepaid rent			100
Cash		5,240	
		20,000	

Current liabilities			
Trade creditors	3,800		
Accrued light and heat		140	
		3,940	
Working capital			16,060
			31,860
	Second	Minute	
Capital accounts	20,000	20,000	40,000
Current accounts:			
Profit	14,060	14,060	
Drawings: Cash	(18,000)	(16,000)	
Stock	(1,000)	(1,260)	
	(4,940)	(3,200)	(8,140)
			31,860

QUESTION 9.4

(a)

		£	£
1.	Sales account	3,000	
	Debtors ledger control account		3,000
2.	Provision for bad debts account*	400	
	Profit and loss account		400

* (153,000 – 3,000 [error 1]) × 2% = 3,000
3,400 – 3,000 = 400 reduction in provision

(b)

	£
Net profit	95,000
Journal 1	(3,000)
Journal 2	400
Adjusted profit	92,400

(c)

	Amir	Barry	Total
	£	£	£
Profit			92,400
Interest on drawings	1,900	3,500	5,400
			97,800
Less: interest on capital	8,400	6,000	14,400
			83,400
Salary	10,000	13,000	23,000
			60,400
Residual profit	36,240	24,160	60,400

(d) **Current accounts**

	Amir	Barry		Amir	Barry
	£	£		£	£
Interest	1,900	3,500	Balance b/d	250	1,240
Drawings	37,000	40,400	Interest	8,400	6,000
Balance c/d	15,990	500	Salary	10,000	13,000
			Residue	36,240	24,160
	54,890	44,400		54,890	44,400

Lincoln plc **QUESTION 10.2**

Profit and loss account period ending 31 December 1992

	£000	*£000*
Turnover		5,000
Less: Returns inwards		(100)
		4,900
Opening stock	300	
Purchases (Note 1)	2,240	
	2,540	
Less: Closing stock	(400)	
Cost of goods sold		2,140
Gross profit		2,760
Discounts received		10
Gain on redemption of debentures ($800 \times \frac{1}{2}$) – 380		20
		2,790
Operating expenses	1,300	
Discounts allowed	20	
Depreciation (Note 2)	125	
Compensation payment	50	
Debenture interest paid and accrued (60 + ($\frac{1}{2} \times 60$))	90	
		(1,585)
		1,205
Dividends: Interim	100	
Final	110	
		(210)
Retained profit for the year		995
Retained profit brought forward		200
Retained profit carried forward		1,195

Lincoln plc
Balance sheet as at 31 December 1992

	£000	£000	£000
Fixed assets:			
Land			1,500
Property		800	
Accumulated depreciation		(216)	584
Machinery		1,600	
Accumulated depreciation		(609)	991
			3,075
Current assets:			
Stock		400	
Debtors		1,000	
Owing from director		10	
		1,410	
Creditors: amounts falling due within one year			
Overdraft	30		
Creditors	400		
Proposed dividends	110		
Accrued interest	30		
		(570)	
Net current assets (working capital)			840
Total assets less current liabilities			3,915
Creditors: amounts falling due after more than one year			
15% Debentures			(400)
			3,515
Share capital and reserves:			
Share capital			1,100
Share premium (0.6 × 200) + 500			620
Revaluation reserve (1,500 – 900)			600
Profit and loss account			1,195
			3,515

Note 1:	Purchases:		
	As per question	2,400	
	Less: returns	(150)	
	Private use	(10)	
		2,240	
Note 2:	Depreciation:		
	Cost		1,600
	Less cost of fully depreciation items		(160)
			1,440

Accumulated depreciation	500
Less fully depreciated items (160 – 10)	(150)
	350

Net book value of items on which depreciation is to be calculated:

(1,440 – 350) = 1,090 × 10% Depreciation rate =	£109
Depreciation on property (800 × 2%)	£ 16
Total depreciation	£125

Note 3: Elimination of suspense account

Suspense Account

	£000		£000
Balance b/d	210	Compensation payment	50
Issue of shares	220	Redemption of debentures	380
	430	Dissolution expenses	430

QUESTION 10.4

Profit and loss account year ended 31 March 20X6

	£	£
Gross profit		1,020,800
Less: Administration expenses	216,900	
Selling expenses	150,400	
Bad debts written off	8,700	
General repairs and maintenance	25,200	
Debenture interest	30,000	
Depreciation (25% of (£1,300,000 – £512,000))	197,000	628,200
Net profit before tax		392,600
Corporation tax		150,000
Net profit after tax		242,600
Less: Proposed dividend		75,000
Retained profit for the year		167,600
Retained profit at 1 April 19X5	1,039,000	
Less: Bonus issue	1,000,000 W1	39,000
Retained profit at 31 March 19X6		206,600

Balance sheet as at 31 March 20X6

Fixed assets	£	£	£
Freehold land and buildings at valuation			900,000
Plant and machinery at cost		1,420,000 W2	
Accumulated depreciation to April 20X5		512,000	
Charge for current year	197,000	709,000	711,000
			1,611,000

Current assets			
Stock and work in progress			984,020
Debtors and prepayments	370,080		
Less: Provision for doubtful debts	15,000	355,080	
Bank balance	268,000		
		1,607,100	
Less: current liabilities			
Creditors and accrued expenses		471,500 W2	
Debenture interest outstanding		15,000	
Proposed dividend		75,000	
Corporation tax due 1 Jan. 20X7		150,000	
		711,500	
Net current assets			895,600
Total assets less current liabilities			2,506,600
Less: 10% debentures repayable 20X9			300,000
			2,206,600
Financed by:			
Ordinary share capital: Authorized			2,000,000
Issued (£1 shares)			1,500,000
Revaluation reserve			500,000
Retained profit			206,600
			2,206,600

W1 The directors could alternatively choose to make part of the bonus issue from revaluation reserve.

W2 Includes £120,000 for plant delivered on 31 March 20X6.

QUESTION 10.6

(a) **Profit and loss account year ended 31 December 20X9**

	£	£
Gross profit on trading		416,500
Less: Rent and rates (£30,000 – £6,000)	24,000	
Office salaries	142,600	
Advertising costs	21,000	
Transport costs	23,600	
Depreciation	37,500	248,700
Net profit before tax		167,800
Taxation		83,900
Net profit after tax		83,900
Retained profit at beginning of year		278,500
Less: Bonus issue	100,000	178,500
Retained profit at end of year		262,400

Balance sheet at 31 December 20X9

	£	£
Freehold property at valuation		650,000
Furniture and equipment at cost	375,000	
Less: Accumulated depreciation (£59,500 + £37,500)	97,000	278,000
		928,000
Current assets		
Stock and work in progress	104,200	
Debtors and prepayments (£105,000 + £6,000)	111,000	
Deposit	10,000	
Temporary investment	60,000	
Balance at bank	72,000	
	357,200	
Current liabilities		
Creditors and accruals		85,300
Taxation due 1 Jan. 20Y0	103,600	
1 Jan. 20Y1	83,900	
	272,800	
Working capital		84,400
		1,012,400
Financed by:		
Ordinary share capital (£500,000 + £100,000)		600,000
Revaluation reserve		150,000
Profit and loss account		262,400
		1,012,400

(b) A dividend of 10p per share on the revised share capital of £600,000 would involve a payment of £60,000. There is no doubt that the bank balance at 31 December 20X9 appears sufficient to support this payment, and the after-tax profits for the year are £83,900. Consideration must, however, be given to the company's future commitments. During January 20Y0, a tax payment of £103,600 must be made as well as £40,000 for the new equipment when delivery takes place. This would suggest that bank overdraft facilities will be required during January even if no dividend is paid, although the position would be partially alleviated by the sale of the temporary investment. Funds generated from trading operations during 20X9 amounted to £205,300 (profit £167,800 and depreciation £37,500), and this should soon make good any cash shortage if the results are repeated during 20Y0. Nevertheless a dividend payment of £60,000 is probably unwise at this stage.

QUESTION 10.8

(a) FRS 3 introduced the requirement to disclose separately the results of continuing and discontinued operations and acquisitions. The separate disclosure is from turnover down to operating profit.

This separate disclosure is designed to assist the user in analysing the performance of the business in that more information is given regarding the operating activity of the business than was previously made available. The user is now able to see the impact on operations of acquisitions and discontinued operations, which enables an assessment to be made of these events on the future performance of the business.

(b) **Leonardo Limited**

Profit and loss account period ending 30 September 19X8

	£000	*£000*
Turnover		6,840
Cost of goods sold (1,200 + 3,670 − 950 + 68)		(3,988)
Gross profit		2,852
Distribution costs		(880)
Administrative expenses (450+590)		(1,040)
Operating profit		932
Profit on sale of head office		1,200
Cost of fundamental reorganization		(560)
Profit before interest		1,572
Interest payable		(300)
Profit before taxation		1,272
Tax		(300)
Profit for the financial year		972

QUESTION 11.2

Tufton Ltd

Cash flow statement for 20X1

	£	£
Net cash flow from operating activities (note 1)		314,200
Returns on investment and servicing of finance:		
Debenture interest paid		(30,000)
Taxation		–
Capital expenditure and financial investment:		
Purchase of property	(50,000)	
Purchase of plant (note 2)	(528,600)	
Sale of plant	169,500	
		(409,100)
Equity dividends paid		(50,000)
Financing:		
Issue of debentures		100,000
Decrease in cash (note 3)		(74,900)

Note 1: Net cash flow from operating activities	£
Retained profit for the year (427.1 − 395.8)	31,300
Add: Bonus issue of shares	100,000

Dividends	60,000
Debenture interest (10% × 300,000)*	30,000
Profit before interest	221,300
Adjustments:	
Depreciation†	295,600
Loss on sale of fixed assets (169.5–202.5)	33,000
Increase in stock	(281,200)
Decrease in debtors	17,800
Increase in creditors	27,700
	314,200

* Assumed that the issue of debentures was made at the start of the year.

† Depreciation for the year;

Opening balance	263,500
Less; Depreciation on disposed asset (390 – 202.5)	(187,500)
Add: Depreciation for year (bal. fig.)	295,600
Closing balance	371,600

Note 2: Purchase of plant	£
NBV Balance b/d forward from 20X0	394,800
Less: Disposal at NBV	(202,500)
Depreciation for year	(295,600)
Purchase of plant (bal. fig.)	528,600
NBV Balance at end of 20X1	425,300

Note 3: Reconciliation of movement in cash	£
Bank balance at end of 20X0	38,000
Decrease in bank during year (bal. fig)	(74,900)
Bank balance at end of 20X1	(36,900)

jordin plc **QUESTION 11.4**

Cash flow statement for 1997

	£	£
Net cash flow from operating activities (note 1)		102,000
Returns on investment and servicing of finance:		
Debenture interest paid		(16,000)
Taxation:		
Tax paid		(18,000)
Capital expenditure and financial investment;		
Purchase of fixed asset		(110,000)
Equity dividends paid (note 2)		(28,000)

Financing:		
Issue of shares (note 3)	40,000	
Repayment of debentures	(40,000)	–
Decrease in cash (note 4)		(70,000)

Note 1:	Net cash flow from operating activities*	£
	Profit before interest and tax	86,000
	Adjustments:	
	Depreciation (666,000 – 624,000)	42,000
	Decrease in stock	3,000
	Increase in debtors	(38,000)
	Increase in creditors	9,000
		102,000

*Assumed that debenture interest paid before redemption took place.

Note 2:	Equity dividends paid	£
	Balance b/d forward from 1996	16,000
	Dividends for 1997	24,000
	Less: Balance c/f from 1997	(12,000)
	Dividends paid	28,000

Note 3:	Cash flow from issue of shares	£
	Increase in share capital	30,000
	Increase in share premium	10,000
		40,000

Note 4:	Reconciliation of movement in cash	£
	Bank balance at end of 1996	56,000
	Decrease in bank during year (bal. fig)	(70,000)
	Bank balance at end of 1997	(14,000)

QUESTION 12.2

(a) 31 December

	20X5	20X6
	£	£
Current assets	90,000	120,000
Less; Current liabilities	45,000	55,500
Working capital	45,000	64,500
Working capital ratio	2 : 1	2.16 : 1

(b) 31 December 20X6

	£
Current assets per balance sheet	120,000
Current liabilities, assuming a working capital ratio of 2 : 1	60,000
Current liabilities per balance sheet	55,500
Maximum permissible dividend	4,500

(c) The directors have made an additional net investment of £31,500 in fixed assets, but this is amply covered by the retained profits of £46,500 (£51,000 – dividend of £4,500) and the working capital ratio has been maintained at 2 : 1.

The financial policy pursued by the directors appears a little less sound when we look at the cash position. The heavy investment in stock has been at the expense of cash; debtors have also increased, but at a rate that is not unreasonable in relation to the other changes.

QUESTION 12.4

(a) Calculation of eight ratios:

Any eight of the following are acceptable.

	Zeta	Omega
Profitability:		
Gross profit margin $\frac{\text{Gross profit}}{\text{Sales}} \times 100\%$	$\frac{1{,}000}{4{,}000} \times 100\% = 25\%$	$\frac{1{,}200}{6{,}000} \times 100\% = 20\%$
Net profit margin $\frac{\text{Net profit}}{\text{Sales}} \times 100\%$	$\frac{500}{4{,}000} \times 100\% = 12.5\%$	$\frac{400}{6{,}000} \times 100\% = 6.7\%$
Return on capital employed $\frac{\text{Profit before interest and tax}}{\text{Capital employed}} \times 100\%$	$\frac{510}{1{,}950} \times 100\% = 26.2\%$	$\frac{800}{6{,}890} \times 100\% = 11.6\%$
Return on equity $\frac{\text{Profit before tax}}{\text{Share capital and reserves}} \times 100\%$	$\frac{500}{1{,}950} \times 100\% = 25.6\%$	$\frac{400}{6{,}890} \times 100\% = 5.8\%$
Asset turnover $\frac{\text{Sales}}{\text{Capital employed}}$	$\frac{4{,}000}{1{,}950} = 2.1$ times	$\frac{6{,}000}{6{,}890} = 0.9$ times
Liquidity:		
Current ratio $\frac{\text{Current assets}}{\text{Current liabilities}}$	$\frac{1{,}350}{1{,}200} = 1.1 : 1$	$\frac{1{,}880}{990} = 1.9 : 1$
Quick ratio $\frac{\text{Current assets – stock}}{\text{Current liabilities}}$	$\frac{950}{1{,}200} = 0.8 : 1$	$\frac{1{,}080}{990} = 1.1 : 1$
Gearing $\frac{\text{Long-term loans}}{\text{Capital}} \times 100\%$	$\frac{\text{Nil}}{1{,}950} = \text{nil}$	$\frac{4{,}000}{6{,}890} \times 100\% = 58\%$
Interest cover $\frac{\text{Profit before interest and tax}}{\text{Interest charges}}$	$\frac{510}{10} = 51$ times	$\frac{800}{400} = 2$ times

Working capital management		
Debtors days		
$\frac{\text{Trade debtors}}{\text{Sales}} \times 365$ days	$\frac{800}{4{,}000} \times 365 = 73$ days	$\frac{900}{6{,}000} \times 365 = 55$ days
Creditors days		
$\frac{\text{Trade creditors}}{\text{Purchases}} \times 365$ days	$\frac{800}{3{,}200} \times 365 = 91$ days	$\frac{800}{4{,}800} \times 365 = 61$ days
Stock turnover in days		
$\frac{\text{Average stock}}{\text{Cost of sales}} \times 365$ days	$\frac{300}{3{,}000} \times 365 = 37$ days	$\frac{800}{4{,}800} \times 365 = 61$ days

(b) ***Profitability.*** Zeta has a higher gross margin than Omega: this may be because of a different pricing policy. Zeta has a higher net margin than Omega: Omega's expenses are higher than Zeta's with a significantly higher interest charge. Zeta has a higher return on capital than Omega: Zeta's asset base is much lower than that of Omega.

Liquidity. The liquidity position of Omega is much healthier than Zeta's, with current assets being nearly twice as much as current liabilities. Zeta's position is quite poor with a lower current ratio and an even lower quick ratio. Nearly half of Zeta's current assets are in the form of stock, with the remainder being made up of debtors. The company has no cash at hand and so is relying on the sale of stock and receipts from debtors to improve its liquidity.

Working capital management. The stock turnover period for Zeta is much quicker than for Omega but this efficiency is being lost in that the number of days it takes them to collect their debts is more than 60. This lack of efficiency has an effect on the company's cash position which affects its ability to pay creditors. This is highlighted in the creditor days calculation, where it is taking Zeta 91 days to pay its debts. This could have an adverse effect on their relationship with suppliers and will do little to help their credit rating.

(c) Omega is highly geared, with over half its capital employed being in the form of debt. Debt has to be financed in the form of interest and capital repayments which makes the company vulnerable should profits begin to fall. Zeta is entirely financed by share capital and so no fixed return is required.

QUESTION 12.6

(a)

	Hot Ltd		Cold Ltd	
	Year 1	Year 2	Year 1	Year 2
	£	£	£	£
Profit before finance charges	110,000	190,000	110,000	190,000
Loan interest	30,000	30,000	75,000	75,000
Profit before tax	80,000	160,000	35,000	115,000
Corporation tax	40,000	80,000	17,500	57,500
Profit after tax	40,000	80,000	17,500	57,500
Dividends	40,000	80,000	17,500	57,500

	Hot Ltd		Cold Ltd	
	Year 1	Year 2	Year 1	Year 2
(b) Return on ordinary shareholder's capital	10%	20%	7%	23%

(c) Changes in the relative performance of the companies over the two-year period are explicable in terms of the financial effects of gearing. Cold Ltd is relatively highly geared and a disproportionately large slice of the company's earnings is required to finance debt capital when profits are low. In year 1 the pre-tax return on long-term capital is 11 per cent (£110,000/ £1,000,000 × 100) but the interest rate payable on loans is 15 per cent, producing a pretax return of only 7 per cent for the shareholders of Cold Ltd. This may be contrasted with Hot Ltd, where the claims of the debenture holders are far less and so the ordinary shareholders get more, in this case 10 per cent. This position alters as profits rise. Additional profits of £80,000 represent a return of 10 per cent on the investment made by the shareholders of Hot Ltd but 16 per cent on the shareholders of Cold Ltd's investment. Therefore, the return to the ordinary shareholders of Hot Ltd increases at only a slightly faster rate than profits before finance charges, whereas the return earned for the shareholders of Cold Ltd increases three times as quickly.

QUESTION 12.8

(a) **Calculation of ratios:**

	Emerald	Garnet
Current ratio		
$\frac{\text{Current assets}}{\text{Current liabilities}}$	$\frac{680}{380} = 1.79 : 1$	$\frac{510}{520} = 0.98 : 1$
Quick ratio		
$\frac{\text{Current assets – stock}}{\text{Current liabilities}}$	$\frac{470}{380} = 1.24 : 1$	$\frac{340}{520} = 0.65 : 1$
Debtors days		
$\frac{\text{Trade debtors}}{\text{Sales}} \times 365$ days	$\frac{400}{1{,}075} \times 365 = 136$ days	$\frac{300}{756} \times 365 = 145$ days
Return on capital employed		
$\frac{\text{Profit before interest and tax}}{\text{Capital employed}} \times 100\%$	$\frac{235}{1{,}185} \times 100\% = 19.8\%$	$\frac{87}{438} \times 100\% = 19.9\%$
Return on equity		
$\frac{\text{Profit before tax}}{\text{Share capital and reserves}} \times 100\%$	$\frac{175}{1{,}085} \times 100\% = 16.1\%$	$\frac{42}{138} \times 100\% = 30.4\%$
Gearing		
$\frac{\text{Long-term loans}}{\text{Total capital employed}} \times 100\%$	$\frac{100}{1{,}185} = 8.4\%$	$\frac{300}{438} \times 100\% = 68.5\%$
Interest cover		
$\frac{\text{Profit before interest and tax}}{\text{Interest charges}}$	$\frac{235}{10} = 23.5$ times	$\frac{87}{30} = 2.9$ times

Dividend cover		
$\frac{\text{Profit after tax}}{\text{Dividends}}$	$\frac{175}{100} = 1.75$ times	$\frac{42}{40} = 1.05$ times
Gross profit margin		
$\frac{\text{Gross profit}}{\text{Sales}} \times 100\%$	$\frac{360}{1{,}075} \times 100\% = 33.5\%$	$\frac{182}{756} \times 100\% = 24.1\%$
Net profit margin		
$\frac{\text{Net profit}}{\text{Sales}} \times 100\%$	$\frac{235}{1{,}075} \times 100\% = 21.9\%$	$\frac{87}{756} \times 100\% = 11.5\%$

(b) ***Profitability.*** Both companies show a profit, although Emerald's profit margins significantly exceed those of Garnet. The return on capital employed is virtually the same for both companies but Garnet's return on equity is much higher. This is because Garnet is more highly geared than Emerald.

Liquidity. Emerald has a good liquidity position, with both the current and quick ratios being at normal levels for a manufacturing company. Garnet, however, is in a weaker position, with both its ratios being below the industry norm. The existence of a large overdraft is the main cause of this.

Risk. Emerald has healthy profit margins, a comfortable liquidity position and a low level of gearing and may be considered a low risk company. Garnet, on the other hand, is very highly geared and therefore risky. Both the long term debt and the overdraft need financing, and with an interest cover of only 2.9 times the company is in a vulnerable position. Profits need only fall by a small margin to severely affect the company's ability to service the debt.

QUESTION 12.10

(a) **JK Ltd trading and profit and loss account for the year to 31 March 1993**

	£	£
Sales		647,400
Opening stock	15,400	
Purchases	321,874	
Carriage inwards	13,256	
Less: Closing stock	(19,473)	
Cost of goods sold		331,057
Gross profit		316,343
Carriage out	32,460	
Electricity (6,994 + 946)	7,940	
Business rates	8,940	
Wages and salaries (138,292 + 2,464)	140,756	
Postage and stationery	6,984	
Rent (14,600 − 2,800)	11,800	

	Depreciation (49,400 – 21,240) × 25%	7,040	
			215,920
			100,423
	Deposit account interest		7,200
	Net profit		107,623
	Corporation tax		30,000
			77,623
	Dividend (50,000 × £0.05)		2,500
			75,123
	Brought forward		76,597
	Carried forward		151,720

(b) **Balance sheet at 31 March 1993**

	£	£
Fixed assets		
Motor vehicles at cost		49,400
Less: Accumulated depreciation (21,240 + 7,040)		28,280
		21,120
Current assets		
Stock	19,473	
Debtors	82,851	
Deposit account (90,000 + 7,200)	97,200	
Current account	77,240	
Prepaid rent	2,800	
	279,564	
Current liabilities		
Creditors	41,936	
VAT control	16,382	
PAYE control	4,736	
Accrued electricity	946	
Accrued wages and salaries	2,464	
Corporation tax	30,000	
Dividend	2,500	
	98,964	
Working capital		180,600
		201,720
Financed by:		
Ordinary shares of £1 each		50,000
Profit and loss account		151,720
		201,720

(c) Debtors payment period = (82,851/647,400) × 365 = 47 days
Creditors payment period = (41,936/321,894) × 365 = 48 days
Stock turnover period = (19,473/331,057) × 365 = 21 days

The company holds items in stock for an average of 21 days, and then has to wait a further 47 days to collect the money from debtors; this is a total of 68 days. However, credit of 48 days is received from suppliers, and this provides finance for the bulk of the time which it takes the company to turn stock into cash. The net result is that the company has to finance debtors for 68 – 48 = 20 days.

QUESTION 13.2

(a) **Overhead analysis sheet**

Type of expenses	*Basis of apportionment*	*Total*	*Dept. XX*	*Dept. YY*	*Stores*
		£	£	£	£
Rent and rates	Floor area	81,000	26,129	19,597	35,274
Power	Cubic capacity	23,200	6,725	4,833	11,642
Heat and light	Cubic capacity	11,740	3,403	2,446	5,891
Salaries and wages	No. of employees	196,300	139,373	33,371	23,556
Ins. and deprec'n					
Buildings	Floor area	14,850	4,790	3,593	6,467
Machinery	Value	28,750	5,500	21,000	2,250
Office equipment	Floor area	5,000	1,613	1,210	2,177
Misc. expenses	Equally	2,190	730	730	730
		363,030	188,263	86,780	87,987
Salaries and wages		337,240	128,640	64,185	144,415
Misc. expenses		24,860	12,210	6,875	5,775
Recharge	Share requisition		119,088	119,089	(238,177)
		725,130	448,201	276,929	

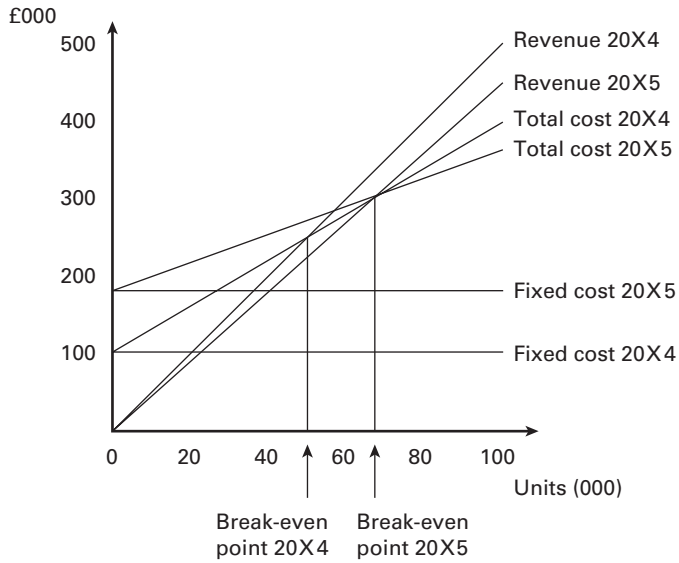
(b) Overhead recovery rate:
Dept XX: £448,201/121,620 (labour hours) = £3.69 per labour hour
Dept YY: £276,929/46,000 (machine hours) = £6.02 per machine hour

(c)

	XX	*YY*
Labour hours per unit 121,620/162,160	0.75	
Machine hours per unit 46,000/322,000		0.143
Units	162,160	322,000
	£	£
Direct wages	891,880	144,900
Direct material	2,043,216	5,924,800
Direct cost	2,935,096	6,069,700
Direct cost per unit	18.10	18.85
Overhead cost per unit		
£3.69 × 0.75	2.77	
£6.02 × 0.143		0.86
Other costs and profit	1.80	1.80
Selling price	22.67	21.51

Workings **QUESTION 13.4**

	Output = 0	*Output = 100,000*
20X4		
Revenue	0	£500,000
Variable cost	0	£300,000
Fixed cost	£100,000	£100,000
Total cost	£100,000	£400,000
20X5		
Revenue	0	£450,000
Variable cost	0	£200,000
Fixed cost	£180,000	£180,000
Total cost	£180,000	£380,000



(£000) **QUESTION 13.6**

(a) Payback period: Zero 1.75 years
Nemo 2.75 years

(b) Average annual profit: Zero (140 – 80)/4 = 15
Nemo (160 – 90)/4 = 17.5

Average capital employed: Zero 80/2 = 40
Nemo 90/2 = 45

Roce: Zero 15/40 = 37.5%
Nemo 17.5/45 = 38.9%

(c)

	20% discount factor	Project Zero Cash flow	Project Zero Present value	Project Nemo Cash flow	Project Nemo Present value
Year 1	0.833	50	41.65	30	24.99
2	0.694	40	27.76	30	20.82
3	0.579	30	17.37	40	23.16
4	0.482	20	9.64	60	28.92
			96.42		97.89
Less;					
Initial investment			80.00		90.00
NPV			16.42		7.89

(d) Profitability index: Zero 96.42/80 = 1.21
Nemo 97.89/90 = 1.09

(e) Zero has a better payback period, NPV and profitability index, while Nemo gives a better return on capital employed. These results are consistent with the fact that Nemo's cash flow increases towards the end of its life, and these flows are given less weight by the former methods of appraisal. Zero appears to be the better investment.

QUESTION 13.8

1. **Cash forecast for three months to 31 March 19X6**

	January £	February £	March £	Total £
Receipts:				
Capital	5,000			5,000
Cash sales	1,000	1,000	1,000	3,000
Credit sales	–	2,000	3,000	5,000
	6,000	3,000	4,000	13,000
Payments:				
Fixtures and fittings	2,000			2,000
Rent	1,500			1,500
Expenses	400	400	400	1,200
Drawings	300	300	300	900
Purchases			4,000	4,000
	4,200	700	4,700	9,600
Opening balance	–	1,800	4,100	–
ADD: Receipts	6,000	3,000	4,000	13,000
LESS: Payments	(4,200)	(700)	(4,700)	(9,600)
Closing balance	1,800	4,100	3,400	3,400

2. **Forecast trading and profit and loss account three months to 31 March 19X6**

	£	£
Sales (W1)		12,000
Purchases (W2)	12,000	

Closing stock (balancing figure)	(3,000)	
Cost of sales (sales – gross profit)		9,000
Gross profit (W3)		3,000
Rent (0.5 × 1,500)	750	
Expenses	1,200	
Depreciation (W4)	125	
		2,075
Net profit		925

Forecast balance sheet at 31 March 19X6

	£	£
Fixed assets		2,000
At cost		125
Less: Depreciation		1,875
Current assets		
Stock	3,000	
Debtors	4,000	
Cash	3,400	
Prepaid rent	750	
	11,150	
Less;		
Current liabilities		
Creditors	8,000	
		3,150
		5,025
Financed by;		
Capital introduced		5,000
Profit		925
		5,925
Less: Drawings		900
		5,025

W1 3,000 (cash sales) + 5,000 (cash from debtors) + 4,000 (debtors) = £12,000
W2 3 (months) × £4,000 (purchases per month) = £12,000
W3 £12,000 (sales) × 25% (standard GP/sales ratio) = £3,000
W4 £2,000 (cost) × 1/4 (life is 4 years) × 1/4 (proportion of year) = £125

QUESTION 14.2

(a)	(i)	Total direct cost variance =	£
		(£189,600 + £819,000) – (£19.05 [W1] × 50,000) = 56,100 (U)	
	(ii)	Material price variance =	
		(£1.20 [W2] – £1.25) 158,000	7,900 (F)
		Material usage variance =	
		(158,000 – 150,000 [W3]) £1.25	10,000 (U)

(iii)

Labour rate variance =	£
(£5.25 [W4] – £5.10) 156,000	23,400 (U)
Labour efficiency variance =	
(156,000 – 150,000 [W5]) £5.10	30,600 (U)

W1 [3.75 (£1.25 × 3) + £15.30 (£5.10 × 3)]
W2 £189,600/158,000
W3 3 Kilos × 50,000
W4 £819,000/156,000
W5 3 hours × 50,000

(b) The calculations confirm the purchasing manager's claim: the 'very good terms' have resulted in a favourable material price variance of £7,900. However, this has been more than offset by an unfavourable usage variance of £10,000, possibly indicating that the cheaper materials are more difficult to work with.

The personnel manager's claims are *not* supported by the above calculations: the hourly wage rate is 15p above standard, resulting in an unfavourable variance of £23,400.

The production manager's opinions are also shown to be unsound: the labour force has taken 6,000 hours longer to do the work than anticipated, resulting in an unfavourable labour efficiency variance of £30,600, while material usage has been 8,000 kilos above standard.

(c) Advantages of a system of standard costing;

- The installation of a system of standard costing requires the company to review existing practices, and this often results in substantial improvements being made.
- Standard costs are a more meaningful yardstick than the alternatives, which are to compare results with those of a previous year or a different company.
- Variances are quickly identified, enabling corrective action to be taken before further losses are unnecessarily incurred.
- There is a saving in management time in that attention is focused on problem areas.
- The system identifies areas of achievement as well as difficulty, and draws management's attention to areas of success which the company must be able to exploit more fully.
- The system provides cost consciousness; individuals know that standards have been set and that the financial results of their work are under scrutiny.

Disadvantages of a system of standard costing:

- Standard costing identifies variances, but investigation is required to discover the reasons for the variances.
- The cost involved in installing a system will be significant and need to be justified in terms of the benefits it will produce.
- Standard costing is an aid to good management but not an alternative to good management.

QUESTION 14.4

(a) **Phelan Forests Ltd revised budget report for month of May 1999**

Item	*Flexible budget*	*Actual*	*Variance*
Quantity produced (cubic metres)	1,150	1,150	0
	£	£	£
Revenue	115,000	120,750	5,750
Variable costs:			
(items market V)			
Extraction fees	23,000	23,000	0
Production wages	23,000	24,150	(1,150)
Fuel etc., saws	1,150	1,035	115
Fuel etc., tractors and winches	575	460	115
Production expenses	1,438	1,495	(57)
Depreciation:			
Saws	460	460	0
Tractors and winches	1,725	1,725	0
Total variable cost	51,348	52,325	(977)
Contribution	63,652	68,425	4,773
Fixed costs:			
Maintenance salaries	2,000	1,950	50
Supervision salaries	3,000	2,800	200
Management and admin. salaries	4,500	4,650	(150)
Vans and trucks fuel etc.	250	275	(25)
Maintenance expenses	1,500	1,550	(50)
Management and admin. expenses	2,300	2,890	(590)
Buildings expenses	850	720	130
Depreciation:			
Vans and trucks	2,500	2,500	0
Maintenance equipment	1,300	1,300	0
Office equipment and furniture	950	950	0
Total fixed costs	19,150	19,585	(435)
Profit (loss)	44,502	48,840	4,338

b)

Memo

To: G.V. Singh
From: Administration Manager
Date: 4 June 1999
Subject: Monthly budgetary control reports

Phelan Forests Ltd's existing budgetary control reports compare the actual revenue and costs with a fixed budget, i.e. a budget which does not take into account the effect changes in output volume have on costs.

This causes two particular problems:

(i) The variances for those costs which are variable are misleading. For instance, the production labour shows an adverse variance of £4,150 for May 1999, but as output was 15% higher than budget there is every likelihood that £3,000 of the variance is simply due to more hours being worked to obtain the higher output.

(ii) The effect of volume changes on profit is hidden as variable costs are not grouped together but are included under their particular expense groupings. This means that it is difficult to identify the contribution made, or lost, by increases or decreases in the volume of timber produced.

The solution to these two problems is to adopt a marginal costing format and flexible budgeting.

A marginal costing format will group the variable costs together and subtract them from the revenue to obtain the contribution for the month. The fixed costs can then be subtracted from the contribution to obtain the profit. This approach will clearly identify the costs which can be controlled by the production manager(s), i.e. the variable costs such as production labour, and those which cannot be changed in the short term, i.e. the fixed costs such as management salaries. This should mean that managers can concentrate upon the costs which they can do something about, rather than being distracted by unavoidable fixed costs.

A flexible budget will adjust the budget for revenue, variable costs and contribution to take into account the volume of output. As a consequence, the variances which are shown on the budget report will be due to price or efficiency deviations and not caused by volume. This will mean that managers will be able to concentrate upon dealing with inefficiencies as the costs of these will be highlighted, instead of being masked by volume changes. For instance, the £3,000 adverse variance for extraction fees will disappear, but there will still be a £1,150 adverse variance on production labour to explain.