Chapter 1

ACTIVITY 1

FINANCIAL STATEMENTS

1 Students' own answer.

ACTIVITY 2

CORPORATION TAX

1 Students' own answer.

ACTIVITY 3

KOSTAS CERAMICS PLC

1

Kostas Ceramics plc: Statement of profit or loss and other comprehensive income for the year ended 30 November 2019

	£	£
Revenue		810,400
Cost of sales		458,860
Gross profit		351,540
Distribution costs	166,900	
Administration costs	122,100	
Financial costs	30,000	319,000
Profit on ordinary activities before tax		32,540
Corporation tax		4,800
Profit on ordinary activities after tax		27,740

Notes

Cost of sales	**£**
Direct materials	348,560
Inventory of materials – 1 December 2018	9,000
Inventory of materials – 30 November 2019	(12,000)
Power	40,200
Depreciation – premises	7,000
Wages – factory staff	57,000
Depreciation – machinery	25,000
Inventory – finished goods 1 December 2018	4,700
Inventory – finished goods 31 December 2019	(20,600)
	458,860

Distribution costs	£
Depreciation – motor vehicles	45,300
Depreciation – premises	20,000
Distribution expenses	47,000
Power	20,000
Wages	34,600
	166,900

Administration costs	£
Administration expenses	43,800
Audit fees	32,000
Depreciation – premises	1,000
Power	6,700
Wages	37,400
	122,100

Financial costs	£
Debenture interest	30,000

ACTIVITY 4

LARNACA PLC

1

Larnaca plc: Statement of profit or loss and other comprehensive income for year ended 31 March 2016

Turnover		900,000
Cost of sales		560,751
Gross profit		339,249
Administrative expenses (W1)	145,100	
Selling and distribution costs	68,000	213,100
		126,149
Interest payable (W2)		2,800
Profit on ordinary activities before tax		123,349
Corporation tax		11,000
Profit on ordinary activities after tax		112,349
Dividends		10,000
Retained profit for the year		102,349
Retained earnings brought forward		19,000
Retained earnings for the year		102,349
Retained earnings carried forward		121,349

Workings	
W1	
Administrative expenses	
Audit fees	800
Directors' fees	32,000
Office expenses	74,800
Depreciation on premises	12,000
Depreciation on machinery	25,500
	145,100
W2	
Interest payable	
Interest on loan stock	800
Interest on debentures	2,000
	2,800

ACTIVITY 5

FINANCIAL STATEMENT HEADING

1(a) Assets without a physical substance that have a monetary value, such as goodwill and patents.

(b) Funds provided by the shareholder in the form of shares and reserves, ordinary share capital.

(c) Expenses directly associated with the production of the product/service, e.g. direct materials.

(d) Expenses incurred in the transfer of the product from production to the final user, the customer, e.g. warehouse rent.

ACTIVITY 6

LATCHI PLC

1

Latchi plc: Statement of profit or loss and other comprehensive income for the year ended 31 October 2019

	£000	£000
Revenue		1,835
Cost of sales		965
Gross profit		870
Distribution costs	436	
Administration costs	304	740

Profit on ordinary activities before tax	130
Corporation tax	20
Profit on ordinary activities after tax	110

Cost of sales	**£000**
Opening inventory	120
Purchases	950
Depreciation	45
Closing inventory	(150)
	965

Distribution costs	**£000**
Distribution costs	400
Depreciation	36
	436

Administration costs	£
Administration expenses	295
Depreciation	9
	304

2

Latchi plc: Statement of financial position for the year ended 31 October 2019

	£000	**£000**
Assets		
Non-current assets		
Property, plant and equipment		460
		460
Current assets		
Inventory	150	
Trade and other receivables	455	
Cash and cash equivalents	45	
		650
Total assets		**1110**
Equity and liabilities		
Equity		
Share capital:		
Ordinary shares of £1	505	
Share premium	115	
Retained earnings	260	
Total equity		880
Current liabilities		
Trade payables and other payables		
Trade payables	190	
Other payables	20	
Corporation tax payable	20	

	230
Total equity and liabilities	**1110**

ACTIVITY 7

ALLIED HOLDINGS PLC

1

Allied Holdings plc: Statement of profit or loss account for the year ended 31 December 2019

Sales			503,000
Less cost of sales			
Stock	43,000		
Add purchases	191,000	234,000	
Less stock		18,900	215,100
Gross profit			287,900
Less expenses			
Audit fees		3,500	
Directors' remuneration		48,000	
Motor expenses		6,300	
Salaries		93,600	
Provision for bad debts		2,730	
Bad debts		12,100	
Depreciation – plant and equipment		14,300	
Depreciation – motor vehicles		3,140	
Depreciation – fixtures and fittings		1,200	184,870
Net profit for the year			103,030
Less appropriations			
Dividend preference shares		4,800	
Dividend ordinary shares – interim		12,000	
Dividend ordinary shares – final		20,000	36,800
			66,230
Add balance at 01/01/09			62,000
Balance of undistributed profit at 31/12/09			128,230

Allied Holdings plc: Statement of financial position at 31 December 2019

	Cost	Accumulated depreciation	Book value
Fixed assets			
Land and buildings	1,950,000		1,950,000
Plant and equipment	143,000	28,300	114,700
Motor vehicle	25,000	12,440	12,560
Fixtures and fittings	12,000	2,300	9,700
	2,130,000	43,040	2,086,960

Current assets			
Stock	18,900		
Debtors	34,470		
Cash in bank	11,100	64,470	
Less current liabilities			
Creditors	19,600		
Proposed dividends	24,800	44,400	
Working capital			20,070
			2,107,030
Long-term liability			
Debentures			78,800
			2,028,230
Financed by:			
Authorised share capital			
800,000 6% preference shares of £1 each			800,000
4,400,000 Ordinary shares of 50p each			2,200,000
			3,000,000
Issued share capital			
800,000 6% Preference shares of £1 each, fully paid		800,000	
2,000,000 Ordinary shares of 50p each, fully paid		1,000,000	
Add reserves			
Share premium account		100,000	
Profit and loss account balance		128,230	
Shareholders' funds			2,028,230

ACTIVITY 8

ADOPTIT PLC

1

Adoptit plc: Statement of changes in equity for the year ended 31 March 2020			
	Ordinary share capital £	Retained earnings £	Total equity £
Balance at 1 December 2018	300,000	171,590	471,590
Profit*		76,390	76.390
Dividends paid		(43,500)	(43,500
Balance at 30 November 2019	300,000	204,480	504,480

Profit = £89,890 - £13,500 = £76,390

ACTIVITY 9

WHILL PLC

1

Whill plc: Statement of changes in equity for the year ended 31 October 2019						
	Ordinary share capital £	Share premium £	Retained earnings £	Revaluation reserve £	General reserve £	Total equity £
Balance 1 November 2018	400,000	100,000	75,000			575,000
Revaluation (W1)				175,000		175,000
Profit (W2)			32,000			32,000
Dividends			(21,000)			(21,000)
Transfer to General reserve			(10,000)		10,000	NIL
Balance 31 October 2019	400,000	100,000	76,000	175,000	10,000	761,000

W1 – New value less old value = £425,000 - £250,000 = £175,000
W2 – Profit for the year = Profit before tax less taxation - £47,000 - £15,000 = £32,000

ACTIVITY 10

COMPANY REPORT RESEARCH

1 Students' own answer.

ACTIVITY 11

COMPANY REPORT RESEARCH

1 Students' own answer.
2 Students' own answer.

EXAM PRACTICE

1(a)

Ventalight plc: Statement of profit or loss and other comprehensive income for the year ended 30 April 2020

	£	£
Revenue		9,060,000
Cost of sales		4,810,000
Gross profit		4,250,000
Distribution costs	1,750,000	
Administration costs	480,000	
Financial costs	138,000	2,368,000
Profit on ordinary activities before tax		1,882,000
Corporation tax		152,000
Profit on ordinary activities after tax		1,730,000

Workings

Cost of sales	£
Inventory of materials – 1 May 2019	300,000
Direct materials	4,200,000
Depreciation – factory	60,000
Wages – factory staff	600,000
Inventory – 30 April 2020	(350,000)
	4,810,000

Distribution costs	£
Marketing	750,000
Depreciation – motor vehicles	30,000
Rent	180,000
Shipping expenses	490,000
Wages	300,000
	1,750,000

Administration costs	£
Office expenses	180,000
Wages	300,000
	480,000

Financial costs	£
Bank loan interest	30,000
Debenture interest	108,000
	138,000

(b)

Dalia plc: Statement of financial position for the year ended 30 November 2019

	£	£
Assets		
Non-current assets		

Intangible assets – goodwill	800,000		
Property, plant and equipment	5,890,000		**W1**
Motor vehicles	70,000		**W2**
		6,760,000	
Current assets			
Inventory	350,000		
Trade and other receivables	615,000		**W3**
Cash and cash equivalents	160,000		
		1,125,000	
Total assets		**7,885,000**	
Equity and liabilities			
Equity			
Share capital:			
Ordinary shares of £1	2,500,000		
Revaluation reserve	100,000		
Retained earnings	2,388,000		**W4 OF**
Total equity		4 988 000	
Non-current liabilities			
6% debenture 2029	1,800,000		
Bank loan	400,000		
		2,200,000	
Current liabilities			
Trade payables and other payables	545,000		**W5**
Corporation tax payable	152,000		
		697,000	
Total equity and liabilities		**7,885,000**	

W1 Property, plant and equipment

	Cost	**Depreciation**	**NBV**
Land	3,000,000		3,000,000
Factory	3,000,000	50,000 + 60 000	2,890,000
			5,890,000

W2 Motor vehicles

	Cost	**Depreciation**	**NBV**
Motor vehicles	150,000	50,000 + 30,000	70,000

W3 Trade and other receivables
Trade receivables + Pre-paid rent £595,000 + £20,000 = £615,000

W4 Retained earnings
Balance b/f + Profit for the year £658,000 + £1,730,000 (OF) = £2,388,000

W5 Trade and other payables
Trade payables + Interest owing £525,000 + £20,000 = £545,000

2
Points in favour

- Allows users of financial information to compare the performance of a business on a like-for-like basis.
- By identifying discontinued activities, potential investors can see the impact this has had on the revenues and profits of the company.
- Ensures that financial statements comply with IAS guidelines and will provide a true and fair view of the company.

Points against

- It may be difficult to identify accurately the exact revenues and costs associated with discontinued operations.
- It may present the company in a poor light and deter potential investors if discontinued activities have a significant impact.
- Cost implications in terms of time and the expertise required to accurately identify the revenues and costs involved.

Decision

Must be based on candidate's response.

Chapter 2

ACTIVITY 1

ALUMINIUM PACKAGING PRODUCTS PLC

1

	£1 Ordinary share capital £	Share premium £	Retained earnings £	General reserve £	Foreign exchange reserve £	Revaluation reserve £	Total equity £
Balance 1 December 2018	1,200,000	180,000	125,750	11,400			1,517,150
Dividends paid			(96,000)				(96,000)
Transfer			11,400	(11,400)			
Revaluation						335,000	335,000
Transfer			(37,000)	37,000			
Profit			922,250				922,250
Balance 30 November 2019	1,200,000	180,000	926,400		37,000	335,000	2,678,400

Dividends - number of shares = £1,200,000 x 4 = 4,800,000, value = 4,800,00 x £0.02 = £96,000

ACTIVITY 2

CROWN PHARMACEUTICALS

1

	Dr £	Cr £
Bank	161,200	
Application and allotment		161,200

	Dr £	Cr £
Application and allotment	161,200	
£0.50 Ordinary share capital		124,000
Share premium account		37,200

ACTIVITY 3

UNDER SUBSCRIPTION

1

	Dr £	Cr £
Bank	400,000	
Application and allotment		400,000
Application and allotment	400,000	
£0.50 Ordinary share capital		400,000

Ledger accounts

Bank

Details	£	Details	£
Allocation and allotment	400,000		

Allocation and allotment

Details	£	Details	£
£1 Ordinary share capital	400,000	Bank	400,000
	400,000		400,000

Ordinary share capital

Details	£	Details	£
		Allocation and allotment	250,000

ACTIVITY 4

BEE CO. PLC

1

Issued share capital

Details	£	Details	£

Balance c/d	400,000	Balance b/d	200,000
		Application and allotment	200,000
	400,000		400,000
		Balance b/d	400,000

Share premium account

Details	£	Details	£
Balance c/d	200,000	Balance b/d	80,000
		Application and allotment	120,000
	200,000		200,000
		Balance b/d	200,000

Application and allotment account

Details	£	Details	£
Refunds	270,000	Bank	450,000
Share capital	200,000	Bank	140,000
Share premium	120,000		
	590,000		590,000

ACTIVITY 5

EXPLOR PLC

1

Ordinary share capital

Date	Details	£	Date	Details	£
31 Dec 2019	Bal c/d	950,000	3 Jan 2019	Bank	500,000
			31 Jan 2019	App & allotment	315,000
			30 Jun 2019	Call account	135,000
		950,000			950,000
31 Dec 2020	Balance c/d	1,662,000	1 Jan 2020	Balance b/d*	950,000
			18 Jan 2020	Application and allotment	380,000

		15 Mar 2020	Bonus – ex premium	332,000
	1,662,000			1,662,000
			Balance b/d	1,662,000

* Opening balance at 1 January 2019 is made up of original offer of 500,000 shares plus offer on 11 January of 450,000 = Total of 950,000.

Share premium

Date	Details	£	Date	Details	£
31 Dec 2019	Bal c/d	420,000	3 Jan 2019	Bank	150,000
			31 Jan 2019	Application and allotment	90,000
			30 Jun 2019	Call account	180,000
		420,000			420,000
15 Mar 2020	Bonus shares**	332,000	1 Jan 2020	Balance b/d*	420,000
31 Dec 2020	Balance c/d	240,000	18 Jan 2020	Application and allotment	152,000
		572,000			572,000
			31 Dec 2020	Balance b/d	240,000

* Opening balance at 1 January 2020 is made up of 30p premium on original offer of 500,000 shares plus 60p premium on offer on 11 January of 450,000.

** Bonus shares are calculated on basis of 1,330,000 shares in issue.

Application and allotment

Date	Details	£	Date	Details	£
31 Jan 2019	Share capital	315,000	15 Jan 2019	Bank	210,000
31 Jan 2019	Share premium	90,000	31 Jan 2019	Bank	195,000
		405,000			405,000
18 Jan 2020	Share capital	380,000	18 Jan 2020	Bank*	532,000
	Share premium	152,000			
		532,000			532,000

* The rights offer is based on issued capital of 950,000 shares. Two shares are issued for every 5 held = 380,000 shares.

ACTIVITY 6

ROSS PRINTERS PLC

1

Ordinary share capital

Details	£	Details	£
Balance c/d	900,000	Balance b/d	300,000
		Share premium	100,000
		Retained earnings	500,000
	900,000		900,000
		Balance b/d	900,000

Share premium account

Details	£	Details	£
Ordinary share capital	100,000	Balance b/d	100,000
	100,000		100,000

Retained earnings

Details	£	Details	£
Ordinary share capital	500,000	Balance b/d	950,000
Balance c/d	450,000		
	950,000		950,000
		Balance b/d	450,000

ACTIVITY 7

JESSORE CONSUMER ELECTRONICS

1

Bonus issue

	Dr £	Cr £
Share premium account	50,000	
Ordinary share capital		50,000
Revaluation reserve	70,000	
Ordinary share capital		70,000
General reserve	35,000	
Ordinary share capital		35,000
Retained earnings	45,000	
Ordinary share capital		45,000

Rights issue

480,000 shares at £0.50 = £240,000

	Dr £	Cr £
Bank	240,000	
Ordinary share capital		240,000

Ordinary share capital

Details	£	Details	£
Balance c/d	640,000	Balance b/d	200,000
		Share premium	50,000
			70,000
			35,000
		Retained earnings	45,000
		Bank	240,000
	640,000		640,000
		Balance b/d	640,000

Share premium

Details	£	Details	£
Ordinary share capital	50,000	Balance b/d	50,000
	50,000		50,000

Revaluation reserve

Details	£	Details	£
Ordinary share capital	70,000	Balance b/d	70,000
	70,000		70,000

General reserve

Details	£	Details	£
Ordinary share capital	35,000	Balance b/d	35,000
	35,000		35,000

Retained earnings

Details	£	Details	£
Ordinary share capital	45,000	Balance b/d	200,000
Balance c/d	155,000		
	200,000		200,000
		Balance b/d	155,000

2

Extract Statement of financial position	
	£
Non-current assets	600,000
Current assets	320,000
	920,000
Equity	
£0.50 Ordinary share capital	640,000
Retained earnings	155,000
	795,000

ACTIVITY 8

GREEN PLC

1

	(a)	(b)
Profit for the year	25,000	100,000
Less debenture interest	18,000	18,000
Profit before tax	7,000	82,000
Less tax	2,100	24,600
Profit after tax	4,900	57,400
Less preference dividends	3,600	3,600
Profit available to ordinary shareholders	1,300	53,800

Return to equity = $\frac{1,300}{500,000}$ = 0.26% $\frac{53,800}{500,000}$ = 10.76%

2 Preference shareholders receive their dividends before ordinary shareholders. In the case of cumulative preference shares, if the dividend cannot be paid because of a lack of funds or a loss made by the company, it must still be paid in later years before the ordinary shares receive their dividend.

EXAM PRACTICE

1

Marshill Foods plc: Statement of changes in equity for the year ended 31 January 2020

	£1 Ordinary share capital £m	Share premium £m	Retained earnings £m	General reserve £m	Capital replacement reserve £m	Foreign exchange reserve £m	Capital redemption reserve £m	Total equity £m
Balance 1 Feb 2019	650	70	50	12	16			798
Dividends paid			(6.5)					(6.5)
Issue of shares	130	26						156
Transfer			16		(16)			
Transfer			(5.95)			5.95		
Capital redemption	(10)	(10)	(20)				20	(20)
Interim dividend			(19.25)					(19.25)

Profit			2.85					2.85
Balance 31 Jan 2020	770	86	17.15	12		20	5.95	911.1

2

Advantages include:

- Utilises excess cash and cash equivalents balances, which would otherwise be idle funds.
- Increases the market value of the shares as fewer shares are on the market.
- Reduces future dividend payments.

Disadvantages include:

- Reduces the liquid assets of the company and therefore liquidity ratios may appear to have worsened.
- Gearing ratio will increase and the company may become highly geared.
- The statement of financial position will show a smaller equity value, which might affect the image of the business.

Chapter 3

ACTIVITY 1

NGONG INTERNATIONAL PLC AND MERU TRADING PLC

1 Number of shares in Meru Trading plc = 20,000,000 / 0.50 = 40,000,000 shares
Shares 40,000,000 x £0.60 = £24,000,000
Cash £1,000,000
Purchase price £25,000,000

2 Goodwill = Purchase price less fair value = £1,620,000

	£000
Assets	
Non-current assets	26,000
Current assets	2,120
Less cash and cash equivalents	(240)
Non-current liabilities	(3,000)
Current liabilities	(1,500)
Value	**23,380**
Goodwill (balancing figure)	**1,620**
Purchase price	25,000

ACTIVITY 2

MERGER OF HIGHWAY CONNECTIONS LTD AND WESSEX QUARRIES LTD

1(a)

Calculation of purchase price for Wessex Quarries Limited	
Buildings	160
Machinery	380
Furniture	37
Vehicles	145
Stock	25
Debtors	22
Bank	12
Cash	2
Goodwill	30
Creditors	(172)
Purchase price	741

(b) Purchase price £741,000 / £1.50 = 494,000 shares

2(a)

Highway Connections – Realisation account

Details	£	Details	£
Buildings	200	Creditors	46
Machinery	950		
Furniture	70	Roadworks	2,202
Vehicles	550	(Purchase Consideration)	
Stock	58		
Debtors	22		
Bank	36		
Cash	21		
Sundry Shareholders (Profit on Realisation)	341		
	2,248		2,248

(b)

Highway Connections – Sundry shareholders account

Details	£	Details	£
Roadworks	2,202	Share capital	800
(Purchase consideration 1,468 shares at £1.50 each)		Share premium	200
		Profit and loss account	861
		Realisation account	
		(Profit on realisation)	341
	2,202		2,202

ACTIVITY 3

MERGER BETWEEN SUN LTD AND LAND LTD

1(a)

Sun Ltd: Realisation account

Details	£	Details	£
1 Jan Buildings	70,000	Creditors	4,600

Machinery	20,000	SunLand Ltd (PP)	148,000
Stock	2,300		
Debtors	1,500		
Bank	18,800		
Sundry shareholders	40,000		
	152,600		152,600

(b)

Sun Ltd: Sundry shareholders account

Details	£	Details	£
1 Jan SunLand Ltd	148,000	Share capital	100,000
		Profit/loss	8,000
		Realisation (Profit)	40,000
	148,000		148,000

2

	Sun Ltd	Land Ltd
Goodwill	20,000	14,000
Buildings	90,000	
Machinery	20,000	80,000
Vehicles (£40,000 - £3,800)		36,200
Stock	2,300	21,000
Debtors	1,500	14,050
Bank (£12,000 + £3,000)	18,800	15,000
	152,600	180,250
Less creditors	4,600	3,450
Purchase price	148,000	176,800
Shares issued at 50p each	296,000	353,600

Total shares = 649,600

ACTIVITY 4

KANDY AND ELLA

1 The first thing to do is to calculate the total value of the assets acquired: £35,800 - £4,000 = £31,800. Company A pays £30,000 in shares and £1,800 in cash.

Acquisition account

Details	£	Details	£
Motor vehicles	11,000	Trade payables	1,300
Office equipment	4,000	Purchase price	
Computer equipment	12,000	Ordinary shares	30,000
Inventory	3,200	Cash	1,800
Trade receivables	2,900		
	33,100		33,100

ACTIVITY 5

SUNRISE PUBLISHING

1 We are provided with the purchase consideration using a combination of shares and cash. The first step is to calculate the number of shares in SunRise Publishing plc:
Value of shares is £10,000,000 at £1 per share, therefore the number of shares is 10,000,000.

New shares are issued in the ratio of two new shares for every existing share, therefore the number of new shares in SunRise Publishing issued will be 2 x 10,000,000 = 20,000,000 shares.

The value of the shares will be 20,000,000 x £1.12 (market value) = **£22,400,000**

The second step is to calculate the cash payment. This is:

Number of shares x cash offered = 20,000,000 x £0.02 = **£400,000**

Therefore, the purchase price is £22,400,000 + £400,000 = **£22,800,000**

2 Goodwill = Purchase price - fair value of assets and liabilities purchased.
The purchase price has been calculated, therefore we now calculate the value of the assets and liabilities purchased after the revaluation has taken place.

	£000
Value of assets purchased	
Property: 16,000 + 2,000	18,000
Equipment: 7,000 - 500	6,500
Inventory: 500 - 200	300
Trade receivables	2,750
Total asset value (A)	27,550

Value of liabilities purchased	
Bank loan	5,000
Trade payables	1,010
Other payables: 200 x 50%	100
Total liabilities value (B)	(6,110)
Value of assets purchased (A - B)	21,440

Goodwill = £22,800,000 - £21,440,000 = **£1,360,000**

3(a)

Labright Printers plc: Realisation account

Details	**£000**	**Details**	**£000**
Property	16,000	Bank loan	5,000
Equipment	7,000	Trade payables	1,010
Inventory	500	Other payables	200
Trade receivables	2,750	SunRise Publishers (purchase consideration)	25,000
Cash and cash equivalents	150		
Realisation (profit)	4,810		
	31,210		31,210

(b)

Labright Printers plc: Sundry shareholders account

Details	**£**	**Details**	**£**
SunRise Publishers (purchase consideration)	25,000	Ordinary share capital	10,000
		Share premium	10,000
		Retained earnings	190
		Realisation account	4,810
	25,000		25,000

4

SunRise Publishing: Acquisition account

Details	**£000**	**Details**	**£000**
Property	18,000	Bank loan	5,000
Equipment	6,500	Trade payables	1,010
Inventory	300	Other payables	100
Trade receivables	2,750	£1 Ordinary share capital	20,000
Goodwill	1,360	Share premium	2,400
		Cash	400
	28,910		28,910

5

SunRise Publishing plc: Statement of financial position at 1 January 2020

	£000	**£000**
Assets		
Non-current assets		
Property	38,000	

Equipment	15,300	
Motor vehicles	2,400	
Goodwill	1,360	
		57,060
Current assets		
Inventory	700	
Trade receivables	5,750	
Cash and cash equivalents	430	
		6,880
Total assets		**63,940**
Equity and liabilities		
Equity		
£1 Ordinary shares		40,000
Share premium		10,400
Retained earnings		2,280
		52,680
Non-current liabilities		
Bank loan	9,000	
		9,000
Current liabilities		
Trade payables	1,960	
Other payables	300	
		2,260
Total equity and liabilities		**63,940**

ACTIVITY 6

BELA RECYCLING PLC

1 At carrying value, **Net assets = Assets - Liabilities**

	£
Assets	
Non-current assets	25,000
Current assets	10,100
Less bank	(4,000)
Total assets	**31,100**
Liabilities	
Current liabilities	1,400
Net assets	**29,700**
Purchase price	**29,700**

Purchase consideration
28,000 £1 Ordinary shares at par = £28,000 plus balance in cash £1,700

Acquisition account

Motor vehicles	10,000	Trade payables	1,400
Equipment	5,000	Purchase price	
Computer equipment	10,000	Ordinary shares	28,000
Inventory	3,200	Cash	1,700
Trade receivables	2,900		
	31,100		31,100

2

Statement of financial position of Bela Recycling plc at 1 January 2020

	£	£
Plant and machinery		43,000
Motor vehicles		26,000
Equipment		6,500
Computer equipment		10,000
		85,500
Current assets		
Inventory	9,200	
Trade receivables	11,300	
Bank (11,700-1700)	10,000	30,500
Total assets		116,000
Equity		
Share capital (46,000 + 28,000)	74,000	
Retained earnings	38,000	
		112,000
Current liabilities		
Trade payables	4,000	
Total equity and liabilities		116,000

ACTIVITY 7

RED PLC AND STAR PLC

1 In this question Red plc acquires the assets (not net assets) so we must ignore the creditors in the calculation. Total assets acquired are £22,100 and the purchase price is £46,000. Goodwill therefore amounts to £23,900. Payment is made by the issue of 20,000 shares for a consideration of £30,000. The balance of £16,000 is paid in cash. The combined balance sheet will be as follows:

RedStar plc: Statement of financial position

Plant and machinery		42,000
Motor vehicles		22,000
Office equipment		5,500
Computer equipment		8,000
Goodwill		23,900
		101,400
Current assets		
Stock	8,000	
Debtors	10,500	
	18,500	
Creditors	2,600	
Bank overdraft	4,300	
	6,900	11,600
		113,000
Share capital		65,000
Share premium		10,000
Profit and loss account		38,000
		113,000

ACTIVITY 8

MERGER OF HIGHWAY CONNECTIONS LTD AND WESSEX QUARRIES LTD – REVISITED

1

Roadworks Limited: Statement of financial position at 1 April 2019		
Buildings	440	
Machinery	1,330	
Furniture	97	
Vehicles	695	
Goodwill	304	
Fixed assets total		2,866
Stock	80	
Debtors	44	
Bank	48	
Cash	23	
Current assets total	195	
Creditors	118	
Working capital		77
Net assets		2,943
Ordinary shares of £1 each	1,962	
Share premium at 50p per share	981	
Capital employed		2,943

2

For merger

- Shareholders in Highway Connections 'receive a profit' on realisation of £341,000. Also Goodwill valuation of £274,000.
- New company should enjoy benefits of vertical integration as they are in the same line of business.
- New company could enjoy economies of scale, e.g. bulk buying of machinery, or managerial economies of scale or marketing economies of scale. Larger company could enjoy financial benefits, e.g. easier to get bank loans at a lower interest rate.

Against merger

- Dilution of ownership and voting power.
- Wessex Quarries does not appear to be in a healthy financial state, e.g. negative profit and loss reserve.
- Original Wessex balance sheet appears to have many assets overvalued, e.g. machinery overvalued by £100,000.
- Also liquidity position of Wessex is worrying as the company appears to have low working capital ratio/negative working capital.
- Wessex may be a drain on the liquid resources of the new company, especially with the large amount of creditors to pay.

ACTIVITY 9

REAL WORLD MERGERS

1 Students' own answer.

2 Students' own answer.

EXAM PRACTICE

1

Assets and liabilities taken over		**£m**
PPE	28 + 2 - 1	29
Inventories	10	10
Trade receivable	6 - 0.5	5.5
Cash and cash equivalents	4	4
Mortgage	(8)	(8)
Trade payables	(4)	(4)

Goodwill paid		1.5
Purchase price		38

2 £38m / £2 = 19m shares

3(a)

Atoll Facilities Management: Realisation account

Details	£m	Details	£m
Property, plant and equipment	28	Bank loan	8
Inventory	10	Trade payables	4
Trade receivables	6	Plc (purchase consideration)	38
Cash and cash equivalents	4		
Sundry shareholders (profit)	2		
	50		50

(b)

Atoll Facilities Management: Sundry shareholders account

Details	£m	Details	£000s
Plc (purchase consideration)	38	Ordinary share capital	16
		Share premium	8
		Retained earnings	12
		Realisation account	2
	38		38

4

Ocean Hotel Service and Facilities: Statement of financial position at 1 January 2020

	£m	£m
Assets		
Non-current assets		
Property, plant and equipment	61	
Goodwill	4.5	65.5
Current assets		
Inventory	22	
Trade receivables	9.5	
Cash and cash equivalents	2	
		33.5
Total assets		**99**
Equity and liabilities		
Equity		
£1 Ordinary shares	41	
Share premium	41	
		82
Non-current liabilities		
Mortgage	8	
Bank loan	3	

		11
Current liabilities		
Trade payables	6	
		6
Total equity and liabilities		99

5 Goodwill is the difference between the value of the business (net assets) and the fair value of those assets. The fair value is calculated after the revaluation of assets and liabilities at the time of purchase or merger.
The correct treatment of goodwill is to record it in the books as an intangible asset in the non-current assets of the statement of financial position and then to amortise the goodwill over its useful economic life.

Advantages of this treatment

- The buyer of the company will derive the benefits over a number of years, so spreading the costs complies with the matching concept and gives a fair view of the accounts. This approach is in line with IAS 38.
- It will ensure profit in the first year is not understated.

Disadvantages of this treatment

- If goodwill is written off immediately it would comply with the prudence concept, as an accurate valuation of goodwill in the new company would be difficult to calculate.
- In addition, it is difficult to estimate accurately the number of years that the goodwill will be of value to the company, therefore the amortisation charge in the accounts may be unrealistic.

Decision/conclusion

Should be based on your own arguments.

Chapter 4

ACTIVITY 1

RATIOS FOR PROFITABILITY, LIQUIDITY AND USE OF ASSETS

1
Profitability ratios
Gross profit as a percentage of revenue

$$\frac{\text{Gross profit}}{\text{Revenue}} \times 100$$

Percentage Mark-up

$$\frac{\text{Gross profit}}{\text{Cost of sales}} \times 100$$

Profit for the year as a percentage of revenue

$$\frac{\text{Profit for the year}}{\text{Revenue}} \times 100$$

Return on capital employed

$$\frac{\text{Profit before interest (PBI)}}{\text{Capital employed}} \times 100$$

Liquidity ratios
Current (working capital) ratio

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

Liquid ratio (acid test)

$$\frac{\text{Current assets – inventory}}{\text{Current liabilities}}$$

Rate of Inventory Turnover

$$\frac{\text{Cost of Sales}}{\text{Average Inventory}} \quad \text{(Times per Accounting Period)}$$

Trade Payables Payment Period

$$\frac{\text{Trade Payables}}{\text{Credit Purchases}} \times 365$$

Trade Receivables Collection Period

Trade Receivables
Credit Sales x 365

Use of assets ratio
Ratio of non-current assets to revenue

Revenue
Non-current assets

ACTIVITY 2

CALCULATOR PLC (1)

1

Profitability ratios	**2018**	**2019**
(a) Gross profit margin	8,900 ÷ 44,800 × 100 = 19.86%	11,180 ÷ 52,620 × 100 = 21.25%
(b) Net profit margin	4,345 + 480 ÷ 44,800 × 100 = 10.77%	5,464 + 130 ÷ 52,620 × 100 = 10.63%
(c) ROCE	4,345 + 480 ÷ 16,400 × 100 = 29.42%	5,464 + 130 ÷ 17,000 × 100 = 32.91%

ACTIVITY 3

CALCULATOR PLC (2)

1

Gearing ratios	**2018**	**2019**
Gearing	6,000 ÷ 16,400 × 100 = 36.59%	1,200 ÷ 17,000 × 100 = 7.06%
Interest cover	4,345 + 480 ÷ 480 = 10.05 times	5,464 + 130 ÷ 130 = 43.03 times

ACTIVITY 4

CALCULATOR PLC (3)

1

Investment ratios	**2018**	**2019**
(a) EPS	4,224 ÷ 11,400 = 0.37p	5,312 ÷ 12,056 = 0.44p

(b) PE ratio	2.50 ÷ 0.37 = 6.76 times	3.50 ÷ 0.44 = 7.95 times
(c) Dividend payout	180 ÷ 4,224 × 100 = 4.26%	240 ÷ 5,312 × 100 = 4.52%
(d) Dividend cover	24.66 times	23.16 times

ACTIVITY 5

REKON PLC

1(a)

Net profit before tax	11,107
Plus interest payable	3,058
PBIT	14,165

Capital employed = 45,031 + 19,082 = 64,113

Note that short-term liabilities can also be included. In this case an additional £16,290 will be added.

Gross profit margin = 43,192 ÷ 312,524 × 100 = 13.82%

Mark-up = gross profit on cost of sales = 43,192 ÷ 269,332 × 100 = 16.04%

(b) Net profit margin = PBIT/turnover = 14,165 ÷ 312,524 × 100 = 4.53%

Note the difference between mark-up and margin.

(c) Return on capital = PBIT/capital employed = 14,165 ÷ 64,113 × 100 = 22.09%

ACTIVITY 6

FEI MEDIA AND MARKETING PLC

1(a) Return on capital employed % = $\frac{\text{Net profit before interest (NPBI)}}{\text{Capital employed}} \times 100$

= $\frac{(8+2) + 1.8 + 0.8}{67 + 40} \times 100$ = 11.78%

(b) Gearing % = $\frac{\text{Fixed cost capital}}{\text{Capital employed}} \times 100$

= $\frac{40}{107} \times 100$ = 37.38%

(c) Dividend per share = $\frac{\text{Total ordinary dividend paid}}{\text{Number of issued ordinary shares}}$

= $\frac{1.8\text{m}}{}$ = 2.25 pence

80m

(d) Dividend yield % = $\frac{\text{Dividend paid per share}}{\text{Market price of share}} \times 100$

$= \frac{2.25}{120} \times 100 = 1.88\%$

(e) Dividend cover = $\frac{\text{Profit for the year after tax - preference share dividend}}{\text{Total ordinary dividend paid}}$

$= \frac{8m}{1,8m} = 4.44$ times

(f) EPS = $\frac{\text{Net profit for the year after tax - Preference share dividend}}{\text{Number of issued ordinary shares}}$

$= \frac{8m}{80m} = 10$ pence

(g) Price–earnings ratio $\frac{\text{Market price per share}}{\text{Earnings per share}}$

$= \frac{120}{10} = 12$ times

2

Strengths

- ROCE is high (11.78%). This could be higher than many other companies.
- Gearing is very stable. It is below 50%. Should be able to obtain additional funds if required.
- EPS is good, as is the P/E ratio. The market would appear to have confidence in the company.
- Dividend cover is high, so the company is cautious in its approach to giving dividends.

Weaknesses

- Dividend yield is very low at below 2%.
- Dividend cover is high. Teturns to shareholders may be low, a disadvantage to shareholders looking for a regular return/income from the investment.

Conclusion

On balance, the company looks to be a good potential investment, despite not having previous years' figure to compare to.

ACTIVITY 7

INVESTOR RESEARCH

1 Students' own answer.
2 Students' own answer.
3 Students' own answer.
4 Students' own answer.

EXAM PRACTICE

1(a) $\frac{200{,}000 + 500{,}000}{28{,}000{,}000}$ = 2.5 pence per share

(b) $\frac{1{,}400{,}000 - (200{,}000 + 80{,}000)}{28{,}000{,}000}$ = 4 pence per share

(c) $\frac{2.5}{60} \times 100$ = 4.17%

(d) $\frac{60}{4}$ = 15 times

(e) $\frac{1{,}120{,}000}{700{,}000}$ = 1.6 times

(f) $\frac{1{,}400{,}000}{20{,}000{,}000} \times 100$ = 7%

2

For Tao Textiles plc

- The P/E ratio is higher by 5 times (15 v 10), which would indicate the market has confidence in the company.
- The dividend per share is higher by 0.5 pence.
- The dividend cover is lower 1.6 times compared to 2.2 times, which could indicate Tao Textiles plc is willing to pay out larger dividends.

For Wei Management Services plc

- The return on capital employed is slightly better by 0.5%.
- The earnings per share is greater, but only marginally.
- The dividend yield is greater by over 1%, which is significant.
- The dividend cover is greater, which means Wei Management Services plc has a more risk averse policy with regard to dividend policy.

Recommendation

With the information provided, Wei Management plc might be considered the best investment given the dividend yield is higher, as is the ROCE.

Chapter 5

ACTIVITY 1

PROFIT OR CASH

1

Transaction	Effect on profit	Effect on cash flow
Issue of new shares	No effect	Increase
Bad debt written off	Decrease	No effect
Goods bought for cash	No effect	Decrease
Bonus share issue	No effect	No effect
Dividend paid to shareholders	No effect	Decrease
Goods purchased for credit	No effect	No effect
Delivery van purchased for cash	No effect	Decrease

ACTIVITY 2

PROFIT FROM OPERATIONS

1

	£
Profit after tax	2,058,000
Add debenture interest	640,000
Add bank loan interest	4,000
Subtract investment income	(5,000)
Profit from operations	2,697,000

ACTIVITY 3

CALCULATION OF DEPRECIATION AND PROFIT/LOSS ON DISPOSAL

1

	£
Closing depreciation	365,000
Less opening depreciation	(330,000)
Add depreciation on disposal	100,000
Depreciation	135,000

2
Carrying value = £250,000 - £100,000 = £150,000.

Profit/loss = Sales proceeds - carrying value = £115,000 - £150,000 = £35,000

ACTIVITY 4

ZELEAH MINING

1

Zeleah Mining: Statement of cash flows for the year ended 31 December 2019		
	£	**£**
Cash flows from operating activities		
Profit from operations	13,500,000	
Add depreciation on non-current assets	1,100,000	
Add loss on sale of non-current assets	50,000	
Operating cash flow before working capital changes	**14,650,000**	
Decrease in inventories	250,000	
Decrease in other receivables	120,000	
Increase in trade receivables	(90,000)	
Increase in trade and other payables	105,000	
Cash generated from operations	**15,035,000**	
Add interest received: Bank loan	11,000	
Less interest paid: Debenture	(70,000)	
Less tax paid	(3,325,000)	
Net cash from operating activities		**11,651,000**

ACTIVITY 5

MISSING FIGURES

1

	A	**B**	**C**
Change in stock	+2	-50	+70
Change in debtors	+30	-15	-10
Change in creditors	+5	+55	-18
Depreciation	15	20	25
Operating profit (after depreciation)	+100	-80	+40
Cash – opening balance	+200	-160	-23
Cash – closing balance	+288	-100	-10

ACTIVITY 6

REVENUE AND CASH CALCULATIONS

1

Increase in trade receivables	4,250
Revenue	**23,751**
Irrecoverable debts written off	170
Cash received	19,331
Increase in trade payables	3,320
Purchases	17,192
Cash paid	**13,872**

ACTIVITY 7

JJ MOTORS

1

Net cash flow from operating activities		
Net profit		30,600
Depreciation	720	
Increase in creditors	720	
Increase in stock	(10,080)	
Decrease in debtors	1,800	(6,840)
Net cash inflow		23,760

JJ Motors: Cash flow statement for the year ended 31 December 2019	
Net cash inflow	23,760
Returns on investment and servicing of finance	
Payment for fixed assets	(10,800)
Financing	
Share capital repaid	(21,600)
Decrease (outflow) in cash	(8,640)
Changes in cash during the year	
Opening bank balance	5,400
Net cash outflow during the year	(8,640)
Overdraft at year end	(3,240)

The cash flow statement shows that although the company earned a profit of £30,600 during the year, cash resources were depleted by carrying a higher stock, purchasing additional fixed assets and repaying £21,600 of share capital.

ACTIVITY 8

MAXWELL & CO. LTD

1

Maxwell & Co. Ltd: Cash flow statement for the year ended 31 December 2019		
Net cash flow from operating activities		
Net profit		63,325
Depreciation	1,490	
Increase in creditors	1,490	
Increase in stock	-20,860	
Decrease in debtors	3,725	-14,155
Net cash flow from operating activities		49,170
Net cash flow from operating activities		49,170
Returns on investment and servicing of finance		
Payment for fixed assets		-22,350
Financing		
Share capital repaid		-44,700
Decrease (outflow) in cash		-17,880
Changes in cash during the year		
Opening balance		11,175
Net cash outflow		-17,880
Balance (overdraft) at year end		-6,705

ACTIVITY 9

PAUL PLC

1

Paul plc: Cash flow statement for the year ended 30 June 2019			
Operating profit		68	
Add back:			
Depreciation	36		
Loss on sale	2	38	
			106
Decrease in stock		2	
Increase in debtors		(26)	

Increase in creditors	16	(8)
Cash flow from operating activities		98
Net cash flow from operating activities		98
Returns on investment and servicing of finance		
Interest paid	(8)	
Interest received	4	(4)
Taxation (W1)		
Corporation tax paid		(30)
Capital expenditure and financial investment		
Purchase of fixed assets (W2)	(50)	
Receipts from sale of fixed assets (W3)	8	(42)
Equity dividends paid (W4)		(24)
Management of liquid resources (investments)		(30)
Cash outflow before financing		(32)
Financing		
Issue of debentures		40
Increase in cash		8

Workings

W1

Taxation ledger account

Cash	30	01/07/18 Balance b/d	30
30/06/19 Balance c/d	24	30/06/19 Profit and loss	24
	54		54

W2

Fixed assets at year end (260 + 160)	420	
Add cost of assets sold in year	30	450
Less cost at beginning of year		400
Assets purchased during year		£50

W3

Asset sold – at cost (per note)	30	
Accumulated depreciation	20	10
Cash received on sale		8
Loss on sale		2

W4

Dividend ledger account

Cash		24	01/07/18	Balance b/d	24
30/06/19	Balance c/d	28	30/06/19	Profit and loss	28
		52			52

ACTIVITY 10

INTEREST RECEIVABLE

1 Interest receivable = 70,000 + 180,000 - 84,000 = £166,000

ACTIVITY 11

NON-CURRENT ASSETS CASH FLOW

1

Plant at cost

01/01/19	Balance b/d	274,000	01/01/19	Disposal a/c	46,000
31/12/19	Purchases	96,000	31/12/19	Balance c/d	324,000
		370,000			370,000

Accumulated depreciation – plant

01/01/19	Disposal account	28,000	01/01/19	Balance b/d	48,800
31/12/19	Balance c/d	52,300	31/12/19	P&L	31,500
		80,300			80,300

Disposal account

01/01/19	Plant – cost	46,000	01/01/19	Depreciation	28,000
			01/01/19	Sale	11,000
			01/01/19	Loss on sale	7,000
		46,000			46,000

Motor vehicles at cost

01/01/19	Balance b/d	31,200	01/01/19	Sale	12,000
31/12/19	Purchases	34,000	31/12/19	Balance c/d	53,200
		65,200			65,200

Accumulated depreciation – motor vehicles

01/01/19	Disposal	7,500	01/01/19	Balance b/d	9,100
31/12/19	Balance c/d	14,300	31/12/19	P&L	12,700
		21,800			21,800

Disposal account

01/01/19	Motor vehicle	12,000	01/01/19	Depreciation	7,500
31/12/19	Profit on sale	2,500	01/01/19	Cash	7,000
		14,500			14,500

Operating activities

Depreciation for the year		
Plant	31,500	
Motor vehicles	12,700	44,200
Loss on sale	7,000	
Less profit on sale	2,500	4,500
Investing activities		
Purchase plant	-96,000	
Purchase motor vehicles	-34,000	
Sale of fixed assets (11,000 + 12,000)	23,000	-107,000

Note: The £230,000 increase in the premises is not because of a further purchase but rather because of a revaluation. This can be seen from the asset revaluation account of £230,000. As such, it does not appear in the cash flow statement.

EXAM PRACTICE

1

Pierides Shipping Management plc: Statement of cash flows for the year ended 31 January 2020

	£000	£000
Cash flows from operating activities		
Profit from operations	7.8	
Add depreciation on non-current assets	50	
Add loss on sale of non-current assets	2	
Operating cash flow before working capital changes	**59.8**	
Increase in inventories	(3)	
Decrease in trade and other receivables	18	
Increase trade and other payables	3	

Cash generated from operations	**77.8**	
Less interest paid	(2.8)	
Less tax paid	(7)	
Net cash from operating activities		**68**
Cash flows from investing activities		
Less payments to purchase non-current assets	(52)	
Add proceeds from disposal of non-current assets	38	
Net cash used in investing activities		**(14)**
Cash flows from financing activities		
Add proceeds from share issues		
Ordinary share capital	60	
Share premium	12	
Less final dividend paid	(27)	
Less interim dividend paid	(12)	
Less repayment of loans and debentures	(70)	
Net cash used in financing activities		**(37)**
Net increase in cash and cash equivalents		**17**
Cash and cash equivalents at the beginning of the year		6
Cash and cash equivalents at the end of the year		23

Workings
Profit from operations = Profit before tax plus interest = £5,000 + £2,800

Depreciation

Provision for depreciation – Non-current assets

Details	£000	Details	£000
Disposal	60	Balance b/d	130
Balance c/d	120	**Depreciation**	**50**
	180		180
		Balance b/d	120

Loss on sale
Carrying value less sales proceeds = £40,000 - £38,000 = £2,000

Final dividend
180,000 shares at 15 pence per share = £27,000

Share issue
60,000 ordinary shares at £1 = £60,000 ordinary share capital, plus 60,000 shares at a premium of 20 pence per share = £12,000.

Interim dividend
240,000 shares at 5 pence per share = £12,000

2
Points for being useful

- Helps the user understand where the business has generated its cash and how it is utilised. Pierides Shipping Management plc has relied on cash from operating activities.

- Users can assess the quality of sales – whether trade receivables are paying and cash is being generated. Trade and other receivables have decreased, which is a positive sign.
- Can be used by investors and other analysts to see if there is a difference between the SOFP and the statement of cash flows. The figures agree, which is a positive sign.

Points against being useful

- It does not assess the liquidity of a company, it merely states the position – ratio analysis is required to assess the liquidity. The cash and cash equivalents may have increased but users would need to calculate liquidity ratios using the statement of financial position in order to assess the liquidity position of the company.
- It is based on historical data and so it is difficult to predict the future cash situation from this.
- The cash position could be manipulated by managers by delaying payment to trade and other payables or delaying investment in non-current assets. The cost and carrying value of non-current assets has declined over the year. This may indicate the company is delaying the purchase of new non-current assets.

Chapter 6

ACTIVITY 1

ADJ SKATES

1

	March	April	May	June	July	August
Sales: units	400	440	484	484	484	363

2

	March	April	May	June	July	August
Sales: £	4,800	5,280	5,808	5,808	6,292	4,719

ACTIVITY 2

ETHEN EDWARD PRODUCTION BUDGET

1

Units	February	March	April
Revenue (sales units)	32,000	28,000	18,000
Opening inventory	(10,000)	(16,000)	(14,000)
Closing inventory	16,000	14,000	9,000
Additional production - rejects	975	26,667	685
Production	**38,975**	**26,667**	**13,685**

Workings: using mark-up, in February (38,000 units / 97.5) x 100 = 38,975 units required to be manufactured to have 38,000 saleable football shirts.

ACTIVITY 3

JOLLY MOTOR OILS

1

	Month 1	Month 2	Month 3	Month 4
Production budget	units	units	units	units
Revenue budget	400	600	680	590
Opening inventory	(100)	(120)	(130)	(118)
Closing inventory	120	130	118	120

Production	**420**	**610**	**668**	**592**

2

	Month 1	**Month 2**	**Month 3**	**Month 4**
Purchases budget	litres	litres	litres	litres
Production	630	915	1,002	888
Opening inventory	(200)	(91.5)	(100.2)	(88.8)
Closing inventory	91.5	100.2	88.8	60
Purchases	**521.50**	**923.70**	**980.60**	**859.20**
Purchases (£)	**312.90**	**554.22**	**588.36**	**515.52**

ACTIVITY 4

SUN POWER PRODUCTS PLC

1

Capital budget	**£m**
Ordinary share capital	24
Retained earnings	26
Debenture	18
Bank loan	12
Total capital	**80**

ACTIVITY 5

JETSET LTD

1

Cash budget for the three months ending 30 June 2021

	April	**May**	**June**
Cash receipts/inflows			
Cash sales	124,000	120,000	96,000
Credit sales	60,000	64,000	58,000
Tax rebate			50,000
Total cash inflows	184,000	184,000	204,000
Less cash payments/outflows			
Purchases	76,000	86,000	90,000

Wages	24,000	24,000	24,000
Overheads	36,000	36,000	36,000
Loan	70,000		
Loan		23,000	
Total			
Cash outflows	206,000	169,000	150,000
Net cash surplus/deficit	(22,000)	15,000	54,000
Opening cash balance	15,000	(7,000)	8,000
Closing cash balance	(7,000)	8,000	62,000

2 A deficit in cash could be overcome by increasing the capital of the company or by arranging overdraft facilities or by another form of loan.

There are ways in which a deficit can be prevented. These include:

- Negotiate better credit terms with suppliers.
- Reduce the time allowed and taken by debtors to pay for credit sales.
- Hold lower stocks, which allows for a reduction in monthly purchases.
- Encourage cash sales by offering special discounts.
- Reduce monthly expenditure wherever possible.

ACTIVITY 6

OUTDOOR SHOPPING

1

2021 budget (£000)

Cash inflows	March	April	May	June	July	Aug
Cash sales	10	8	8	12	10	8
60% credit	48	24	19.2	19.2	28.8	24
40% credit	25.6	32	16	12.8	12.8	19.2
	83.6	64	43.2	44	51.6	51.2

Cash outflows	March	April	May	June	July	Aug
Purchases	40	10	60	10	30	20
Wages	10	14	18	18	14	10
Rent	2.8	2.8	2.8	2.8	2.8	2.8
Loan interest		12			12	

Office equip			14			
	52.8	38.8	94.8	30.8	58.8	32.8

Net surplus	March	April	May	June	July	Aug
(deficit)	30.8	25.2	(51.6)	13.2	(7.2)	18.4
Opening balance	5.9	36.7	61.9	10.3	23.5	16.3
Closing balance	36.7	61.9	10.3	23.5	16.3	34.7

ACTIVITY 7

ROSE FASHIONS LTD

1

Cash inflows	Jul	Aug	Sept
Cash sales	70,000	45,000	80,000
Credit sales	65,000	75,000	70,000
	135,000	120,000	150,000

Cash outflows	Jul	Aug	Sept
Purchases	65,000	50,000	90,000
Overheads	10,000	7,000	11,000
Wages	35,000	35,000	35,000
Rent	18,000		
Taxation		10,000	
Computer		50,000	
	128,000	152,000	136,000

Net surplus	Jul	Aug	Sept
Opening balance	5,000	12,000	(20,000)
Surplus/deficit	7,000	(32,000)	14,000
Closing balance	12,000	(20,000)	(6,000)

ACTIVITY 8

RAINBOW LIMITED

1

Flexible budget	
Production	6,600
Direct materials	21,120
Direct labour	54,780
Fixed overheads	2,300
Total cost of production	78,200

ACTIVITY 9

DANIEL

1

(a) Revenue budget

	Tables		Chairs		Total	
	Units	Value	Units	Value	Units	Value
Sales	40	£20,000	100	£14,000	140	£34,000

(b) Production budget

	Tables Units	Chairs Units
Sales	40	100
Less opening stock	(20)	(40)
Plus closing stock*	6	15
Units required	26	75

* You calculate the closing stock by taking 15% of the number of units sold in April. Once you know that then the difference equals the number of units that Daniel is required to manufacture in April.

(c) Materials usage budget

	Units	Material kg	Price per kg	Total £
Tables	26	312	£14	4,368
Chairs	75	375	£14	5,250
Total material cost				£9,618

(d) Budgeted profit and loss

	Tables	Chairs	Total
Sales	20,000	14,000	34,000
Material cost	4,368	5,250	9,618
Labour cost	2,574	4,050	6,624
Contribution	13,058	4,700	17,758
Administration, selling and distribution overheads**	350	550	900
Profit	£12,708	£4,150	£16,858

** The administration, selling and distribution costs are apportioned on the basis of hours taken in production.

ACTIVITY 10

JACK LTD

1

Inventory budget:

Month	January	February	March	April
Opening stock	46	84	112	128
Production*	232	238	296	352
	278	322	408	480
Less sales	194	210	280	320
Closing stock	84	112	128	160

Raw materials budget:

Month	January	February	March
Opening stock	140	214	266
Purchases of raw material*	422	409	494
	562	623	760
Less production usage	348	357	444
Closing stock	214	266	316

* Note that these figures are the balancing figures.

ACTIVITY 11

ONE-ONE LTD

1

Receipts	Sep	Oct	Nov	Total
Cash	21,609	12,965	17,287	51,861
Debtors	32,340	26,950	16,170	75,460
	53,949	39,915	33,457	127,321
Payments				
Credit purchases	8,400	11,200	15,400	35,000
Labour	9,000	5,400	7,200	21,600
Other variable	6,000	3,600	4,800	14,400
Fixed costs	5,850	5,850	5,850	17,550
	29,250	26,050	33,250	88,550
Net surplus/deficit	24,699	13,865	207	38,771
Opening balance	11,800	36,499	50,364	11,800
Closing balance	£36,499	£50,364	£50,571	£50,571

ACTIVITY 12

WOOD PRODUCTS LTD

1

Revenue budget for July–December 2020

	July	Aug	Sept	Oct	Nov	Dec	Total
UK	700	700	700	700	700	700	4,200
USA	300	300	300	500	500	575	2,475
Totals	1,000	1,000	1,000	1,200	1,200	1,275	6,675

2 Budgets are prepared in the following order:

(a) Sales – this is the key budget for all the others.
(b) Stock – this ensures sufficient quantity of raw material at all times.
(c) Production – prepared to meet sales and stock levels.
(d) Cash – the budget is derived from production and sales budgets.

ACTIVITY 13

FRESH TO FRIDGE

1

Receipts (£)	September	October	November
Month of sale	24,000	29,600	28,800
Less discount	(480)	(592)	(576)
Month after sale	21,400	36,000	44,400
Irrecoverable debts	(214)	(360)	(444)
Total	44,706	64,648	72,180

ACTIVITY 14

MOOSA HALEEM

1

Cash budget for period January–March 2021			
	Jan	Feb	March
Cash in			
Capital	350,000		
Bank loan	120,000		
Sales - cash	90,000	94,500	112,500
- credit		210,000	220,500
Total	**560,000**	**304,500**	**333,000**
Cash out			
Motor vehicle	120,000		
Wages	50,000	50,000	50,000
Other expenses		20,000	20,000
Drawings	10,000	10,000	10,000
Purchases		126,000	234,000
Initial inventory	250,000		
Interest	600	600	600
Marketing	60,000		
Total	**490,600**	**206,600**	**314,600**
Net cash flow	69,400	97,900	18,400
Opening balance	0	69,400	167,300
Closing balance	69,400	167,300	185,700

2

Budgeted statement of profit or loss and other comprehensive income for the three months ending March 2021			
		£	**£**
Revenue			990,000
Cost of sales			
Opening inventory		250,000	
Purchases		690,000	
Closing inventory		280,000	
			660,000
Gross profit			330,000
Less expenses			
Marketing	20,000		
Wages	150,000		
OE	60,000		
Depreciation	6,000		
Interest	1,800		237,800
Profit			92,200

3

Budgeted statement of financial position at 31 March 2021			
	£	**£**	**£**
Non-current assets			
Motor vehicles	120,000	6,000	114,000
Current assets			
Inventory	280,000		
Trade receivables	262,500		
Prepaid marketing expenses	40,000		
Cash	185,700		
			768,200
Total assets			**882,200**
Capital and equity			
Capital			350,000
Profit			92,200
Drawings			30,000
			412,200
Non-current liabilities			
Bank loan			120,000
Current liabilities			
Trade payables	330,000		
Accrued expenses	20,000		350,000
Total Equity and liabilities			**882,200**

EXAM PRACTICE

1

£	May	June	July	August
Inflows				
Kayaking and canoeing	3,200	3,200	3,200	3,200
Shop		2,800	3,360	2,800
Online sales		1,200	1,200	1.200
Disposal of equipment				1,000
Total inflows	**3,200**	**7,200**	**7,760**	**8,200**
Outflows				
Wages		840	840	840
Shop expenses		280	280	280
Utilities	60	60	60	60
Insurance	400	400	400	400
Sundry expenses	40	40	40	40
Purchases – shop	1,680	2,016	1,680	
Purchases – online			800	800
Drawings	1,600	1,600	1,600	1,600
Total outflows	**3,780**	**5,236**	**5,700**	**4,020**
Net cash Flow	(580)	1,964	2,060	4,180
Balance b/f	(500)	(1,080)	884	2,944
Balance c/f	(1,080)	884	2,944	7,124

2

For increasing drawings

- It would provide more tangible rewards for the partners for their efforts.
- The business appears to have sufficient cash over the trading period to support the decision.

Against increasing drawings

- The increase is equivalent to £200 per week from £200, which is a large increase. It would result in an extra £6,400 outflow of cash, leaving little for

investment or emergencies.

For investment

- New equipment might increase demand for the product and might allow them to increase their prices, so increasing the revenue.
- Old equipment is being sold, so some replacement will be necessary as the equipment is depreciating, probably through wear and tear.
- The business is generating sufficient cash over the whole trading period.

Against investment

- The business would not have sufficient cash in July to pay for the equipment. A loan would be required, which might increase costs.

Evaluation

They cannot do both. Drawings would improve the quality of life, while investment might bring future rewards.

Chapter 7

ACTIVITY 1

LARNACA FOUNDRY

1
Materials: 4 x £3.50 = £14 per unit
Labour: (2 x £15.50) + (1.5 x £9.70) = £45.55
Overhead: 10,200 / 200 = £51.00
Standard cost per unit: £110.55
Standard cost per 200 units: **£22,110**

ACTIVITY 2

VARIANCE ANALYSIS

1 Efficiency analysis – material usage variance, labour hours efficiency.

2 Price variance – material price variance, labour rate variance.

3

Efficiency analysis			
Name	**Formula**	**Meaning**	**When adverse? When favourable?**
Materials usage variance	(standard quantity - actual quantity) x standard price	This means whether the change in quantity of material used affects the difference between budgeted material cost and actual material cost.	Actual < Budget = Favourable Actual > Budget = Adverse
Labour efficiency variance	(Standard hours - actual hours) x standard rate	This measures whether the change in labour hours affects the difference between budgeted labour cost and actual labour cost.	

4

Price variance			
Name	**Formula**	**Meaning**	**When adverse? When favourable?**

Materials price variance	(Standard price - actual price) x actual quantity	This means whether the change in price of material used affects the difference between budgeted material cost and actual material cost.	Actual < Budget = Favourable Actual > Budget = Adverse
Labour rate variance	(Standard rate - actual rate) x actual hours	This measures whether the change in labour wage rate affects the difference between budgeted labour cost and actual labour cost	

ACTIVITY 3

HARBOUR ROPES

1 (1740 x £5.25) - (1680 x £5.65) = £9,135 - £9492 = £357 Adverse

2 1680 x (£5.25 - £5.65) = £672 Adverse

3 £5.25 x (1740 - 1680) = £315 Favourable

4 Adverse price variance – more expensive supplier used, no trade discounts.

Favourable usage variance – better quality of material, more skilled workforce.

Total materials variance – better quality material but at a higher price.

ACTIVITY 4

RAVI & CO.

1 We need to flex the budget, which will show the effect on profit and the output volume differences. We cannot compare budget and actual cost where the output does not coincide. In this example, we increase the budget to a 1,900 unit output.

Flexed budget			**1,600 units**		**1,900 units**
Sales			32,000		38,000
Direct materials:	Plastic £25/kg	6,000		7,125	
	Colourants £10/litre	8,000		9,500	
Direct labour	Skilled £2.5 per hour	2,000		2,375	

	Unskilled £2 per hour	5,000		5,938	
Fixed overheads		6,000	27,000	6,000	30,938
Budgeted profit			5,000		7,062

Usage for 1,600 units	Usage for 1,900 units	Actual usage/cost
Material usage 240 kg	Material usage 285 kg	Material usage 155 kg
Price £25/kg	£25/kg	£49/kg
Colourants 800 litre	Colourants 950 litre	Colourants 460 litre
£10/litre	£10/litre	£20/litre
Skilled 800 hour	Skilled 950 hour	Skilled 845 hour
£2.5 per hour	£2.5 per hour	£2.6 per hour
Unskilled 2,500 hour	Unskilled 2,969 hour	Unskilled 2,375 hour
£2 per hour	£2 per hour	£2.2 per hour
Fixed costs	£6,000	£5,980

Sales variance = Budgeted selling price - Actual selling price = £1,500 (A)

Material usage (Actual - Standard usage) × Standard price = 130 kg @ 25 = 3,250 (F)

Material price (Actual - Standard price) × Actual usage = (49 - 25) × 155 kg = 3,720 (A)

Colourant usage = (460 - 950) = 490 litres @ 10 = 4,900 (F)

Colourant price (20 - 10) × 460 litres = 4,600 (A)

Skilled labour hours (Actual hours - Standard hours) × Standard rate = (845 - 950) × £2.50 = 105 hours × £2.50 = £262.50 (F)

Skilled labour rate (Actual rate - Standard rate) × Actual hours = (£2.60 - £2.50) × 845 = £84.50 (A)

Unskilled labour hours (2,375 - 2,969) × £2 = 594 hours @ 2 = 1,188 (F)

Unskilled labour rate (£2 - £2.20) × 2,375 hours = £475 (A)

Fixed costs usage = Actual overhead expenditure - Budgeted overhead expenditure = £5,980 - £6,000 = £20 (F)

Variances	F	A
Sales		1,500
Materials	3,250	3,720
Colourants	4,900	4,600
Skilled labour	262.50	84.50
Unskilled	1,188	475
Fixed overheads	20	
Totals	9,620.50	10,379.50

Difference between flexed budget and actual results = £7,062 - £6,303 = £759 (A)

Actual profit and loss account			
Sales			36,500
Direct materials:	Plastic	7,595	
	Colourants	9,200	
Direct labour	Skilled	2,197	
	Unskilled	5,225	
Fixed overheads		5,980	30,197
Actual profit			6,303

The difference between the favourable and unfavourable variances = £759. This is the difference between the budgeted and actual results.

ACTIVITY 5

MERVYN & CO.

1

	Budget	Flexed budget	Actual
Number of units	**2,200**	**2,300**	**2,300**
Direct material	88,000	92,000	92,600
Direct labour	44,000	46,000	46,400
Fixed overheads	40,000	40,000	38,600
Profit	48,000	52,000	49,400
Sales	220,000	230,000	227,000
Material used	88,000 kg	92,000 kg	92,600 kg
Labour	5,500 hours	5,750 hours	5,920 hours

Original profit minus flexed profit = 48,000 - 52,000 = £4,000 (F)

This is favourable because we sold more than in the original budget. You must note that this is the only time that we use any information from the original budget for comparison.

All the remaining variances are calculations between the actual results and the flexed budget.

Sales price variance:
£230,000 - £227,000 = £3,000 (A)

Material usage variance:
We take the excess in kg used at the budget price = 600 × £1 = £600 (A)

Material price variance:
92,600 - (92,600 × £1) = 0. There is no variance here as the cost price paid for the actual usage was the same price as per the budget.

Labour efficiency variance:
5,920 - 5,750 = £170 additional hours taken for the production. This amount is then multiplied by the budgeted hourly rate of £8 to achieve an amount of £1,360 (A).

Labour rate variance:
(5,920 × 8) - 46,400 = £960 (F)

Fixed overhead variance:
40,000 - 38,600 = £1,400 (F)

Reconciliation		
Profit per original budget		48,000
Add favourable variances:		
Sales volume	4,000	
Labour rate	960	
Overhead	1,400	6,360
		54,360
Less adverse variances:		
Sales price	3,000	
Material usage	600	
Labour efficiency	1,360	4,960
Actual profit		49,400

ACTIVITY 6

FRANCIS & CO.

1 (a) Material usage variance:
2,000 metres extra at £1 per metre = £2,000 (A)
Sales price variance:
£4,000 (F)

Material price variance:
We take the actual metres used at the budget price = 74,000 × £1 = 74,000.
From this we deduct the actual amount paid of £73,800. This results in a £200 (F) variance.

(b) Labour efficiency variance:
4,300 hours - 4,500 actual hours × £8 = £1,600 (F)

Labour rate variance:
4,300 hours × £8 = 34,400 - 35,000 = £600 (A)

(c) Fixed overhead variance:
More was spent than allowed in the budget: £1,400 (A)

Reconciliation	
Profit per original budget	40,000
Add favourable variances:	

Sales price	4,000	
Material price	200	
Labour efficiency	1,600	5,800
		45,800
Less adverse variances:		
Sales volume	8,000	
Material usage	2,000	
Labour rate	600	
Fixed overheads	1,400	12,000
Actual profit		33,800

ACTIVITY 7

MARCEL LTD

1(a) Material usage = 3,672 - 3,400 = 272 × 52 = 14,144 (A)

Material price = 264,384 - (3,672 × 52) = 73,440 (A)

(b) Labour rate = 136,000 - (5,440 × 61/3) = 25,386 (A)

Labour efficiency = 5,440 - 5,100 = 340 × 61/3 - 6,914 (A)

(c) Overheads = 18,000 - 12,600 = 5,400 (A)

	Original budget	Flexed budget	Actual
Units	1,400	1,700	1,700
Material usage	2,800	3,400	3,672
Material price	£145,600	£176,800	£264,384
Labour hours	4,200	5,100	5,440
Labour rate	£85,400	£103,700	£136,000
Fixed overheads	£12,600	£12,600	£18,000
Sales	£366,800	£445,400	£579,020
Profit	£123,200	£152,300	£160,636

Original profit		123,200
Add favourable variances:		
Sales volume	29,100	
Sales price	133,620	162,720
		285,920
Less adverse variances:		
Material usage	14,144	
Material price	73,440	
Labour rate	25,386	
Labour efficiency	6,914	

Overheads	5,400	125,284
Actual profit		160,636

Exam practice

1

	Budget	Actual	Variance
	£	£	£
Revenue	48,500	**47,000**	1,500 Adv
Less			
Material costs	**3,675**	**3,705**	**30 Adv**
Labour costs	12,220	**12,400**	180 Adv
Variable overheads	2,150	**2,250**	100 Adv
= Cost of sales	**18,045**	**18,355**	**310 Adv**
Gross profit	**30,455**	**28,645**	**1,810 Adv**
Less fixed overheads	22,300	**21,570**	730 Fav
Profit for the year	**8,155**	**7,075**	**1,080 Adv**

2

(a) (£0.98 - £0.95) x 1,500 = £45 x 3900/1500 = £117 Fav

(b) (1500 x 2.5) - (4000 - 100) x £0.98 = £147 Adv

(c) £117 Fav + £147 Adv = £30 Adv

3

Favourable material price variance

- Lower price charged by the supplier.
- Bulk purchasing or trade discounts.
- Lower quality material purchased.

Adverse material usage variance

- Inferior materials leading to an increase in wastage.
- Less skilled workforce leading to more rejected products.
- Poor inventory control leading to deterioration of stock, possible theft of inventory.

Chapter 8

ACTIVITY 1

WHY PLC

1

	Machine A	Machine B	Machine C
Investment	(150,000)	(180,000)	(165,000)
Year 1 cash flow	45,000	36,000	30,000
	(105,000)	(144,000)	(135,000)
Year 2	45,000	42,000	39,000
	(60,000)	(102,000)	(96,000)
Year 3	45,000	90,000	39,000
	(15,000)	(12,000)	(57,000)
Year 4	30,000	60,000	75,000
	15,000	48,000	18,000
Year 5	24,000	45,000	75,000
	39,000	93,000	93,000
Payback time	3.5 years	3.2 years	3.8 years

Based on the time taken to recover the cost of the new machine, Why Ltd should select machine B.

ACTIVITY 2

CAM WATER COOLERS PLC

1

Average annual profit = $\frac{\text{Total profit}}{\text{Number of years}}$

Option 1: $\frac{£3,000,000}{5}$ = £600,000

Option 2: $\frac{£2,900,000}{5}$ = £580,000

Average investment = $\frac{\text{opening value of investment + closing value of investment}}{2}$

Option 1: $\frac{£3,200,000 + £1,200,000}{2}$ = £2,200,000

Option 2: $\frac{£4,000,000 + £800,000}{2}$ = £2,400,000

Average rate of return % (ARR %) = $\frac{\text{Average annual profit}}{\text{Average investment}} \times 100$

Option 1: $\frac{£600,000}{£2,200,000} \times 100 = 27.27\%$

Option 2: $\frac{£580,000}{£2,400,000} \times 100 = 24.17\%$

Cams Water Coolers should proceed with Option 1 as it has the greater ARR.

ACTIVITY 3

AZIZ AGGREGATES

1
Option 1:

Year	Net cash flow	Discount factor	NPV
0	(24)	1	(24)
1	7.1	0.943	6.6953
2	7.1	0.890	6.3190
3	7.1	0.840	5.9640
4	7.2	0.792	5.7024
5	7.2	0.747	5.3784

Net present value is £6,059,100.

Option 2:

Year	Net cash flow	Discount factor	NPV
0	(18)	1	(18)
1	5.5	0.943	5.1865
2	5.5	0.890	4.8950
3	5.5	0.840	4.6200
4	6	0.792	4.752
5	6	0.747	4.4820

Net present value is £5,935,000.

As the net present value of Option 1 is greater than Option 2, Option 1 should be chosen.

ACTIVITY 4

CLEAN CLOTHES LAUNDERETTE PLC

1

Year	Annual cash flow	PV factors at 20%	Present value
0	(150,000)	1.000	(150,000)
1	60,000	0.833	49,980
2	60,000	0.694	41,640
3	60,000	0.579	34,740
4	60,000	0.482	28,920
5	20,000	0.402	16,080
6	20,000	0.335	6,700
			128,060

Using the 20% return expected, we can see there is a positive NPV at the end of the sixth year. This gives us the go-ahead for the project but it does not tell us what the expected rate of return is. For this we use a further method to determine the internal rate of return (IRR).

Using a higher rate of interest, we redo our calculations. Assuming a rate of 30% for the project, the NPV would be as follows:

Year	Annual cash flow	PV factors at 30%	Present value
0	(150,000)	1.000	(150,000)
1	50,000	0.759	45,140
2	50,000	0.592	35,520
3	50,000	0.455	27,300
4	50,000	0.350	21,000
5	20,000	0.259	10,750
6	20,000	0.207	4,140
			(5,140)

In this case there is a deficit, which tells us the IRR is less than 30% but more than the 20% minimum required by the directors.

IRR = 29.61

ACTIVITY 5

WHY PLC (2)

1

Why Ltd	Year	Discount factor	A	B	C
Initial investment	0	1	(150,000)	(180,000)	(165,000)

Net cash inflows:	1	0.893	40,185	32,148	26,790
	2	0.797	35,865	33,474	31,083
	3	0.712	32,040	64,080	27,768
	4	0.636	19,080	38,160	47,700
	5	0.567	13,608	25,515	42,525
Net present value			**(9,222)**	**13,377**	**10,866**

2 This would indicate that Machine B should be chosen.

ACTIVITY 6

GLOBAL DIGITAL CONSTRUCTION PLC

1

Source of funds	£m	Interest rate/ expected return	Interest/return £m
Ordinary shares	250	6%	15
Preference shares	190	3%	5.7
Debenture	340	8%	27.2
Bank loan	170	5%	8.5
Total	950		56.4

Weighted cost of capital (WACC) = $\frac{\text{Cost of interest and returns}}{\text{Total cost of project}} \times 100$

$= \frac{56.4}{950} \times 100 = 5.94\%$

2 The most appropriate funding package is the second option since the cost of capital is lower.

ACTIVITY 7

FAST PRINTING SOLUTIONS

1 Annual cash flows: 500,000 - 50,000 (wages) - 100,000 (material) = £350,000

Payback year	Cash flow	Cumulative cash flow
0	-400,000	-400,000
1	350,000	-50,000
2	350,000	300,000

The payback period is longer than one year but less than two years.

1 year + (52 weeks × 50,000 ÷ 350,000) = 1 year 7.4 weeks

2

Net present value

Year	Cash flow	Factor	NPV
0	-400,000	1	-400,000
1	350,000	0.8333	291,655
2	350,000	0.6944	243,040
3	350,000	0.5787	202,545
4	350,000	0.4823	168,805
	1,000,000		506,045

The positive NPV satisfies the company's investment criteria.

3 Accounting rate of return
Annual net profits = sales - wages - materials - depreciation (400,000/4)
= 500,000 - 50,000 - 100,000 - 100,000 = £250,000

Average capital employed = 400,000 ÷ 2 = £200,000

ARR = average annual profit ÷ average capital employed × 100%
250,000 ÷ 200,000 × 100 = 125%

Card-cutting machine
Annual cost savings = savings 325,000 - 100,000 (annual cost of new machine)
= £225,000

4(a)

Payback year	Cash flow	Cumulative cash flow
0	-300,000	-300,000
1	225,000	-75,000
2	225,000	150,000

Payback period is longer than one year but less than two years.
1 year + 75,000 / (225,000 / 12) = 1 year + 4 months

(b)

Net present value

Year	Cash flow	Factor	Net PV
0	-300,000	1	-300,000
1	225,000	0.8333	187,493
2	225,000	0.6944	156,240
3	225,000	0.5787	130,208
4	225,000	0.4823	108,518
	600,000		282,459

The result shows a positive NPV.

(c) ARR
Annual profit improvement = cutting revenue - running cost - depreciation

$325{,}000 - 100{,}000 - \left(\frac{300{,}000}{4}\right) = 150{,}000$

Average capital employed = $\frac{300{,}000}{2} = 150{,}000$

ARR = $\frac{150{,}000}{150{,}000} = 100\%$

5 The new printing press gives the best return. Although the card-cutting machine also gives a good return (100%), the printing press shows a shorter payback period.

ACTIVITY 8

ART LTD

1

Year	Discount factor	PV
1	0.909	(9,090)
2	0.826	49,560
3	0.751	71,345
4	0.683	51,225
		163,040
Initial investment		100,000
NPV		63,040

Investment is worthwhile because the NPV is positive.

2

Year	PV 20%	PV 25%	PV 30%
1	(8,333)	(8,000)	(7,690)
2	41,640	38,400	35,520
3	55,005	48,640	43,225
4	36,150	30,750	26,250
	124,462	109,790	97,305
Investment	100,000	100,000	100,000

IRR is between 25% and 30%.

ACTIVITY 9

STYLISH WEAR LTD

1
Net cash flows resulting from the replacement machine

Year	Cash inflow	Cash outflow	Net cash flow
2021	365,000	200,000	165,000
2022	557,600	295,800	261,800
2023	702,000	374,400	327,600

2
Net present value of the replacement machine

Year	Net cash flow	Discount factor	Present value
2021	-400,000	1.000	-400,000
2022	165,000	0.909	149,985
2023	261,800	0.826	216,247
2024	327,600	0.751	246,027
Net present value			212,259

3(a) The payback period is the amount of time it takes to recover or receive in cash the income required to match the amount spent on the investment.

(b) The accounting rate of return is the average profit (expressed as a percentage) of the capital invested in the project.

4 From the financial point of view the net present value indicates a return on investment significantly in excess of the 10% cost of capital faced by the company. There may be non-financial factors to take into account, e.g. reduction of the labour force. Overall it would depend on company policy and how this decision fitted in with its overall strategy.

5 If the net present value were zero instead of £212,259 then the exact return on the investment would have equalled the chosen discount rate (10%). The exact rate is known as IRR. Since NPV is higher than zero the IRR must be higher than 10%. It is possible to estimate the IRR by deciding how much above zero the return is and expressing this as a percentage.

6 The internal rate of return is more valuable than the net present value because it is more precise.

ACTIVITY 10

HELICO LTD

1
Workings:
Income calculation:
Years 1 & 2 = 300 days × £690 = £207,000
Year 3 = (320 days × 2) × £690 = £441,600
Years 4, 5 & 6 = (320 days × 2) × £828 = £529,920

Depreciation = £900,000 / 6 = £150,000 p.a.

Monthly expenses:
Years 1 & 2 = £315,000
Years 3, 4 & 5 = £355,000
Year 6 = £381,000

Payback period

Year	Cash inflow	Cash outflow	Net cash flow
0		(950,000)	(950,000)
1	207,000	(165,000)	42,000
2	207,000	(165,000)	42,000
3	441,600	(205,000)	236,600
4	529,920	(205,000)	324,920
5	529,920	(205,000)	324,920
6	529,920	(231,000)	298,920

At the end of year 5, £970,440 is paid back as calculated in the above cash flow statement.

Payback is after four years and (20,440 / 324,920) × 365 days = 4 years 23 days

Using the payback method and the fixed criteria of the company we would not invest as the period is greater than four years (only 23 days excess).

Net present value

Year	Net cash flow	Discount factor	Disc cash flow
0	(950,000)	1.000	(950,000)
1	42,000	0.870	36,540
2	42,000	0.756	31,752
3	236,600	0.658	155,683
4	324,920	0.572	185,854
5	324,920	0.497	161,485
6	298,920	0.432	129,133
NPV			(249,553)

NPV shows that the company should not invest.

Average rate of return:
Total surplus of project = £1,269,360 - 950,000 = £319,360

Average annual return = $\frac{£319,360}{6 \text{ years}}$ = £53,227 per year

Accounting rate of return = $\frac{£53,227}{£950,000}$ x 100 = 5.60%

As the company only invests where an average of 10% return is shown, it should not invest in this project.

2
In considering this project there are many things to take into account. These include:

- Accuracy of predictions.
- Chance of renewal of contract after the initial six years.
- Other possible investment projects available.
- Does the project identify with other objectives and/or strategy of the company?

EXAM PRACTICE

1(a) The accounting rate of return is the profit as a percentage of the cost of the investment over the life of the investment.

(b) The weighted average cost of capital for a company is the average interest rate (cost) it must pay to finance a capital investment.

2
Cash flows

Year	Cash inflows £	Cash outflows £	NCF £	Cumulative cash flow
0		1,600,000	(1,600,000)	(1,600,000)
1	312,000	84,000	228,000	(1,372,000)
2	338,000	8,200	248,800	(1,123,200)
3	416,000	89,200	326,800	(796,400)
4	416,000	84,000	332,000	(464,400)
5	1,890,000	73,600	1,816,400	1,352,000

NPV

NCF £	Discount factor	NPV
(1,600,000)	0	(1,600,000)
228,000	1	215,004
248,800	2	221,432
326,800	3	274,512
332,000	4	262,944
1,816,400	5	1,356,851
	NPV =	730,743

3 Payback period is five years as cash inflow from the sale of depot is not until the end of the year.

4
Advantages of the pay back method

- It is a simple calculation and easy to understand. As such it is highly favoured by managers and non-accountants. In the case of Dunburr it is easy to calculate the period as five years.
- Considers the cash inflows and outflows and so reflects liquidity.
- Recognises that cash received earlier in the project is probably preferable to cash received later.

Disadvantages of the payback method

- It does not measure total profitability over the life of the investment but merely tells how long it will take to recover the initial investment – but in this example the life of the investment is known.
- Does not consider the time value of money like NPV.
- Does not recognise the net cash inflows after the payback period – in this case there are none.

Conclusion

Payback period is a useful method but is probably best used in combination with another method.

Chapter 9

ACTIVITY 1

TYPES OF COST

1

Definition	Type of cost
(i) Costs that do not vary with output or activity levels.	(d) Fixed cost
(ii) An expense that contains an element of fixed cost and an element of variable cost.	(c) Semi-variable cost
(iii) Expenses that change in direct proportion to levels of activity/output.	(b) Variable cost
(iv) Expenses that remain fixed over a certain range of activity, then increase and remain fixed over another range of activity. Sometimes referred to as stepped-costs.	(a) Semi fixed cost

ACTIVITY 2

CLASSIFICATION OF COSTS

1(a) fixed
(b) fixed
(c) variable
(d) semi-variable
(e) fixed
(f) semi-fixed
(h) fixed
(i) fixed
(j) semi-fixed
(k) variable

ACTIVITY 3

BASHIR'S DASHCAMS

1 Variable cost per unit

Variable cost/unit	£

Material	19.50
Labour	8.50
Total fixed cost	28.00

2 Fixed costs

Fixed costs	**£**
Rent (£400X12)	4,800
Insurance	740
Other fixed costs	960
Total fixed cost	6,500

ACTIVITY 4

CHECKING THE HIGH–LOW CALCULATION

1 Calculate the total variable cost for a given level of output.

At 40,000 units, total variable cost = £15 x 50,000 = £750,000

Subtract the total variable cost from the given total cost (at the same level of output)

Fixed cost = Total cost - Total variable cost

£1,250,000 - £750,000 = **£500,000**

ACTIVITY 5

F8 LENSES PLC

1 Profit = TR - TC
TR = £35 x 12,500 = £437,500

Fixed cost	**£**	**Variable cost per unit**	**£**
Rent	22,800	Materials	14.50
Management salaries	48,000	Labour	3.50
Depreciation	14,400	Delivery costs	0.40
Other fixed costs	8,000		18.40
	93,200		

TC = TVC + FC
= (£18.40 x 12,500) + £93,200
= £323,200

Therefore, profit = £437,500 - £323,200
= £114,300

ACTIVITY 6

NINGXIA BLOCKS PLC

1 Calculate the difference in cost between the two levels of output.
£896,450 - £787,300 = £109,150

Calculate the difference in the level of output.
300,000 - 241,000 = 59,000 units

Divide the difference in cost by the difference in the level of output.
£109,150 = **£1.85**
59,000

2 Calculate the total variable cost for a given level of output.
At 300,000 units, total variable cost = £1.85 x 300,000 = £555,000
Subtract the total variable cost from the given total cost (at the same level of output).
Fixed cost = Total cost - Total variable cost
£896,450 - £555,000 = **£341,450**

3
Jan 2020
TR = £3.25 x 300,000 = £975,000; TC = £555,000 + £341,450 = £896,450
Profit = TR - TC, £975,000 - £896,450 = **£78,550**

Feb 2020
TR = £3.25 x 241,000 = £783,250; TC = £445,850 + £341,450 = £787,300
Loss = TR - TC, £783,250 - £787,300 = **£4050**

ACTIVITY 7

GRAY MOULDINGS

1 Profit = (Unit contribution x output) - fixed cost.
= (£5.80 x 3,200) - £21,000
= £18,560 - £21,000
Loss = £2,440

ACTIVITY 8

CLOSE SHAVE LTD

1 The break-even point in units will be:
160,000 = 20,000 units
8

The break-even value will be:
20,000 x £38 = £760,000

2(a) Selling price increases to £40 per unit:
BEP = 160,000 = 16,000 units
40 - 30

(b) Fixed costs increase to £180,000 and the selling price remains at £38:
BEP = 180,000 = 22,500 units
8

(c) Variable costs increase to £36 per unit; the selling price remains at £38:
BEP = 160,000 = 80,000 units
38 - 36

3 The effect of an increased selling price is to reduce the level at which the firm will break even. When either fixed or variable costs increase, the break-even point rises. Therefore, the break-even point moves in the same direction as cost changes, but in the opposite direction to changes in selling price.

ACTIVITY 9

EXCEL TOYS

1 To calculate the break-even point we first need to know what the contribution is per unit.

Variable costs = £18 + (£6 + £9) + £14 = £47
Contribution per unit = £90 - £47 = £43

(a) BEP in units = Fixed costs / Contributions per unit = 430,000 / 43 = 10,000 units

(b) Margin of safety
Estimated turnover / SP per unit = 945,000 / 90 = 10,500 units

MOS = Estimated sales in units less BEP = 10,500 - 10,000 = 500 units

(c) Calculation using marginal costing:

Sales (10,500 @ £90)	945,000

Less variable costs	(493,500)
Total contribution	451,500
Less total fixed costs	430,000
Anticipated profit	21,500

(d) To allow for the target profit of £215,000 we need to add that amount to the fixed costs.

We now have a total of 430,000 + 215,000 that must be covered through the contribution that each unit makes.

i.e. $\frac{430,000 + 215,000}{43}$ = 15,000 units

2(i) SP £90 - 30% = £63
Volume/Sales units 10,500 + 50% = 15,750

Sales 15,750 units @ £63	£992,250
Variable costs 15,750 @ £43	(677,250)
Total contribution	315,000
Less fixed costs	(430,000)
Net loss	(115,000)

(ii) Sales 10,500 + 60% = 16,800 units
Variable o/h £14 + 50% = £21
Variable costs now = £18 + (£6 + £9) + 21 = £54

Sales 16,800 @ £63	1,058,400
Variable costs (£54)	(907,200)
Contribution	151,200
Less fixed costs	(430,000)
Net loss	(278,800)

(iii) Variable costs are now increased because of the additional cost of a free toy.
£43 + £15 = £58

Sales 10,500 + 120% = 23,100

Profit statement	
Sales 23,100 @ £90	2,079,000
Variable costs (£58)	(1,339,800)
Contribution	739,200
Less fixed costs	(430,000)
Profit	£309,200

The best option is (iii).

ACTIVITY 10

SPEEDY LTD

1(a) Present contribution per unit is £8 less (2 + 2.50 + 0.60) = £2.90
Future contribution per unit should be £7.80 less (1.60 + 2.50 + 0.60) = £3.10
Present break-even point in units = $\frac{£96,000}{2.90}$ = 33,103 units
Present break-even point in £s = 33,103 × £8 = £264,824

(b) Future break-even point in units = $\frac{£96,000}{3.10}$ = 30,967 units
Future break-even point in £s = 30,967 × £7.80 = £241,543
Margin of safety = 36,000 units - 30,967 units = 5,033 units

ACTIVITY 11

SMOOTH FABRICS

1 Break-even point = FC/Contribution = 3,000 ÷ 14 = 215 ties
2 Revised break-even = FC + profit = 3,700 + 4,000 = £7,700
Contribution is SP - VC = 21 - 14 = 7
Therefore, ties to be sold = 7,700 ÷ 7 = 1,100 ties

ACTIVITY 12

DESIGN LTD

1		
Sales (9,000 units @ £65)		585,000
Less:		
Direct materials	156,600	
Direct labour	256,500	
Variable production overhead	21,600	
Variable admin overheads	10,800	445,500
Total contribution		139,500
Fixed production overhead	54,000	
Other fixed costs	27,000	81,000
Net profit		58,500

Calculation: £139,500 ÷ 9,000 = £15.5 per unit

Break-even:	
Fixed costs	£81,000
Contribution per unit	£15.50
Break-even (units)	5,226 units

Break-even (£s)	£339,690		
Margin of safety (units) = 9,000 - 5,226 = 3,774 units			
Margin of safety (£s)	£245,310		
Sales (13,000 units @ £57)			741,000
Less:			
Direct materials		226,200	
Direct labour		305,500	
Variable production overhead		31,200	
Variable admin overheads		15,600	578,500
Total contribution			162,500
Fixed production overhead		99,000	
Other fixed costs		27,000	126,000
Net profit			36,500

Contribution per unit £12.50
Fixed costs £126,000
Break-even (units) = 126,000 ÷ 12.5 = 10,080 units

ACTIVITY 13

ROCKY LTD

1(a) Contribution per unit = 60,000 ÷ 15,000 = £4
BEP = Fixed costs / Contribution = 30,000 ÷ 4 = 7,500 units
(b) Sales price = 10 + 20% = £12
Variable costs per unit = £6 + 50% = £9
Contribution = £3
Therefore BEP = £30,000 ÷ 3 = 10,000 units

ACTIVITY 14

TASTY LTD

1(a) Total variable costs = £3,100
This is equal to 3,100 ÷ 200 = £15.50 per box
The contribution based on a selling price of £20 per box is 4.50 × 200 = £900
BEP = 700 ÷ 4.50 = 156 boxes
At a selling price of £18 the contribution = 2.50 × 450 = £1,125
BEP = 700 ÷ 2.50 = 280 boxes
At £17 the contribution = 1.50 × 600 = £900
BEP = 700 ÷ 1.50 = 467 units

2 This means the company should reduce its selling price to £18 and achieve a profit of £425 per month. This assumes the company is able to achieve budgeted sales and that fixed overheads remain constant.

EXAM PRACTICE

1(a)

Bluetooth Sounds: Statement of profit or loss and other comprehensive income for the year ended 31 January 2020

	£	£
Revenue		425,000
Less		
Materials	112,200	
Labour	108,800	
Salary	24,000	
Rent	18,000	
Depreciation	9,600	
		272,600
Net profit for the year		152,400

(b)

Break-even point (units) = $\frac{51,600}{125 - 65}$ = 860 units

Break-even point (value) = £125 x 860 = £107,500

(c)

Margin of safety (units) = 3400 - 860 = 2,540 units

Margin of safety (value) = £125 x 2,540 = £317,500

2

3,600 units = $\frac{\text{£52,360 + £200,000}}{\text{Selling price - £77}}$

Fixed cost = 18,360 (rent) + 24,400 (salary) + 9,600 (depreciation) = £52,360

Variable cost per unit = £35 (material) + £42 (labour) = £77

Contribution (SP-VC) = $\frac{\text{£252,360}}{3,600}$ = £70.10

Therefore, selling price = Contribution + variable cost per unit

= £70.10 + £77.00

= £147.10

3

Points in favour of break-even analysis

- It informs of the number of sales required to break even, which can be used to determine if the business/product is viable. Break-even analysis has allowed Amelia to see that her business is viable as it made a profit in the first year.

- A business can determine the level of output required to achieve a specific target profit.
- It allows a simple risk assessment to be done in terms of the margin of safety; the higher the margin of safety the more resilient the business will be when trading conditions are unfavourable. Amelia can see that the business has a relatively high margin of safety and can be confident in the future success of the business.

Points against break-even analysis

- The selling price is unlikely to be the same for all output – a business will often sell at different prices to different customers. Unless Amelia has a single customer for her speakers, she is likely to have to sell them at different prices to different customers, thus making the revenue calculation much more difficult for use in a break-even analysis.
- Break-even analysis assumes that all output is sold. As this is only the second year of trading, Amelia cannot be confident that she will sell all her production, especially as it has increased by 200 units, which is almost a 6% increase in sales.

Evaluation

A justified recommendation that could make reference to the fact that Bluetooth Sounds is a single product company, which increases the validity of a break-even analysis.

Chapter 10

ACTIVITY 1

MULTI LTD

1 In order to advise management, we change the cost structure of each hairdryer to absorb the total fixed costs. This now results in the hairdryer having fixed costs of £17.50 per unit. Using this information we can calculate the following costing:

Hairdryer		
Selling price		35
Unit cost:		
Materials	14	
Labour	9	
Other variable costs	2	
Fixed costs	17.5	
Total cost		42.5
(Loss)/Profit per unit		(7.5)
Units produced	1,000	
(Loss) / Profit on product:	(7,500)	

This result is clearly far worse than when producing both products, and arises because the total fixed costs must now be borne by a single product. What has been lost is the contribution towards those fixed costs that had originally been made by the hair curlers.

We now re-examine the original situation by showing the contribution per unit from both products.

		Hair curler		**Hairdryer**
Selling price per unit		25		35
Unit cost:				
Materials	10		14	
Labour	7		9	
Other variable costs	3.5		2	
Total variable costs		20.5		25
Contribution per unit		4.5		10
Units		2,500		1,000
Contribution per product		£11,250		£10,000
Total contribution		21,250		
Less total fixed costs		17,500		
Profit		£3,750		

This shows what each product is actually contributing to the business. It also enables us to see what will happen if the firm stops producing hair curlers – the loss of the £11,250 contribution on the hair curlers turns an overall £3,750 profit into a £7,500 loss.

We see from this example that any product with a positive contribution will help us maximise our profits.

The fixed costs are not specific to either product. This is not always the case. Although fixed costs are supposed to remain constant in the short term, regardless of the volume of production or sales, certain costs, such as maintenance of machinery or managers' salaries, could well disappear if the manufacture of one product ceased.

The assumptions made here using the contribution approach for the two products need to be looked at in more detail. The firm may be able to sell more dryers, in which case the greater contribution per unit gained from selling each dryer could build up a sufficient total contribution to absorb the fixed costs, and the production capacity used for the curlers could perhaps be diverted to the dryers.

Normally a firm concentrates on a product that has the highest contribution per unit, provided that there is sufficient demand and no shortage of resources. In this example, the firm must continue to manufacture both products. Should there be an upsurge in demand for the hair curler, the loss per unit that it is currently making could be turned into a profit, provided that fixed costs remain unchanged.

ACTIVITY 2

JASON LTD

1

	Normal production	Special order
Selling price per unit	40	36
Total variable costs per unit	(30)	(30)
Contribution per unit	10	6
Units demanded	5,000	1,000
Fixed costs	£40,000	

For normal production, total contribution is £50,000 (£10 × 5,000 units), so profit will be £10,000 after deducting fixed costs. Although the special order has a lower selling price, the variable costs have not risen per unit. This results in an extra contribution of £6,000 and, as the fixed costs are already covered, this extra amount is all profit.

When a customer wants a special order, extra costs may be incurred. These costs could be for special packaging or delivery costs. The company must ensure that

there is a positive contribution and that it cannot use the spare capacity more profitably.

In this example Jason Ltd would not want to end up with all the units for sale at £36, as this would give a contribution of only £36,000 (£6 × 6,000 units). This would result in a loss of £4,000.

ACTIVITY 3

KHALID & CO.

1 Our answer to the question of ranking would be calculated as follows:

	A	B	C
Selling price	25	20	23
Variable costs	10	8	12
Contribution	15	12	11
Machine hours	4	3	4
Contribution per machine hour	3.75	4.00	2.75
Ranking order	2	1	3

Based on the above calculations we can produce 20 units of B × 3 = 60 hours and 22 units of A × 4 = 88 hours. This makes use of the total hours available.
We cannot produce the remaining three units of A, nor the 30 units of C.

ACTIVITY 4

BRANDEE & CO.

1

	A	B	C
Selling price per unit	50	40	65
Variable costs per unit	25	19	29
Contribution	25	21	36
Hours of labour per unit	5	3	6
Contribution per labour hour	5	7	6
Ranking	3	1	2

Therefore product B should be produced first and then C. If any labour hours remain, they can be used for producing product A, which has the lowest contribution per labour hour.

ACTIVITY 5

ERINA & CO.

1 The Gold service has the highest contribution followed by the Bronze service and finally the Silver service. This would produce the following results:

	Gold	Silver	Bronze
Hours of skilled service work	80,000	22,200	42,000
Services performed	2,000	740	1,200
Contribution per service	£800	£540	£600
Total contribution per service	1,600,000	399,600	720,000
Total contribution	2,719,600		
Less fixed costs	£400,000		
Profit	£2,319,600		

Note that there are only 22,200 hours left for Silver service. Therefore only 740 units of this service can be offered.

We must also examine the contribution per service per hour of skilled employee time, and use the ranking produced from that to find a profit figure for Erina & Co.

Contribution per service	£800	£540	£600
Contribution per service per hour	20	18	17.14

The above table indicates that although Erina & Co should still place the Gold service first, the Silver service should be ranked before the Bronze service. We now need to calculate the profit using this fact.

Hours of skilled service work	80,000	60,000	4,200
Services performed	2,000	2,000	120
Total contribution per service	£1,600,000	£1,080,000	72,000
Total contribution	£2,752,000		
Less fixed costs	£400,000		
Profit	£2,352,000		

If the ranking for the contribution per scarce factor were identical to that for the contribution per service, the result would be the same. As this is not the case, we find the maximum possible profit by taking into consideration not just the differences between revenues and variable costs, but also how economical the usages are of the limiting factor.

The Silver service requires less of the scarce skilled employee time than the Bronze service, even though it had a lower contribution per service.

Note: While this method indicates the highest profit obtainable, a firm may have reasons, such as competition, for choosing a different combination.

ACTIVITY 6

SMOOTH FABRICS

1 Contribution = £28 - (7 + 2 + 3 + 2) = £14 per tie
New SP - VC = 18 - 14 = £4 contribution
Additional fixed costs are two months at £300 p.m. = £600

2 Therefore the contribution from this order = 400 ties @ £4 per tie = £1,600
The extra fixed costs incurred for this order = £600 additional rent. This results in a positive contribution of £1,000 so the order should be accepted.

New designs:

	Style 1	Style 2	Style 3
Material	£4	£3	£5
Trimmings	£2	£1	£2
Wages	£3	£3	£3
Packaging	£1	£1	£1
Total VC	10	8	11
Selling price	£25	£20	£31
Contribution	£15	£12	£20

	Style 1	Style 2	Style 3
Machine hours per tie	5	3	4
Contribution per hour	£3	£4	£5
Ranking	3rd	2nd	1st
Demand in units p.m.	20	15	25
Production in hours	55	45	100
Production in units	11	15	25

Only Style 1 has a limit placed on production. Although there is a demand for 20 units, only 11 can be produced because of machine-hour limitation.

ACTIVITY 7

ABLE & CO.

1

	Marginal cost		Absorption cost	
Sales		6,000		6,000
Material	60p	-1,200	60p	-1,200
Labour	40p	-800	40p	-800

Contribution		4,000		
Factory rent	£1,000	-1,000	£1,000	-1,000
Salary	£2,000	-2,000	£2,000	-2,000
Profit				1,000

ACTIVITY 8

MYCO LTD

1

	Small	Medium	Large
Selling price (per unit)	100	140	200
Total variable costs	68	92	128
Contribution	32	48	72
Contribution per machine hour	£8	£6	£12
Ranking:	2	3	1

Myco Ltd will therefore elect to produce Large first, followed by Small. Should there be any machine hours still available after that then they will be used to produce Medium. In this case 2,000 units of Medium can be manufactured.

	Small	Medium	Large
Machine hours needed	160,000	16,000	120,000
Products made	40,000	2,000	20,000
Contribution per unit	32	48	72
Total contribution	1,280,000	96,000	1,440,000
Total contribution	2,816,000		
Less fixed costs	330,000		
Profit	£2,486,000		

ACTIVITY 9

NISH LTD

1

	UK	Spain
Selling price per unit	£150	£150
Variable costs:		
Materials	60	66
Labour	30	31.5
Variable factory cost	10	10
Variable selling cost	15	12

Contribution	35	30.5
Total contribution	(35 × 20,000)	(30.5 × 5,000)
	700,000	152,500
Less fixed costs	330,000	16,000
Profit	370,000	136,500
Total profit	£506,500	

Nish Ltd would increase its profit by accepting the order. However, it will have incurred additional fixed costs of £16,000 per annum, and if the Spanish order is not repeated the following year, profit will be reduced by this additional fixed cost of £16,000 per annum.

The decision will therefore depend on how anxious the company is to sell to another market and whether it has any idea if the order is likely to be repeated.

ACTIVITY 10

MINIM LTD

1 The present profit/loss situation, based on full cost, is as follows:

	Trumpets	Saxophone
Sales revenue	750,000	540,000
Total cost	657,000	546,000
Profit/loss	£93,000	-£6,000

Total profit for Minim Ltd is therefore £87,000.

If the factory producing saxophones were to be closed, £66,000 of the fixed costs still remain to be paid. As there would be no revenue coming from saxophone production, this £66,000 would have to be deducted from the profit of the trumpets, leaving a profit of only £27,000.

ACTIVITY 11

ZEPHYR LTD

1

Contribution = Selling price	23.50
Less variable costs	9.30
Contribution	£14.20
Total contribution (30,000 @ £14.2 per unit)	426,000
Less fixed costs	63,750
Profit	21,250

You were told that the directors require a minimum return on capital employed of 16%. The above costing statement shows a return of 16.35%. Therefore, the directors will agree that the selling price can be held at the lower level of £23.50.

ACTIVITY 12

SMART ATTIRE

1 At first glance we might decide that we should stop making ties and jackets, as each of these products has a negative contribution towards fixed costs, and obviously is non-profit-making. However, we also know that customers buy shirts and ties so if production of ties is discontinued, we should also lose our market for shirts.

In order to arrive at a well-formed opinion, we need to summarise the various alternatives.

Discontinue jackets only

Total contribution:	Shirts	216,000
	Ties	-12,000
	Pants	312,000
		516,000
	Fixed costs	180,000
	Profit	336,000

Discontinue jackets and ties and lose market for shirts

Total contribution:	Pants	312,000
	Fixed costs	180,000
	Profit	132,000

Although ties have a negative contribution (£12,000), they are bought jointly with shirts, which have a positive contribution. Therefore, the firm should continue to produce and sell ties and in so doing, should also be able to sell shirts. This would maximise profits at £336,000.

Smart Attire should, of course, try to find ways of reducing the variable costs relating to ties in order to raise profits further.

The volume of sales determines profit. For example, if the firm's sales of pants had been identical to those for shirts and ties (i.e. 40,000 units) then the contribution from pants would be only £156,000.

Therefore, although we look for items that give us a positive contribution per unit, it is the amount we are then able to sell them for that is important. Where there are products that have a joint demand (such as above), we must consider the options very carefully.

EXAM PRACTICE

1 Variable cost per unit = (£2,250 + £1750 + £500) / 200 units = £22.50

The order of 500 chopping boards at £22.00 per board will result in a negative contribution per unit of £0.50 and a negative contribution of £250.

The order for 100 chopping boards at £28 per board will give a positive contribution of £5.50 per board, a total of £550.

Looking at the financial factors, the order for 100 chopping boards should be accepted as it provides a positive contribution.

The factory has spare capacity so this is not an issue. However, will the order affect the selling price of existing sales? If the business accepts the larger quantity order it might be able to increase the selling price so that it makes a positive contribution.

2

	Small (£)	**Medium (£)**	**Large (£)**
Selling price	8.25	14.25	21.00
Direct materials	4	5	8
Direct labour	1.5	4.50	6
Variable cost/unit	5.5	9.50	14
Contribution	2.75	4.75	7
Contribution per labour hour	11	6.33	7

Contribution per labour hour = $\frac{\text{contribution per unit}}{\text{labour hours per unit}}$

Production

Small: **4,000 units** @ 15 minutes =	1,000 hours
Large: **5,000 units** @ 60 minutes =	5,000 hours
Medium: **400 units** @ 45 minutes =	300 hours
	6,300 hours

Chapter 11

ACTIVITY 1

ACCOUNTING APPS AND SOFTWARE PACKAGES RESEARCH

1(a)–(c) Students' own answer.

ACTIVITY 2

HUMAN ASPECTS OF ICT AND ACCOUNTING

1 One advantage would be professional development. The introduction of ICT would result in staff training and greater skills, which would improve staff motivation.

On the other hand, staff may feel threatened by the introduction of ICT. It could lead to the de-skilling of staff into merely inputting transactions into a system. At the extreme, staff could feel threatened that they might be replaced by technology.

ACTIVITY 3

EAST MEETZ WEST

1 ICT stands for Information and Communication Technology: it is the technology that gathers, store, processes and analyses a range of data.

2 One function that would benefit from ICT is the trade receivables function. ICT would allow the business to identify quickly those customers who do not pay their invoices on time, allowing them to chase up debts quickly and avoid cash flow problems.

A second function that could benefit from ICT is break-even analysis. ICT will be able to calculate the contribution, break-even point and margin of safety. It will also be able to prepare a graphical representation of break-even for the figure inputted. Perhaps more importantly, the owners of East Meetz West will be able to quickly do 'what-if' scenarios by changing the variables – price, variable cost and fixed cost.

EXAM PRACTICE

1
Points in favour

- Spreadsheets can be created for a wide range of budgets. Dunya is likely to have to prepare budgets for sales, purchases, inventory and purchases, as

well as a cash budget. The spreadsheet will save her time and will be able to automatically transfer information between different budgets.
- It will allow her to flex her budgets for different levels of activity. This will be important to Dunya as her business is growing so she cannot be certain of the level of output.

Points against

- Dunya and any staff she employs will need to be trained to use the spreadsheets correctly. A lack of training may result in inaccurate information being provided in the budgets.
- The hardware and the software will need to be purchased. This might be more than the available retained profits. Once purchased, it must be properly maintained, adding to costs.

Conclusion

To be based on arguments presented, which could be in favour or against the decision to invest in ICT.