

Paper 1 Past Calculation Questions

Q1.

Table 1 contains information about the number of new business start-ups in four cities in the UK in 2016.

City	Number of new start-ups
London	205 320
Birmingham	17 473
Leeds	7 645
Liverpool	4 915

Table 1

Using the information in Table 1, calculate, to 2 decimal places, the number of new start-ups in Birmingham as a percentage of the number of new start-ups in London. You are advised to show your workings.

..... %

(Total for question = 2 marks)

Q2.

Using the information below calculate the total costs for the business. You are advised to show your workings.

Number of units sold: 240

Fixed costs: £1 100

Variable costs per unit: 45 pence

(2)

£

Q3.

Look at Figures 1 and 2, read the extract carefully, then answer the question.

The cost of the contactless payment system is £4 500. Neil and Sue plan to borrow the money from their bank. They will repay the loan over three years. Their monthly repayment is £136.50.

Calculate the total interest Neil and Sue will pay for this loan as a percentage of the total amount borrowed. You are advised to show your workings.

(2)

..... %

Q4.

Table 1 contains information about a small business for one month. The business sold 270 units in this month.

Fixed costs	£2 100
Variable costs (per unit)	£110
Sales price (per unit)	£200

Table 1

Using the information in Table 1, calculate the profit for this business. You are advised to show your workings.

£

Q5.

Figure 1 shows the change in the revenue of a business over three months.

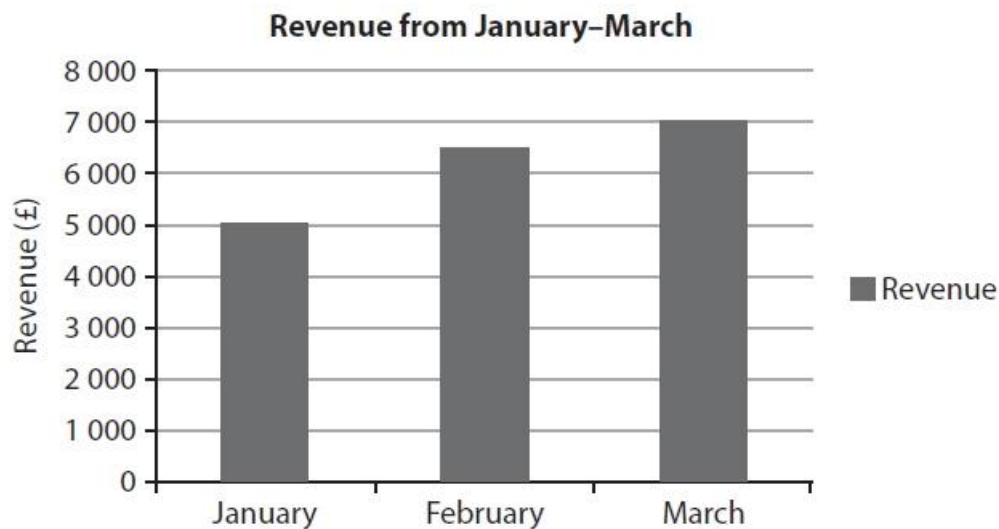


Figure 1

Using the information in Figure 1, calculate the percentage increase in revenue between January and March. You are advised to show your workings.

..... %

Q6.

Figure 1 shows a break even diagram for a business.

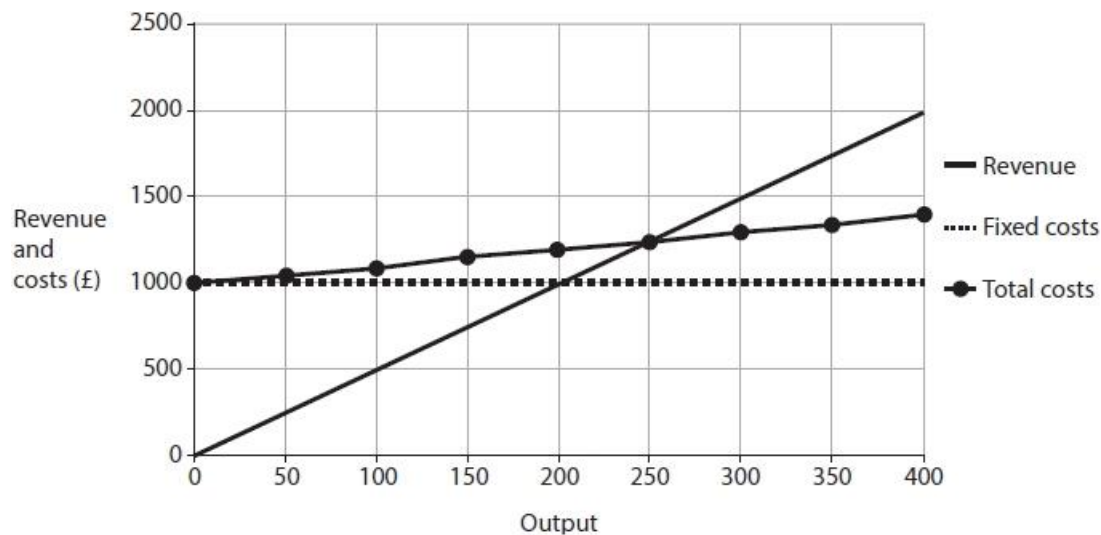


Figure 1

The business produces 400 units of output. Using the information in Figure 1, calculate the margin of safety.

..... units

Q7.

Amelia Cooper trained as a plumber six years ago. Since then she has worked for a building company that carries out repairs to houses and business premises in the Birmingham area.

Cash inflows	Cash outflows	Opening balance
£8 600	£11 000	£4 000

Table 2

Using the information in Table 2, calculate *Lili Heating Ltd's* forecasted closing balance at the end of month one. You are advised to show your workings.

(2)

£

Q8.

Table 1 contains information about a small business.

Fixed costs	£10 000
Variable cost	£2.50 per unit
Selling price	£5.00 per unit
Break even level of output	4,000 units

Table 1

The business increases the selling price of its product to £6.50 per unit.

Using the information in Table 1, calculate the decrease in the break even level of output. You are advised to show your workings.

(2)

..... units

Q9.

When starting the business in 2007, Melanie took out a loan. The financial details of this loan are in Table 2.

Loan required from the bank	£10 000
Total repayments for loan	£11 100
Length of loan	3 years

Table 2

Using the information in Table 2, calculate the interest on the loan as a percentage of the total amount borrowed. You are advised to show your workings.

(2)

..... %

Q10.

Last Course Patisserie has the following financial information for the month of April.

	April
Raw materials for each dessert	£0.50
Packaging for each dessert	£0.20
Fixed costs	£2 730
Selling price for each dessert	£2.00

Table 2

Using the information in Table 2, calculate the level of output required to breakeven in April. You are advised to show your workings.

(2)

..... desserts

Q11.

Table 1 contains information about a small business for one month.

Number of sales	2,700
Variable costs (per unit)	£6
Sales price (per unit)	£20
Break even level of output	1,500

Table 1

Using the information in Table 1, calculate the margin of safety. You are advised to show your workings.

(2)

units

Q12.

Table 1 contains information about cash payments of a small business in one month. The business sold 200 units in this month. All customers paid in cash.

Selling price	£15
Rent	£500
Wages	£1 000
Advertising	£150

Table 1

Using the information in Table 1, calculate the net cash flow for this month. You are advised to show your workings.

(2)

£

Q13.

Figure 1 shows the total costs for a business between May and July.

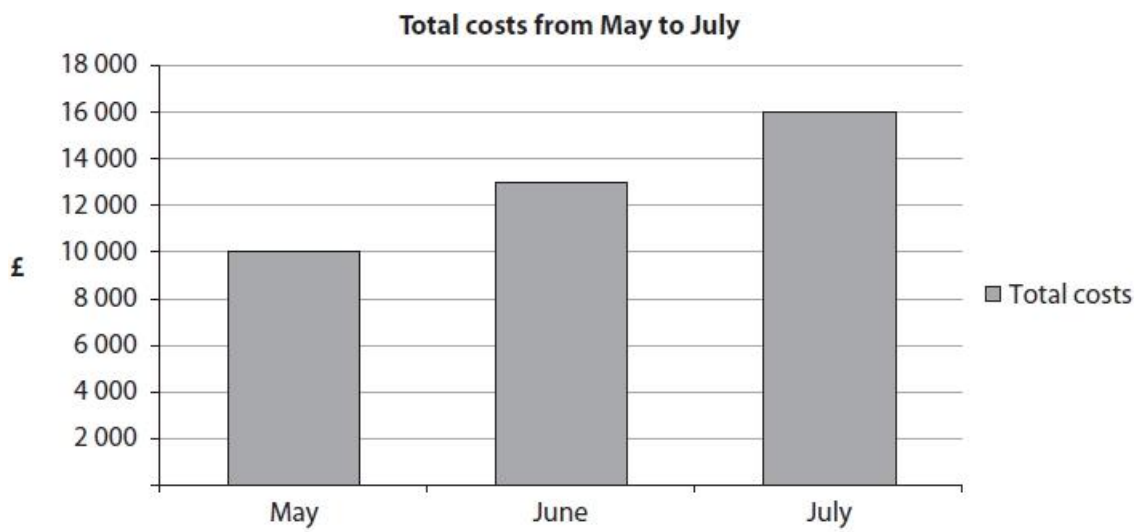


Figure 1

Using the information in Figure 1, calculate the percentage change in total costs between May and July. You are advised to show your workings.

(2)

%

Q14.

Figure 1 shows the sales revenue of a business from January to April.

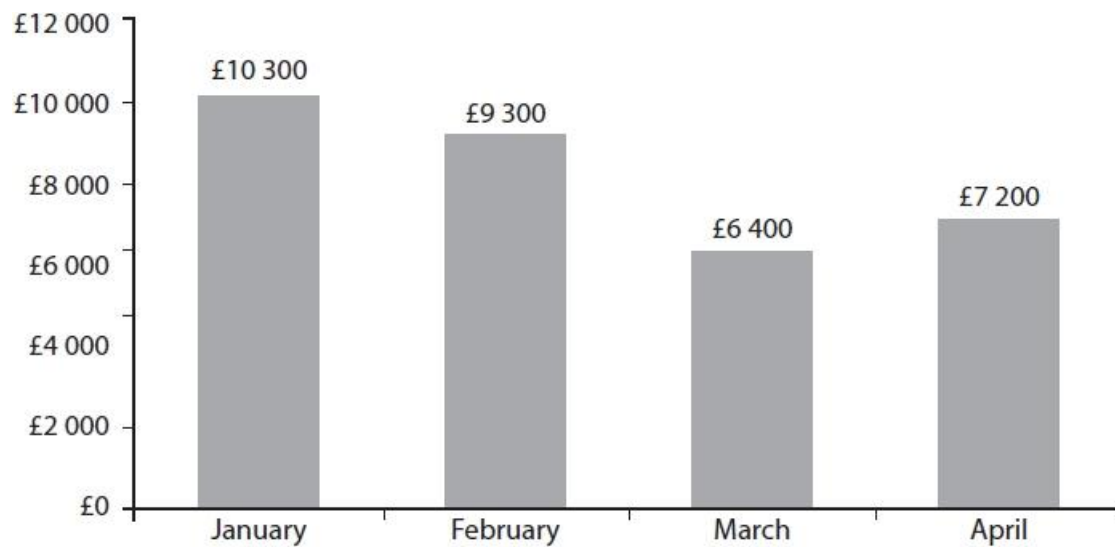


Figure 1

Using the information in Figure 1, calculate, to 2 decimal places, the percentage decrease in sales revenue from January to March. You are advised to show your workings.

(2)

%

Q15.

In the Source Booklet, look at Figure 2 and read Extract A

Extract A

BIRMINGHAM			
2019 Population by five-year age groups			
Age	Males	Females	Total
30–34	41,500	41,200	82,700
35–39	37,600	38,600	76,200
40–44	33,300	33,700	67,000
45–49	33,000	33,700	66,700
50–54	32,000	33,500	65,500

Table 3

(Source: adapted from https://www.birmingham.gov.uk/downloads/file/10293/2017_birmingham_population_tool)

Using the information in Table 3, calculate to 2 decimal places, the percentage of people in the age group 45–49 that are female. You are advised to show your workings.

(2)

.....%

(Total for question = 2 marks)

Q16.

Read the following extract before answering the question.

Sports Tours Ltd was established in 1989 and is one of the leading online specialist sports tour operators in the United Kingdom. It arranges tours for teams to destinations in the United Kingdom and Europe in sports such as football, rugby, hockey and netball. The business not only organises travel, accommodation and meals, but it also arranges games and entry to tournaments for the sports team whilst on tour.



(Source: Mike Flippo/Shutterstock)

Sports Tours Ltd has very high standards. It carries out full risk assessments for all tours including possible pre-tour inspection visits. Tours are licensed and authorised through official agencies. All tours have regular contact with a member of staff from *Sports Tours Ltd*.

In recent years the business has faced increasing competition. This is not only from other sports tour operators but also from teams organising their own tours. Changing levels of consumer income and exchange rates have also had an impact on demand for tours by sports teams.

Sports Tours Ltd are confident that the high level of service they offer will help them to remain competitive. However, it is always looking for more ways to add value to its business activities.

(Source: adapted from <https://www.sports-tours.co.uk/about>)

Sports Tours Ltd has been organising football tours to Munich, Germany since 2010. The price of a hotel room in Munich in 2010 was €100.

Table 2 shows the value of the pound (£) in euros (€) in June 2010 and June 2019.

	Number of euro (€) per pound (£)
June 2010	1.23
June 2019	1.13

Table 2

Using the information in Table 2, calculate, to 2 decimal places, the price in pounds (£) of a hotel room in 2010. You are advised to show your workings.

(2)

£

Q17.

Sports Tours Ltd has been organising football tours to Munich, Germany since 2010. The price of a hotel room in Munich in 2010 was €100.

Table 2 shows the value of the pound (£) in euros (€) in June 2010 and June 2019.

	Number of euro (€) per pound (£)
June 2010	1.23
June 2019	1.13

Table 2

In 2019 the cost of a hotel room had increased to €130.

Using the information in Table 2, calculate, to 2 decimal places, the price in pounds (£) of a hotel room in 2019. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q18.

Read the following extract before answering the Question.

On Your Bike has made the following forecasts for the costs and sales of its bikes for 2021.

	Forecast
Total number of bike sales	2,000
Total revenue	£1 100 000
Variable cost per bike	£350
Fixed costs	£150 000

Table 2

Using the information in Table 2, calculate the profit *On Your Bike* is forecast to make from selling bikes in 2021. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q19.

Figure 1 shows the number of units sold per month by a business from February to April. The selling price for each unit was £5.20

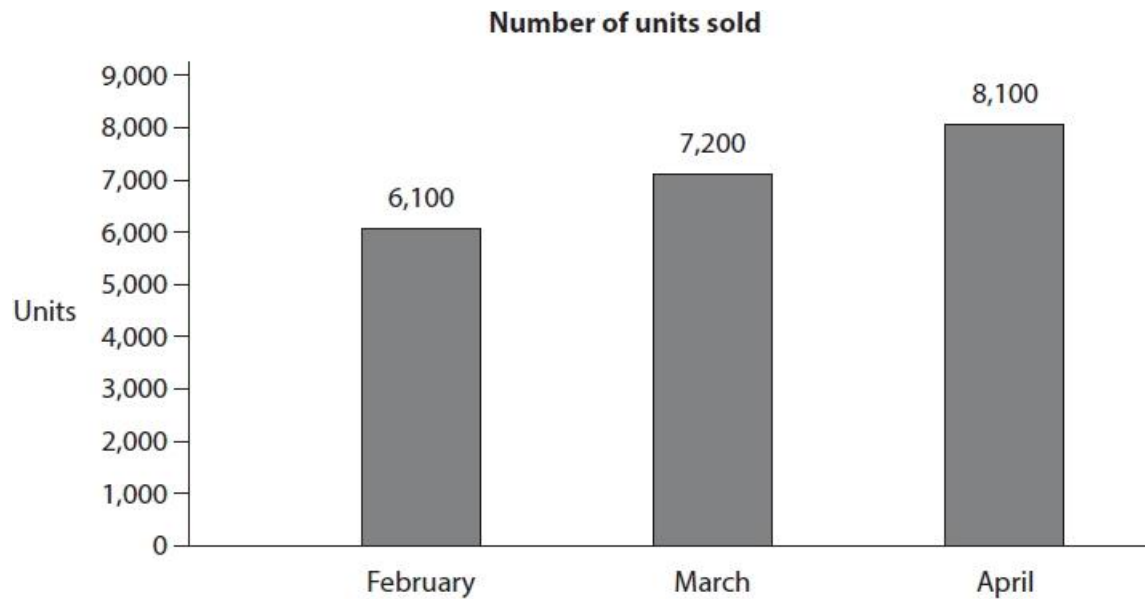


Figure 1

Using the information in Figure 1, calculate the revenue for March. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q20.

On Your Bike has made the following forecasts for the costs and sales of its bikes for 2021.

	Forecast
Total number of bike sales	2,000
Total revenue	£1 100 000
Variable cost per bike	£350
Fixed costs	£150 000

Table 2

Using the information in Table 2, calculate the selling price per bike.
You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q21.

Table 1 contains information about a small business for one month. The business sold 340 units in this month.

Fixed costs	£3 600
Variable costs (per unit)	£9

Table 1

Using the information in Table 1, calculate the total costs for one month. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q22.

Figure 1 shows the cash-flow of a business from May to August.

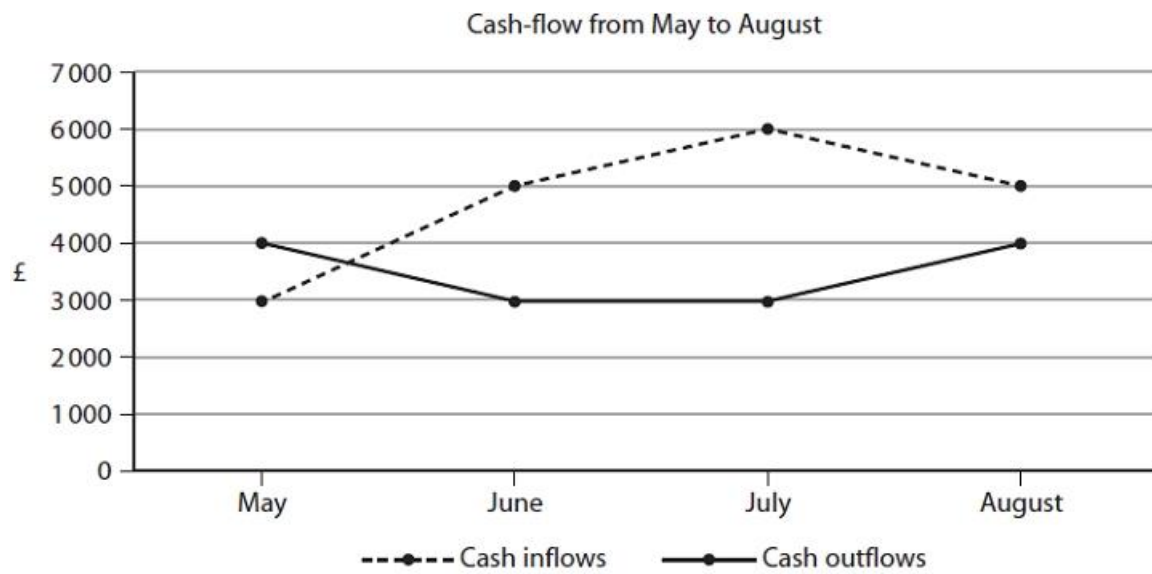


Figure 1

Using the information in Figure 1, calculate the total net cash-flow from May to August. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q23.

Figure 1 shows information about the financial performance of a business from January to March.

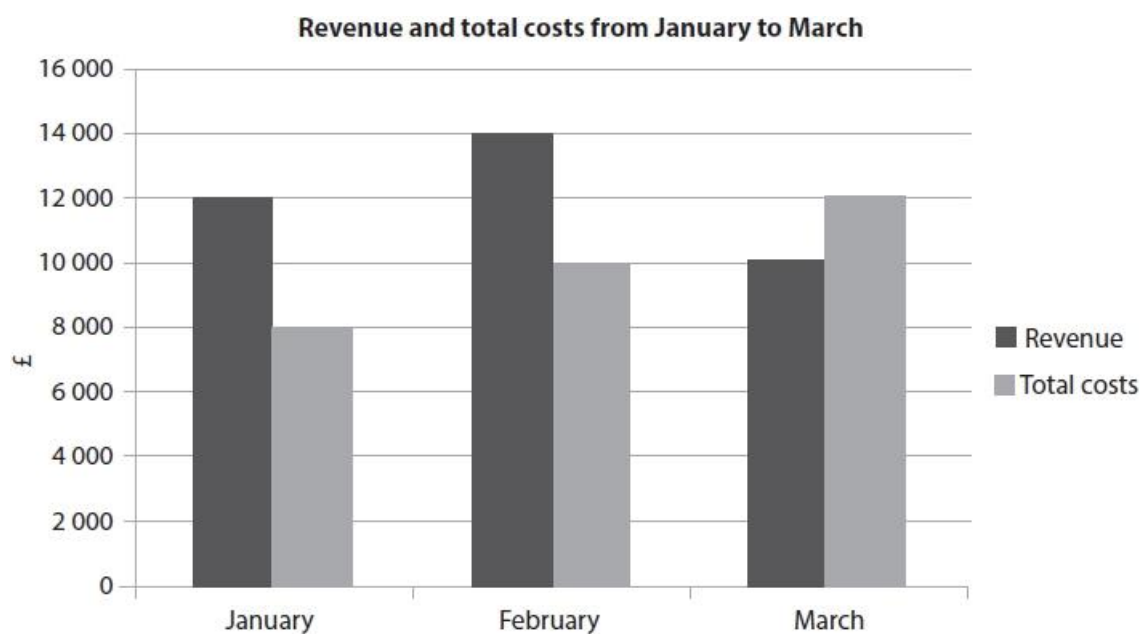


Figure 1

Using the information in Figure 1, calculate the total profit for the period January to March. You are advised to show your workings.

(2)

£

(Total for question = 2 marks)

Q24.

Last Course Patisserie has the following financial information for the month of April.

	April
Raw materials for each dessert	£0.50
Packaging for each dessert	£0.20
Fixed costs	£2 730
Selling price for each dessert	£2.00

Table 2

In May suppliers increased the cost of raw materials by 4%.

Using the information in Table 2, calculate the variable cost per dessert following the increase in the cost of raw materials.

(2)

£

(Total for question = 2 marks)

Q25.

When starting the business in 2007, Melanie took out a loan. The financial details of this loan are in Table 2.

Loan required from the bank	£10 000
Total repayments for loan	£11 100
Length of loan	3 years

Table 2

Using the information in Table 2, calculate, to 2 decimal places, the monthly repayments for the loan. You are advised to show your workings.

(2)

(Total for question = 2 marks)

Q26.

	April
Opening cash balance	£3 500
Receipts (cash)	£1 200
Sales (due in cash in 60 days)	£1 100
Total payments	£700

Table 2

Using the information in Table 2, calculate, to 2 decimal places the value of total payments as a percentage of receipts (cash). You are advised to show your workings.

..... %

(Total for question = 2 marks)

Q27.

A retailer selling *Frog Bikes* bicycles has the following financial information for the month of April.

	April
Opening cash balance	£3 500
Receipts (cash)	£1 200
Sales (due in cash in 60 days)	£1 100
Total payments	£700

Table 2

Using the information in Table 2, calculate the net cash flow for April. You are advised to show your workings.

£

(Total for question = 2 marks)

Q28.

A retailer selling *Zoella Beauty* products has three shops, A, B and C. Financial information for the three shops in the month of June is shown in Table 2.

	Shop A	Shop B	Shop C
Receipts	£17 300	£23 200	£25 000
Total payments	£11 200	£18 200	£16 800
Opening balance	£5 100	£3 500	£2 100
Closing balance	£11 200	£8 500	£10 300

Table 2

Using the information in Table 2, calculate the average closing balance. You are advised to show your workings.

£

(Total for question = 2 marks)

Q29.

Table 1 shows the cash-flow forecast for a small business.

Complete the table with the **two** missing figures.

(2)

	May (£)	June (£)
Cash inflows	12 600	13 400
Cash outflows	8 200	9 100
Net cash flow	4 400	(ii)
Opening balance	600	5 000
Closing balance	(i)	9 300

Table 1

(Total for question = 2 marks)

Mark Scheme

Q1.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(17\,473 / 205\,320) \times 100$ (1) Answer: 8.51% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q2.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: Total costs = £1 100 + (240 × 0.45) (1) Answer: £1 208 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q3.

Question number	Answer	Additional guidance	Mark
	Loan = £4,500 Total repayments = $36 \times £136.50$ = £4 914 Interest = £4 914 – £4,500 = £414 Substitution into correct formula: Total interest = $414/4500 \times 100$ (1) Answer: 9.2% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q4.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: Profit = £54 000 – (£2 100 + £29 700) (1) Answer: £22 200 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q5.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(2\,000 \div 5\,000) \times 100$ (1) Answer: 40% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q6.

Question number	Answer	Additional guidance	Mark
	Substitution into the correct formula: $400 - 250$ (1) Answer: 150 units (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q7.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $\pounds 4\,000 + (\pounds 8\,600 - \pounds 11\,000)$ (1) Answer: $\pounds 1\,600$ (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q8.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $\pounds 10\,000 \div (\pounds 6.50 - \pounds 2.50)$ $= 2,500$ units Decrease $= 4,000 - 2,500$ (1) Answer: 1,500 units (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q9.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $((£11\ 100 - £10\ 000) \div £10\ 000) \times 100$ (1) Answer: 11% (1)	Award full marks for correct numerical answer without working.	(2) A02

Q10.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $\text{Break-even output} = £2\ 730 / £2.00 - (£0.50 + £0.20)$ $= 2\ 100 \text{ Desserts}$	Award full marks for correct numerical answer without working.	(2) A02

Q11.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $2,700 - 1,500$ (1) Answer: 1,200 units (1)	Award full marks for correct numerical answer without working.	(2) A02

Q12.

Question Number	Answer	Additional guidance	Mark
	Substitution into correct formula: $\text{Cash inflows} = 200 \times £15$ $= £3\ 000$ $\text{Cash outflows} = £500 + £1\ 000 + £150$ $= £1\ 650$ $\text{Net cash flow} = £3\ 000 - £1\ 650$ (1) Answer: £1 350 (1)	Award full marks for correct numerical answer without working.	(2) A02

Q13.

Question Number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(6\,000 \div 10\,000) \times 100$ (1) Answer: 60% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q14.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $((£6\,400 - £10\,300) / £10\,300) \times 100$ (1) Answer: 37.86% or -37.86% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q15.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(33,700 \div 66,700) \times 100$ (1) Answer: 50.52% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q16.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $€100 \div 1.23$ (1) Answer: £81.30 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q17.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $€130 \div 1.13$ (1) Answer: £115.04 (1)	Award full marks for correct numerical answer without working.	(2) A02

Q18.

Question Number	Answer	Additional guidance	Mark
	Substitution into correct formula: $£1\ 100\ 000 - ((£350 \times 2,000) + £150\ 000)$ (1) Answer: £250 000 (1)	Award full marks for correct numerical answer without working.	(2) A02

Q19.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $£5.20 \times 7,200$ (1) Answer: £37 440 (1)	Award full marks for correct numerical answer without working.	(2) A02

Q20.

Question Number	Answer	Additional guidance	Mark
	Substitution into correct formula: $£1\ 100\ 000 \div 2,000$ (1) Answer: £550 (1)	Award full marks for correct numerical answer without working.	(2) A02

Q21.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: Total Costs = £3 600 + (£9 x 340) (1) Answer: £6 660 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q22.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: (£1 000)+£2 000+£3 000+£1 000 (1) Answer: £5 000 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q23.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: Total Profit = £4 000 + £ 4 000 - £2 000 (1) Answer: £6 000 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q24.

Question number	Answer	Additional guidance	Mark
	Increase in raw materials = $4/100 \times £0.50$ = £0.02 Variable cost per dessert = £0.52+£0.20 (1) Answer: £0.72 (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q25.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $\pounds 11\,100 \div 36$ (1) Answer: $\pounds 308.33$ (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q26.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(\pounds 700 \div \pounds 1\,200) \times 100$ (1) Answer: 58.33% (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q27.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $1\,200 - 700$ (1) Answer: $\pounds 500$ (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q28.

Question number	Answer	Additional guidance	Mark
	Substitution into correct formula: $(11\,200 + 8\,500 + 10\,300) \div 3$ (1) Answer: $\pounds 10\,000$ (1)	Award full marks for correct numerical answer without working.	(2) AO2

Q29.

Question number	Answer	Additional guidance	Mark
(i)	5 000	Do not accept any other answer	(1) A02

Question number	Answer	Additional guidance	Mark
(ii)	4 300	Do not accept any other answer	(1) A02