mark Schemes on Firefly → Revision Lab → At top + Examiners Report → these are great!

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 3 GCE

Time 2 hours 2017

Paper reference **9BS0/02**

Business

Advanced

PAPER 2: Business activities, decisions and strategy

General mark grids — mark? read answer then yours/peers

You do not need any other materials.

Total Marks

Instructions

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- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
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Information

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- You may use a calculator.

Advice

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- Try to answer every question.
- Check your answers if you have time at the end.

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Turn over

Pearson

Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

Extract from easyJet plc's annual report 2020

	2020 £m
Non-current liabilities	2 748
Total equity	1 899

EasyJet plc's gearing for 2019 was 45.67%

(Source: adapted from https://corporate.easyjet.com/~/media/Files/E/Easyjet/pdf/investors/agm/agm-dec-2020/annual-report-2020.pdf)

Extract B

Why is the budget airline industry struggling?

In 2019, budget airline Flybmi and travel business Thomas Cook both collapsed. "The aviation industry is struggling with rising costs," says Loizos Heracleous, Professor of Strategy at Warwick Business School. "Aeroplanes are expensive assets with few alternative uses, which limits the ability of airlines to reduce their capacity during lean periods. Airlines also have to deal with fluctuating expenses like fuel, which accounts for around a third of total costs."

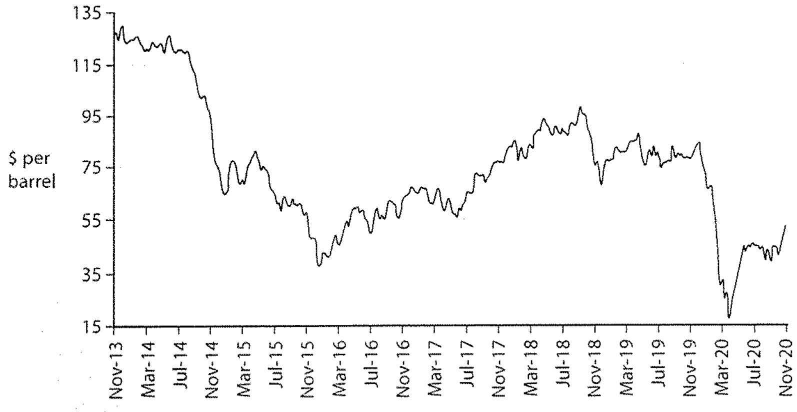
Delayed flights, cramped seating, inconvenient flight times and poor service are common customer complaints, which have damaged the reputation of many budget airlines. Customers share their experiences on social media, resulting in widespread bad publicity.

Alex Brummer, City Editor for the Daily Mail, argues that there is a far greater problem for budget airlines: "The rise of a new generation of budget airlines, challenging the dominance of easyJet and Ryanair, means that there is huge overcapacity in the industry. As the number of seats exceeds the number of travellers, prices have been pushed down".

(Source: adapted from https://www.theweek.co.uk/105222/flybe-saved-but-why-is-the-airline-industry-struggling)

Extract C

Jet fuel price ($/barrel) November 2013 – November 2020



(Source: adapted from https://www.iata.org/en/publications/economics/fuel-monitor/)

Extract D

easyJet plc

EasyJet plc is a low-cost European airline. It is the seventh largest airline in the world, with 342 aircraft and 48 million customers across 35 countries and 154 airports.

In 2019, the company launched easyJet holidays to offer package holidays, combining flights and hotels. At present 97% of its customers travel for leisure and easyJet plc is aiming its package holidays at these customers. EasyJet holidays offers its customers a best price guarantee and full refund if customers cancel their holiday at least 28 days before departure.

94% of easyJet plc's customers are concerned with the environmental impact of air travel. The company wants to lead the aviation industry in meeting this challenge. Its 'sustainability strategy' aims to achieve net zero carbon emissions by working with manufacturers to develop electric and hydrogen powered aircraft. This will also avoid reliance on fuels that cannot be stored for long periods of time.

In common with all airlines, easyJet plc was affected by travel restrictions in 2020 caused by the global health crisis. The capacity utilisation of its planes fell from 91.5% in 2019 to 87.2%.

(Source: adapted from https://corporate.easyjet.com/~/media/Files/E/Easyjet/pdf/investors/agm/agm-dec-2020/annual-report-2020.pdf)

1 (a) Using the data from Extract A, calculate the difference in the gearing ratio for easyJet plc between 2019 and 2020. You should state the difference to two decimal places. You are advised to show your working.

Turn over

(b) Explain **one** effect on easyJet plc of the reduced capacity utilisation of its aircraft in 2020.

DO NOT WRITE IN THIS AREA

(c) Assess, with reference to Porter's five forces, whether the 'bargaining power of buyers' represents the most significant external influence on easyJet plc.

(d) Assess whether the change in price of jet fuel between November 2015 and July 2018 may have affected easyJet plc's management of its working capital.

EasyJet plc wishes to improve its profitability. To achieve this, easyJet plc is considering either purchasing a new fleet of electric and hydrogen powered aircraft or focusing on increasing its market share of the package holiday market.

(e) Evaluate these **two** options and recommend which one is more suitable for easyJet plc to improve its profitability.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read the following extracts (E to H) before answering Question 2.

Write your answers in the spaces provided.

Extract E

Bluebells

Bluebells is a seven-bedroom bed and breakfast guesthouse in Keswick, Cumbria, owned and run by Les and Liz Miller. Bluebells is open between March and November. All rooms are en suite, and free WiFi access is available. Since opening in 2006, Bluebells has developed an excellent reputation and consistently receives 5* reviews on websites such as TripAdvisor.

The market for holiday accommodation in Keswick is competitive, with a wide choice of guesthouses, hotels and self-catering accommodation. The market is seasonal, with most tourists visiting between May and September.

Bluebells reinvests 50% of its profits back into the business each year. Recent projects have included replacing the windows and purchasing a fuel-efficient boiler. Les and Liz place great emphasis on the importance of financial planning, which includes the use of historical budgeting and careful management of its cash flow.

(Source: adapted from interview with Les Miller, owner of Bluebells)

Extract F

Room occupancy levels for Bluebells 2019

Month	% of rooms occupied
March	30
April	45
May	70
June	70
July	90
Aug	90
Sept	70
Oct	50
Nov	30

(Source: adapted from interview with Les Miller, owner of Bluebells)

Extract G

Selected cost and revenue data for Bluebells

	£
Revenue per room per night	84
Variable costs per room per night	34
Annual fixed costs	30 000

(Source: adapted from interview with Les Miller, owner of Bluebells)

Extract H

Tourism in Cumbria

The Lake District in Cumbria is one of Britain's world class destinations. It attracts large numbers of visitors spending over £1bn each year.

In the UK, city breaks have become increasingly popular and other rural destinations such as North Wales and the Peak District are marketing themselves aggressively. The popularity of online travel agents such as 'Booking.com' provides consumers with more holiday choices and competitive prices.

Cumbria remains a popular holiday destination but has not enjoyed the growth that other UK destinations have seen over the last few years. Cumbria is far more dependent on tourism than most other parts of the UK so it cannot afford to be complacent.

(Source: adapted from http://www.cumbriatourism.org/wp-content/uploads/2015/07/tourism-strategy-2008-2018.pdf)

2 (a) Using the information in Extract F, calculate the three period moving averages for the percentage of rooms occupied for the periods March to May and June to August to two decimal places, stating the difference between these moving averages. You are advised to show your working.

(b) Using the information in Extract G, calculate how many rooms need to be occupied each month for the business to break-even.

(c) Assess the value of historical budgeting to Les and Liz in their financial planning for Bluebells.

(d) Assess the usefulness of SWOT analysis for Bluebells' continued success.

Liz and Les have set themselves the objective of managing Bluebells' finances more effectively. They are considering whether to focus more on improving cash flow or increasing profit.

(e) Evaluate these **two** options and recommend which one is more suitable for Liz and Les to achieve this objective.

(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

Write your name here

Surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number | Candidate Number

Business

Advanced
Paper 2: Business activities, decisions and strategy

Monday 11 June 2018 – Afternoon
Time: 2 hours

Paper Reference
9BS0/02

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
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Information

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- You may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over

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Pearson

Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

Mumtaz Food Group

Mumtaz is an Asian food producer in Bradford. It is a private limited company owned and run by the Akbar family. Established as a takeaway restaurant in 1979, it now owns three restaurants and food processing factories that make ready meals. It has always used internal finance to establish and grow the business.

Mumtaz has sales revenues of around £25m. Unlike many of its rivals that produce ready meals for the supermarkets' own label brands, Mumtaz sells most of its products under the Mumtaz premium brand name. Asda, Morrisons and Tesco are among the supermarkets that sell Mumtaz products and they are also sold in more than 40 countries. The ready meals part of the Group is growing by 15-20% a year.

In 2006, a new product range of Halal baby food was launched after Mumtaz became aware of how difficult it was for Muslim parents to find Halal baby food. Today, roughly half of all Mumtaz baby food is bought by non-Muslim customers.

Mumtaz intends to continue to expand by organic growth. It recently opened a second factory in Bradford to meet the increased demand for its ready meals. It is also considering setting up manufacturing operations in Asia.

(Source: adapted from © 2017 Johnston Publishing Ltd)

Extract B

Cost, sales and revenue data for a food producer

Annual fixed costs	£3m
Selling price per unit	£5
Variable cost per unit	£2
Number of units sold	1.5m

P 5 2 3 0 8 A 0 2 2 4

Extract C

UK Economic data for 2016 and forecasts for 2020

Economic indicator	2016	2020
Economic growth (change in GDP)	0.5%	1%
Inflation	1.2%	2.7%
Unemployment	4.8%	6.5%
US$ to the £ exchange rate	1.23	0.99

(Source: adapted from www.tradingeconomics.com/united-kingdom/forecast)

Extract D

The UK ready meals market

The UK ready meals market grew by 2% in volume and value in 2016. Sales of ready meals benefitted from the trend towards premium products amongst consumers. The popularity of ready meals was due to their convenience, as well as the growing number of single-person households.

Supermarkets' own label products remained the leader in ready meals with a combined 68% market share, with Tesco having the highest percentage of 18%. Retailers offer different recipes which, in turn, help them to meet a wide range of consumer tastes. Supermarkets' own label products also rely heavily on price discounts and promotional offers in order to attract more price-sensitive buyers.

Convenience is likely to be an important factor in driving sales of ready meals, but so is the introduction of new product ranges.

(Source: adapted from © 2017 Euromonitor)

1 (a) Explain **one** reason Mumtaz has always used internal finance to establish and expand its business.

(b) Using the data in Extract B, calculate the margin of safety. You are advised to show your working.

(c) Assess whether expanding by organic growth was the right decision for Mumtaz.

(d) Using the data in Extract C, assess the likely impact of the forecast changes in the UK economy on a business such as Mumtaz.

DO NOT WRITE IN THIS AREA
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Mumtaz's aim is to become the UK's market leader in Asian ready meals.
To achieve this, it could produce own label ready meals for supermarkets or focus on selling more Mumtaz premium brand name products.

(e) Evaluate these **two** options and recommend which is most suitable for Mumtaz to achieve its aim.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read the following extracts (E to H) before answering Question 2.

Write your answers in the spaces provided.

Extract E

The business failure of MG Rover Group

The MG Rover Group was the last UK-owned mass-production car manufacturer in the British motor industry. The company failed in 2005.

MG Rover Group did not produce new and improved cars and its existing brands, such as 'Triumph' and 'Rover', competed with each other. The original Mini, which was produced by MG Rover Group, sold in millions of units but never made much profit because of its high production costs. Also, UK consumer tastes were rapidly changing as they preferred new foreign cars.

(Source: adapted from ©2014 Nomura Research Institute, Ltd)

Extract F

Production and wage cost data for a car manufacturer

Monthly output	20,000 cars
Number of production workers	400
Labour cost per worker per month	£2 000

Extract G

Toyota test drives a new hybrid

Toyota shareholders last week approved the issue of 50 million new shares – and not just any new shares.

The new 'Model AA' shares must be held for five years and cannot be sold earlier. Toyota will pay a guaranteed dividend that increases each year through the five-year period. At the end, shareholders can sell the shares back to the company at the price they paid, or convert them to ordinary shares.

The idea, according to the company, is to raise $4 billion from long-term investors, so that Toyota can invest in the car of the future. Applications for the shares were about 10 times more than the amount on offer. The firm's managers see this investment as a response to short-termism. Sheltered from some of the pressure to drive the share price up immediately, Toyota's managers will be able to look further ahead.

Some business analysts have criticised these shares for giving managers too much protection from the demands of shareholders.

(Sources: adapted from © 2017 Bloomberg L.P and © Crain Communications, Inc)

Extract H

Changes at Volkswagen (VW)

VW aims to create 9,000 new jobs as it shifts to self-driving cars. The new Chief Executive, Matthias Müller, said it was "the biggest modernisation programme in the history of the group's core brand. The VW brand needs a real shake-up".

During a presentation at the Paris Motor Show, Matthias Müller said that VW has teamed up with Gett – a rival to Uber - to create a self-driving mobility service for businesses.

In 2016, VW cut 30,000 jobs globally, partly due to the falling popularity of its diesel cars. This was a consequence of VW being fined $15bn for cheating in emission tests on its diesel cars. The VW brand was struggling even before the emissions scandal damaged its reputation. It had weak profitability, high labour costs and a complex organisational structure.

(Sources: adapted from © Independent Digital News and Media Ltd and © Associated Newspapers Ltd)

2 (a) Explain **one** internal cause of the business failure of MG Rover Group.

(b) Using the data in Extract F, calculate the monthly labour cost per car. You are advised to show your working.

DO NOT WRITE IN THIS AREA

(c) Assess the likely effects of employee legislation on a business such as VW.

DO NOT WRITE IN THIS AREA

Corporate timescales can be short-term or long-term.

(d) Assess Toyota's decision to issue 'Model AA' shares as a means of raising finance.

VW's new Chief Executive has been given the aim of increasing the company's profitability. The two options VW is considering are to develop a new range of self-driving cars or to improve productivity.

(e) Evaluate these **two** options and recommend which is most suitable to achieve the aim of increasing profitability, for a business such as VW.

(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

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Candidate surname	Other names

Pearson Edexcel Level 3 GCE

Centre Number | Candidate Number

Monday 3 June 2019

Afternoon (Time: 2 hours) | Paper Reference **9BS0/02**

Business

Advanced

Paper 2: Business activities, decisions and strategy

You do not need any other materials.

Total Marks

Instructions

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Advice

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Turn over

Pearson

Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

VisionSpring

VisionSpring is a social enterprise founded to provide glasses that are affordable for people in developing countries, such as India. These glasses improve job opportunities for many people in rural areas.

VisionSpring supplies local small businesses, that sell its glasses, and also trains the business owners to conduct eye tests in local villages.

Each pair of glasses costs VisionSpring £1 to make and deliver, which the small business buys for £2 and sells to customers for £4. As every step of the chain is profitable, the business model is sustainable.

VisionSpring's current growth strategy is to reinvest its profits to expand the scheme, but it is also considering obtaining loans from established businesses in developing countries.

One such business is ITC, a tobacco company in India that supplies the majority of village shops.

(Source: adapted from Pyramid power © The Economist, Jan 11th 2007)

Extract B

Economic impact of buying a pair of VisionSpring glasses

Price	£4
Estimated increased earnings per person, per year	£108
Expected life of a pair of glasses	2 years

(Source: adapted from © VisionSpring 2018)

P 5 6 2 0 5 A 0 2 2 8

Extract C

Warby Parker

Warby Parker was founded with the objectives of selling designer glasses at a low price and being socially responsible. The optical industry is dominated by a few large companies that keep prices high, making huge profits from consumers who have limited choice.

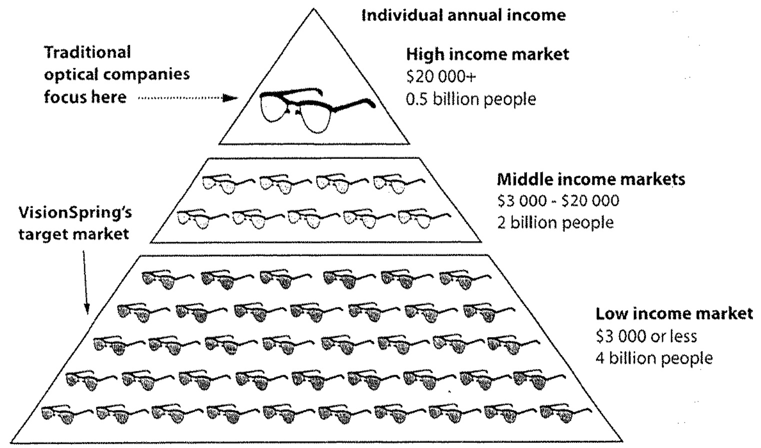
Warby Parker created an alternative by designing and selling glasses to customers directly online. It is able to provide higher-quality, better-looking prescription glasses at a lower price than larger competitors.

Almost one billion people worldwide lack access to glasses, limiting their ability to learn or work. Warby Parker believes that everyone has the right to see. For every pair of glasses it sells another pair is given free to charities, such as Sightsavers, operating in developing countries.

(Source: adapted from https://www.warbyparker.com/history)

Extract D

The world economic pyramid



In high income markets, glasses are typically sold using a low-volume, high-profit margin approach. However, VisionSpring recognised the potential for success in the developing world. To achieve this, it focused on the low income market, using a high-volume and low-profit margin approach.

(Source: adapted from © VisionSpring 2018)

1 (a) Explain **one** reason why businesses that sell VisionSpring's glasses may prefer to stay small.

For people in developing countries, purchasing a pair of VisionSpring glasses may be considered as an investment.

(b) Using the data in Extract B, calculate the average rate of return from purchasing a pair of glasses. You are advised to show your working.

(c) Assess VisionSpring's decision to finance its growth using retained profits.

Turn over

(d) Assess whether the decision to be a socially responsible business is likely to increase Warby Parker's profits.

Warby Parker's main corporate objective is to grow the business. The management is considering two options, either to develop a new range of contact lenses for the high income market, or to start selling glasses in the low income market.

(e) Evaluate these two options and recommend which **one** is most likely to achieve Warby Parker's main corporate objective.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read the following extracts (E to G) before answering Question 2.

Write your answers in the spaces provided.

Extract E

Hardy Punglia's designs are a cut above the rest

Fashion designer Hardy Punglia launched his own range of clothing in Huddersfield with one shop and just five designs. Three years later his collection exceeds over 100 designs.

Hardy now plans to open another shop and is hoping to supply other retailers in Yorkshire. He also sells to a wider audience through the online fashion outlet ASOS.

Cash flow forecast for the period January to March 2020

	January	**February**	**March**
	£	**£**	**£**
Cash inflows	2 000	3 600	8 000
Cash outflows	7 000	4 000	3 000
Net cash flow	(5 000)	(400)	5 000
Opening balance	2 000	(3 000)	(3 400)
Closing balance	(3 000)	(3 400)	1 600

(Source: adapted from © a Reach plc subsidiary 2018)

Extract F

Zara's successful formula for fast fashion

Zara is a Spanish clothing retailer with 650 stores in 50 countries. It has 12 factories in Spain and Portugal, which supply the majority of Zara's stores using a just in time (JIT) stock control system.

In Zara stores, customers can always find new products, but in limited supply. To create a sense of exclusivity, Zara constantly introduces new products in small quantities, which motivates customers to visit its shops more often. On average, customers in London visit a fashion store four times a year; Zara's customers visit 17 times.

A Zara customer may think, 'If I don't buy this orange shirt now, it may not be there next time I visit.'

Selected financial information for Zara 2016

	£m
Budgeted sales revenue	20 900
Actual sales revenue	23 310
Budgeted total costs	16 204
Actual total costs	18 226

(Source: adapted from © Inditex)

Extract G

Second ASOS fire damages stock worth £6m

In May 2017 a fire at ASOS's Berlin warehouse damaged two million products worth £6m. According to ASOS, 'All relevant safety measures were followed and the fire was contained'. After the fire, ASOS's scenario plan was put into operation and ASOS immediately started to fulfil orders from Germany through its Barnsley warehouse.

In June 2014 ASOS's Barnsley site had been damaged by fire, destroying an estimated 20% of stock. In addition, this fire cost £30m in lost sales, which meant ASOS missed its £1bn sales target for 2014.

The fire in 2014 disrupted business for three days. In contrast, after the fire in the Berlin warehouse, the ASOS website serving Germany and the UK operated as normal. Following news of the Berlin fire, ASOS's share price dipped initially, but soon recovered.

(Source: adapted from © InternetRetailing Media)

2 (a) Using the data in Extract E, explain **one** way Hardy Punglia could use his cash flow forecast.

(b) Using the data in Extract F, calculate the total profit variance for Zara in 2016.
You are advised to show your working.

(c) Assess the extent to which Zara's use of just in time (JIT) may have contributed to its success.

Turn over

(d) Assess the usefulness of scenario planning to a business, such as ASOS.

Zara is planning to open another 200 stores and is considering the best way to maintain the quality of its clothes. Zara is considering using either quality control or total quality management (TQM).

(e) Evaluate these two options and recommend which **one** would be the best way for Zara to maintain the quality of its clothes.

(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number | Candidate Number

Monday 01 June 2020

Afternoon (Time: 2 hours) | Paper Reference **9BS0/02**

Business

Advanced
Paper 2: Business activities, decisions and strategy

You do not need any other materials.

Total Marks

Instructions

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Advice

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Turn over

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Pearson

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P 6 1 8 4 5 R A 0 2 2 8

Answer ALL questions.

SECTION A

Read the following extracts (A to C) before answering Question 1.

Write your answers in the spaces provided.

Extract A

Tended Ltd

Tended Ltd is a fast-growing technology start-up company based in Lincoln, UK founded by young entrepreneur Leo Scott Smith, who is the main shareholder. The company has created a personal safety device called the 'Tended Protect'. Tended Ltd aims to increase its market share of the global wearable technology market.

Tended Protect is a wrist-worn wearable safety device that monitors the movements of the user through artificial intelligence and has the ability to learn and detect 'abnormalities', such as a fall or strong impact. If the user does not or cannot respond to the device's safety check, then an alert will be sent to the user's nominated emergency contact. It gives the GPS location, health and activity information and will open the channel for live audio with the wearer.

Tended Ltd has gained £50 000 from Enterprise Loans*, to help further develop the Tended Protect, create new jobs and marketing for the new product, as well as fulfil its initial orders.

*A subsidiary of the UK government's British Business Bank.

(Source: adapted from http://www.smeweb.com/2018/07/09/qa-leo-scott-founder-ceo-tended-protect/ and https://cityx.co.uk/2018/07/tended-wearable-safety-device-developed-lincolnshire/)

Extract B

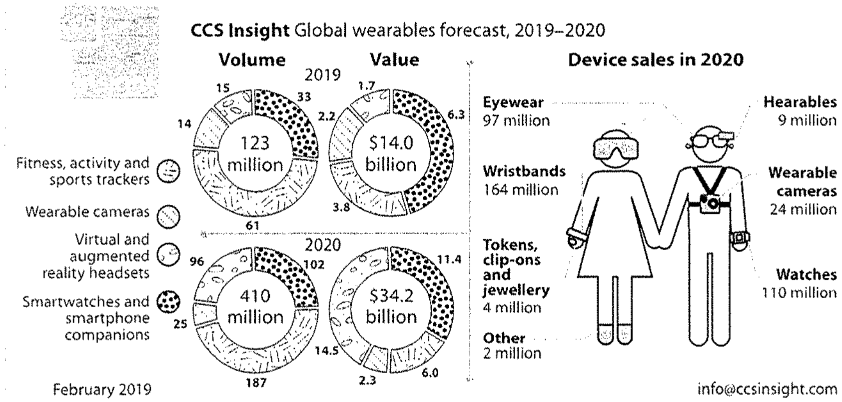
The expansion of Tended Ltd

Tended Ltd has developed at a fast rate, from one member of staff to a team of 10 in eight months. It encountered difficulties such as raising finance and it ran out of cash on a few occasions. Tended Ltd also faced development issues, which took months to fix. However, it overcame all of these issues. The staff pulled together as a team, worked into the early hours of the morning and constantly innovated and took risks, enabling the business to stay agile and continue to grow rapidly.

(Source: adapted from https://www.startupvalley.news/uk/tended-personal-safety-wearables/)

Extract C

The global technology wearables market



CCS Insight, a market research business, has updated its forecast on the future of wearable technology, indicating that 411 million smart wearable devices, worth a staggering $34 billion, will be sold in 2020.

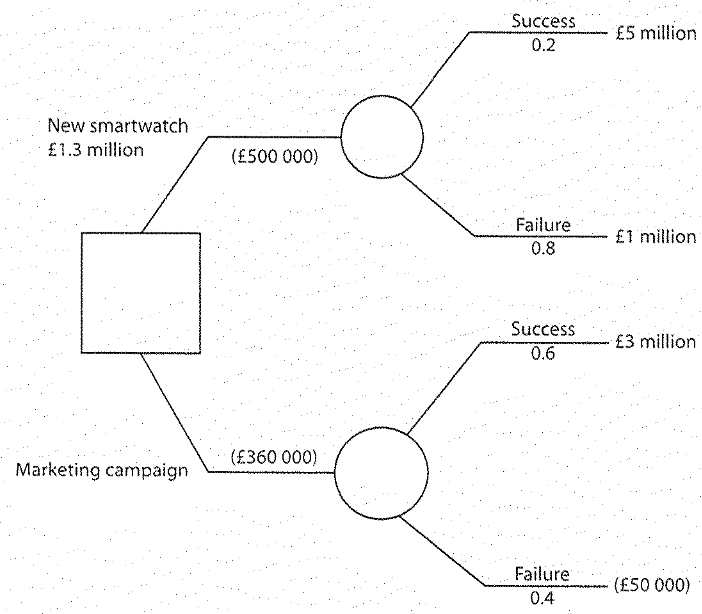
CCS Insight claims the industry will achieve sales of $14 billion in 2019, with wrist-based devices, such as smartwatches and fitness trackers, continuing to dominate. Its forecast states half of all wearable technology sales over the next 12 months will be from these devices, with smartwatches making up 50%.

Ben Wood, Chief of Research at CCS Insight, commented: "Given the falling consumer interest for smartphones, it is little wonder so many companies are chasing the rapidly growing opportunity presented by this dynamic market."

(Source: adapted from https://www.forbes.com/sites/paullamkin/2016/02/17/wearable-tech-market-to-be-worth-34-billion-by-2020/#192e2d113cb5)

1 (a) Explain **one** financial reason why Leo Scott Smith decided to establish Tended Ltd as a private limited company.

Tended Ltd has constructed the decision tree below to help it decide whether to develop a new smartwatch or launch a new marketing campaign.



The net gain for the new smartwatch is £1.3 million.

(b) Using the data in the decision tree, calculate the net gain for the marketing campaign. State your answer to two decimal places. You are advised to show your working.

(c) Assess the likely value of a business plan to Tended Ltd.

(d) Assess the extent to which the problems of rapid growth may have been managed by Tended Ltd.

To achieve its aim of increasing its market share of the global wearable technology market, Tended Ltd could produce a new smartwatch or launch a marketing campaign for 'Tended Protect'.

(e) Evaluate these two options and recommend which **one** is most suitable for Tended Ltd to achieve its aim of increasing its market share.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read the following extracts (D to G) before answering Question 2.

Write your answers in the spaces provided.

Extract D

Sports Direct rescues House of Fraser for £90 million

Sports Direct, the British sportswear retailer controlled by Mike Ashley, has bought House of Fraser for £90 million.

Billionaire Ashley said his ambition was to transform House of Fraser "into the Harrods of the High Street", a reference to the luxury department store in London. "This is a massive step forward and further enhances our strategy," he added. Ashley's stated desire is to make Sports Direct the "Selfridges of Sport", matching the status of the department store on London's Oxford Street.

Buying significant shareholdings in other businesses forms part of Ashley's strategy. Investments have been made in retailers such as Debenhams and French Connection, however this strategy has not always been successful. Last month Sports Direct reported a loss of £85 million resulting from its investment in Debenhams.

(Source: adapted from https://uk.reuters.com/article/uk-house-of-fraser-administration/sports-direct-rescues-house-of-fraser-for-90-million-pounds-idUKKBN1KV0IL)

Extract E

Extract from Sports Direct plc* Annual Report 2018

	£million
Revenue	3 359.5
Cost of sales	2 024.4
Selling, distribution and administrative expenses	1 156.1

*Sports Direct plc includes House of Fraser

(Source: adapted from http://www.sportsdirectplc.com/~/media/Files/S/Sports-Direct/annual-report/annual-report-2018.pdf)

Extract F

UK retail trends

Online purchases now account for almost 20% of retail sales, growing at 10 times the rate of physical store sales in the first half of 2018. During this period, 4,400 stores closed across the UK high street, up from 103 in 2017.

Years of rising costs, technological disruption and changing consumer behaviour have forced the UK high street to undergo considerable structural change.

There will be fewer shops in the future but this does not mean the store is dead, it just means that the role of the store is changing. There are numerous examples of innovation happening within stores, such as cashless supermarkets and retailers investing in better customer service.

(Source: adapted from https://www2.deloitte.com/uk/en/pages/consumer-business/articles/retail-trends.html)

Extract G

Sports Direct's corporate culture

Over the past two years investigations by the Guardian newspaper and the BBC found that working conditions at Sports Direct's Shirebrook warehouse in Derbyshire were similar to a 'modern-day Victorian workhouse'. Allegations of workers being paid below the minimum wage, fearing their bosses, experiencing security checks, and workers feeling forced to attend work despite being ill were all uncovered.

The Unite union reported that: "People are scared because they are working under a system where they know they could lose their employment at any moment." Employees were deducted 15 minutes' pay if they were one minute late for their shift, and lost their jobs altogether if they fell foul of the firm's 'six strikes' system – with one strike including anything from spending too long in the toilet to taking a day off sick.

Sports Direct admitted it had made some mistakes and was reviewing its Human Resource strategies.

(Source: adapted from https://www.managers.org.uk/insights/news/2016/june/5-things-we-learned-about-management-at-sports-direct)

2 (a) Explain **one** benefit Sports Direct could gain from conducting a SWOT analysis.

(b) Using the information in Extract E, calculate the operating profit margin for Sports Direct in 2018. State your answer to two decimal places. You are advised to show your working.

(c) Assess the usefulness of a sales forecast for Sports Direct.

Turn over

(d) Assess the likely consequences for Sports Direct of its corporate culture.

Sports Direct aims to reduce the labour turnover of its workforce. To achieve this, it could introduce an employee share ownership scheme or implement an empowerment strategy.

(e) Evaluate these two options and recommend which **one** is most suitable for Sports Direct to achieve its aim of reducing labour turnover.

(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel Level 3 GCE

Centre Number | Candidate Number

Time 2 hours

Paper reference **9BS0/02**

Business

Advanced

PAPER 2: Business activities, decisions and strategy

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- You may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.
- Good luck with your examination.

Turn over

Pearson

P66557A

Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

The teenage entrepreneur who dropped out of university to make lip balm

While studying for her GCSEs in 2015, Rose Dyson entered a local business enterprise competition. She established 'Pura Cosmetics', based on her love of quality beauty products and her frustration with how expensive they were. Rose spotted a gap in the market for ethical cosmetics at affordable prices.

Pura Cosmetics uses batch production to make its range of 12 lip balms and 10 lip scrubs in a variety of different flavours, such as raspberry and gingerbread. The business now has its own factory, shop and online store. It currently supplies 30 small retailers that only order small quantities. In the future Pura Cosmetics hopes to supply national chains, such as Boots. Pura Cosmetics currently give retailers one month's trade credit.

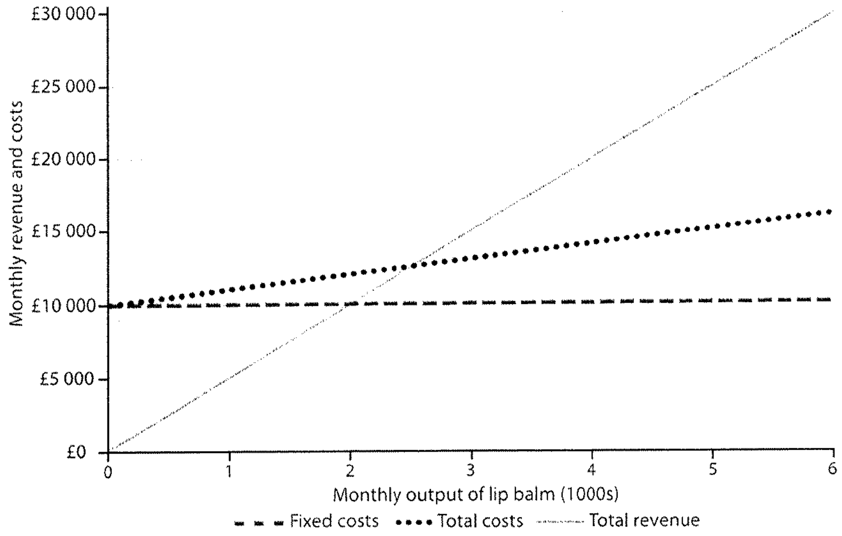
Pura Cosmetics has won a range of business awards and Rose has received advice from successful entrepreneurs, such as Karen Brady (Vice Chairman of West Ham United FC, and BBC 'The Apprentice') and Deborah Meaden (venture capitalist from BBC 'Dragon's Den').

Since leaving college in 2018, Rose has worked full time for her business. Her objective is to rapidly expand Pura Cosmetics by increasing its output from the current level of 6,000 units per month to 15,000 and increase sales turnover by 300% in the next year.

(Source: adapted from https://startups.co.uk/young-entrepreneurs-rose-dyson/)

Extract B

Break-even chart for Pura Cosmetics



(Source: adapted from information provided by Rose Dyson)

Extract C

Unilever extends its skin care brands with the takeover of Dermalogica

Dermalogica is a brand of skin care cosmetics which uses natural ingredients, such as aloe vera, rather than artificial colours and fragrances. Currently sold in over 80 countries, Dermalogica will be included within Unilever's prestige brand division.

"Dermalogica enjoys an outstanding reputation and incredible awareness among skin care professionals and consumers alike, that complements our prestige offering," said Unilever Chief Executive, Paul Polman. "It is a company with great distribution and presence globally and shares our belief in the role of business as a force for good in society." The cost of the takeover is reported to be £500m.

The move comes as Unilever, a multinational business that already owns health and beauty brands such as Dove, plans to drive growth. It aims to increase sales of personal care goods from its current amount of 37% to 66% of total worldwide sales. Dermalogica founder, Jane Wurwand, said that the Unilever takeover will enable the brand to expand globally. She added: "This takeover will provide Dermalogica with the resources to increase brand awareness and help us continue our legacy in supporting the next generation of professional skin therapists and women entrepreneurs worldwide."

(Source: adapted from https://www.marketingweek.com/unilever-extends-skin-care-brands-with-dermalogica-acquisition/)

Extract D

Pura Cosmetics cash-flow forecast November 2021 to January 2022

	November	December	January
	£	£	£
Cash inflows	31 500	31 500	63 000
Cash outflows	26 300	43 500	22 700
Net cash-flow	5 200	(12 000)	40 300
Opening balance	3 000	8 200	(3 800)
Closing balance	8 200	(3 800)	36 500

(Source: information provided by Rose Dyson)

1 (a) Explain **one** likely reason why Pura Cosmetics chooses to use batch production.

(b) Using Extract B, calculate the contribution per unit of one lip balm. You are advised to show your working.

(c) Assess the value of venture capital as an external method of finance for Pura Cosmetics.

(d) Assess the extent to which Unilever may benefit from its takeover of Dermalogica.

Pura Cosmetics has set the objective of managing its cash-flow more effectively. To achieve this, it is considering two options; either to increase its overdraft facility or to reduce the credit period given to its retail customers.

(e) Evaluate these **two** options and recommend which one Pura Cosmetics should choose in order to achieve the objective of managing its cash-flow more effectively.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read the following extracts (E to H) before answering Question 2.

Write your answers in the spaces provided.

Extract E

Buy it Direct

Buy it Direct is one of the largest online retailers in the UK. Established in 1999, it employs over 250 staff across three sites in Huddersfield, Barnsley and the East Midlands. The business is split into separate divisions, each of which is responsible for managing its own budget. The head of each division reports directly to Buy it Direct's Chief Executive.

Buy it Direct was one of the first e-commerce businesses in the UK to sell computers and electronics and then moved into also selling kitchen appliances, televisions and furniture.

Buy it Direct offers competitive prices and high levels of customer service. For example, it has a customer call centre that provides product advice and offers additional services, such as arranging for the installation of new appliances. Buy it Direct aims to hold a wider range of stock than its competitors. It sells premium brands, such as Bosch and Zanussi, as well as lower priced 'own brand' products. A significant proportion of its products are imported from China.

(Source: adapted from https://www.laptopsdirect.co.uk/content/buyitdirect)

Extract F

Buy it Direct's Chief Executive has set a target of 3 years payback for all investment projects including a new bathroom division with an estimated cost of £700 000.

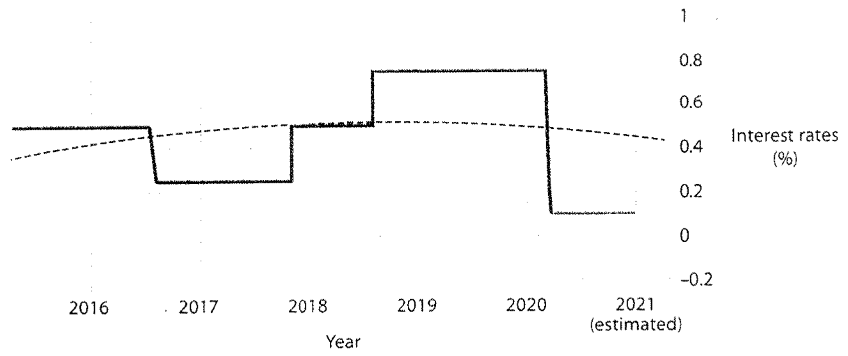
Cash-flow data for Buy it Direct's proposed new bathroom division

Year	Net cash-flow, £000s
1	200
2	200
3	200
4	200

(Source: figures provided by Nick Glynne, Chief Executive of Buy it Direct)

Extract G

UK interest rates 2016–2021 (estimated forecast for 2021)



(Source: adapted from https://tradingeconomics.com/united-kingdom/interest-rate)

Extract H

The UK electrical household appliance sector

It's been a challenging year for the sales of major domestic appliances, such as washing machines and televisions. The market has been growing at just 0.5% as a result of a slowing housing market and wavering consumer confidence. Most major domestic appliance purchases are triggered by replacing a broken or faulty appliance and this part of the market has remained unchanged. When buying household appliances, price and speed of delivery are key factors for consumers.

High rates of innovation in the sector and introduction of smart technologies are helping to tempt some consumers to trade up. However, only a small proportion of consumers are willing to pay a higher price for the latest innovations. Meanwhile, research shows that style and design, combined with either price or quality, are the key to deciding which brand of major domestic appliance to buy.

(Source: adapted from https://www.retaileconomics.co.uk/retail-sector-electricals_market)

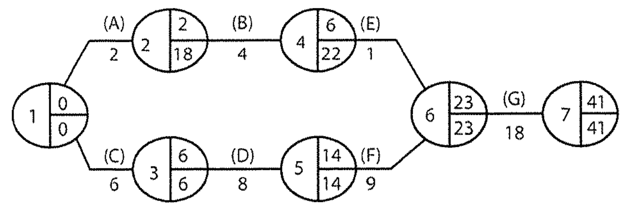
2 (a) Explain **one** reason why the head of each division of Buy it Direct is responsible for managing its own budget.

The Chief Executive has calculated the new bathroom project will not meet its payback target of three years.

(b) Using the data in Extract F, calculate the difference in the payback period compared to the Chief Executive's target. You are advised to show your working.

(c) Using the data in Extract G and your own business knowledge, assess the likely effects of the changes in interest rates between 2019 and 2021 on Buy it Direct.

Buy it Direct's new Operations Director is in charge of installing a new IT system for the warehouses. This project must be completed within 45 weeks. The Operations Director has produced the following network diagram:



Activity A: Identify problem

Activity B: Consult with software supplier

Activity C: Recruit staff

Activity D: Staff training

Activity E: Discuss IT solution

Activity F: Order equipment from suppliers

Activity G: Implementation and testing

(d) Assess the likely value of Critical Path Analysis (CPA) for the effective management of the installation of the new IT system.

DO NOT WRITE IN THIS AREA
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Turn over

Buy it Direct has set the objective of increasing its sales revenue. It is considering two options, either to adopt a strategy of market penetration in the UK Electrical Household Appliance market or diversification.

(e) Evaluate these **two** options and recommend which one is most likely to achieve Buy it Direct's objective of increasing its sales revenue.
(20)

DO NOT WRITE IN THIS AREA
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(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS

TOTAL FOR PAPER = 100 MARKS

A level Edexcel Essay Structures: 10marks: Structure Template (2 sided)

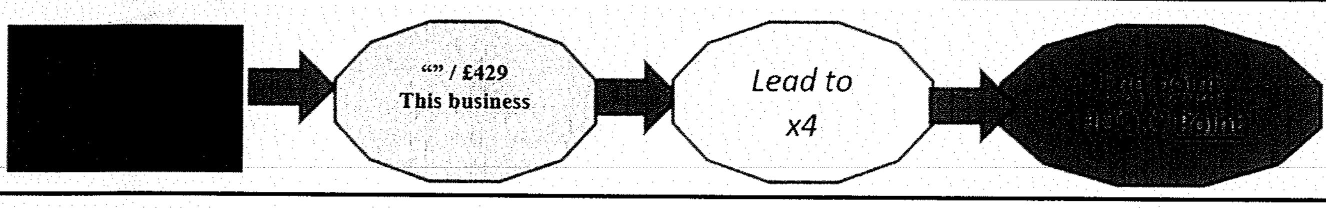
Essay =

Name =

EBI last time =

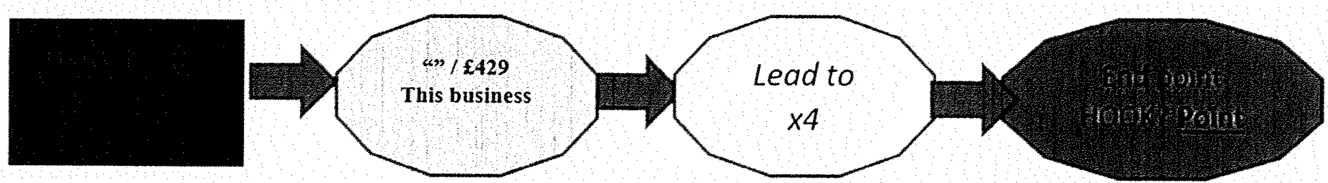
[definition - ***formal language, trigger words, try to give an example too]*:** **ONLY IF TIME** **K AO1**

MAIN POINT 1 / 1 SIDE OR ARGUMENT K1



DIRECT COUNTER to POINT K1 above - ***with App*** **>** ***However/On the other hand/it depends on…lead to…***

MAIN POINT 2 / OTHER SIDE OR ARGUMENT K2

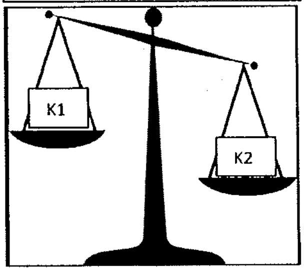


DIRECT COUNTER to POINT K2 above - *with App* > *However/On the other hand/it depends on...lead to...*

>] DECISION (not a sum up/conclusion) [question 'hook'] >Ev AO4 MOPS App

My first/second point was more convincing as... The main issue for this business is X therefore point 1 was more convincing... Short/Long term... Objectives...

Decide which way from K1/K2 - justify



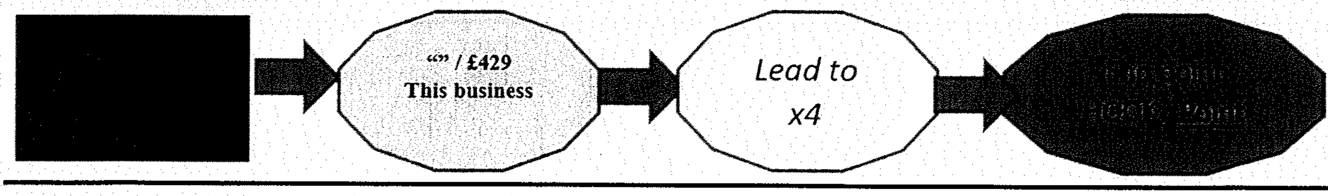
However/Also/It depends on...

A level Edexcel Essay Structures: marks: Structure Template (2 sided)

[definition - ***formal language, trigger words, try to give an example too]*:** **ONLY IF TIME** **K AO1**

MAIN POINT 1 / 1 SIDE OF ARGUMENT K1

1) Advantage or disadvantage / main App point Use words from the question SNAPPY
2) This is particularly relevant for THIS business/in THIS industry/in THIS position because…
3) This will lead to…which will lead to…which will lead to… which will end in [hook if there was one] Stay on track!

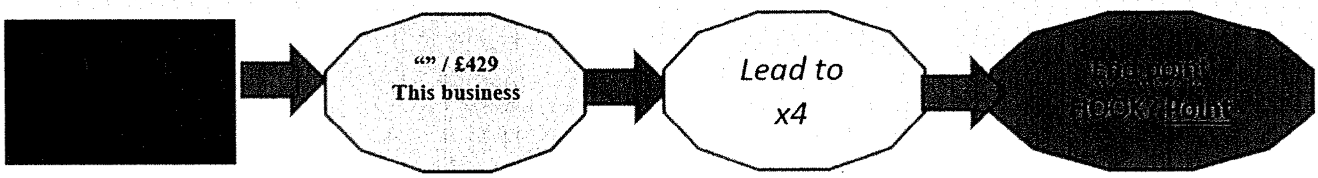


DIRECT COUNTER to POINT K1 above - *with App & some An* >

However/On the other hand/it depends on…lead to… My point I just made might not be valid because…

MAIN POINT 2 / OTHER SIDE OF ARGUMENT K2

1) OTHER SIDE OF THE ARGUMENT 50/50 split — Use words from the question — SNAPPY/CLEAR 1 POINT
2) This is particularly relevant for THIS business/in THIS industry/in THIS position because…
3) This will lead to…which will lead to…which will lead to… which will end in [hook if there was one] — Stay on track!



DIRECT COUNTER to POINT K2 above - *with App & some An* >

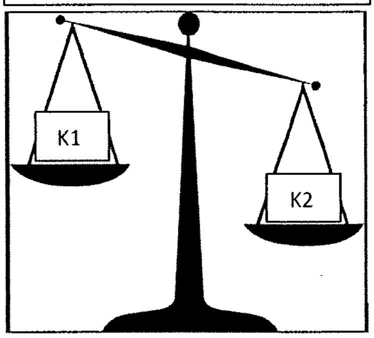
However/On the other hand/it depends on…lead to… *My point I just made might not be valid because…*

>] DECISION (not a sum up/conclusion) [question 'hook'] medium length >Ev AO4 MOPS App

The most convincing point of the 2 I have already made is X because…

} their objective(s) are X and therefore…. } the main issue in this situation/industry is }in the long term this point is better because…

Decide which way from K1/K2 - justify



However/Also/It depends on…

10 marker K=2 Ap=2 An=3 Ev=3

10 MARK QUESTIONS

Level	Marks	Knowledge and Understanding	Application	Analysis	Evaluation
4	7-10	Accurate and thorough	Supported throughout by relevant and effective use of the business behaviour/ context	A coherent and logical chain of reasoning, showing causes(s) and/ or effect(s)	Assessment is balanced, wide ranging and well contextualised using quantitative and/ or qualitative information, and shows an awareness of competing arguments/ factors leading to a supported judgement
3	5-6	Accurate and thorough	Supported throughout by relevant and effective use of the business behaviour/ context	Analytical perspectives are presented, with developed chains of reasoning, showing cause(s) and/ or effect(s)	An attempt at an assessment is presented, using quantitative and qualitative information, though unlikely to show the significance of competing arguments
2	3-4	Elements of knowledge and understanding	Some application to the business example	Chains of reasoning are present but may be assertions or incomplete	A generic or superficial assessment is presented
1	1-2	Isolated elements	Weak or no relevant application to business examples	Generic assertions	No attempt at assessment
0	0	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response

Overall Level and Mark Band: Mark Awarded: /10 EBI (Even better if):

WWW (What went well):

DIN Task from assessment (to be completed on the back)

- Write a new knowledge point related to the question
- Link one of your knowledge points to application from the case study
- Analyse the point highlighted from your work (it hasn't been developed enough for AN) Use the sentence starters to develop your work. ***This means/this is because/as a result/the effect of this/the outcome of this/the impact of this/as advantage or disadvantage of this is***
- Evaluate the identified point in its paragraph; critique your point. However/in reality/this depends on/the extent to which...
- Write an evaluation paragraph (MOPS) based on facts from the case study – ANSWER the question – ***overall/on balance/the best outcome/despite the fact***
- Read the chapter in the book & make notes to enhance your knowledge
- See my notes in your work – ask me to explain them
- Other -

3 to 4 direct chains of analysis steps

12 marker K=2 Ap=2 An=4 Ev=4

Level	Marks	Knowledge and Understanding	Application	Analysis	Evaluation
4	9-12	**Accurate and thorough**	Supported **throughout** by **relevant and effective use of the business behaviour/ context**	**A coherent** and **logical** chain of reasoning, **showing causes(s) and/ or effect(s)**	Assessment is balanced, wide ranging and well contextualised using quantitative and/ or qualitative information, and shows an **awareness of competing arguments/** factors leading to a **supported judgement**
3	5-8	**Accurate and thorough**	Supported **throughout** by **relevant and effective use of the business behaviour/ context**	Analytical perspectives are presented, with **developed chains of reasoning, showing cause(s) and/ or effect(s)**	**An attempt at an assessment** is presented, using quantitative and qualitative information, **though unlikely to show the significance of competing arguments**
2	3-4	**Elements** of knowledge and understanding	**Some** application to the business example	**Chains of reasoning are present** but **may be assertions or incomplete**	A **generic or superficial** assessment is presented
1	1-2	**Isolated elements**	**Weak** or **no** relevant application to business examples	**Generic assertions**	**No attempt** at assessment
0	0	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response

Overall Level and Mark Band: Mark Awarded: /12 EBI (Even better if):

WWW (What went well):

DIN Task from assessment (to be completed on the back)
• Write a new knowledge point related to the question • Link one of your knowledge points to application from the case study • Analyse the point highlighted from your work (it hasn't been developed enough for AN) Use the sentence starters to develop your work. ***This means/this is because/as a result/the effect of this/the outcome of this/the impact of this/as advantage or disadvantage of this is*** • Evaluate the identified point in its paragraph; critique your point. However/in reality/this depends on/the extent to which... • Write an evaluation paragraph (MOPS) based on facts from the case study – ANSWER the question – ***overall/on balance/the best outcome/despite the fact*** • Read the chapter in the book & make notes to enhance your knowledge • See my notes in your work – ask me to explain them
• Other -

3 to 4 direct chains of analysis steps

20 marker K=4 Ap=4 An=6 Ev=6

Level	Marks	Knowledge and Understanding	Application	Analysis	Evaluation
4	15-20	Accurate and thorough	Supported throughout by **relevant and effective use of the business behaviour/ context**	**Well-developed and logical, coherent, chains of reasoning** showing a range of cause(s) and/ or effect(s). **Arguments** are **fully developed**	**Quantitative and/or qualitative information is/are used well to support judgements.** A full awareness of the validity and significance of competing arguments/factors, leading to balanced comparisons, judgements and an **effective conclusion that proposes a solution and/or recommendations**
3	9-14	Accurate and thorough	Supported throughout by **relevant and effective use of the business behaviour/ context**	Uses **developed chains of reasoning**, so that cause(s) and/or consequence(s)/effect(s) are complete, showing an understanding of the question. Arguments are well developed	**Quantitative or qualitative information is introduced in an attempt to support judgements,** a partial awareness of the validity and/ or significance of competing arguments and **may lead to a conclusion**
2	5-8	**Elements** of knowledge and understanding	**Some** application to the business example	**Arguments and chains of reasoning** are presented, but connections between cause(s) and/ or consequence(s)/ effects are incomplete - attempts to address the question	**A comparison or judgement may be attempted** but will not successfully show an awareness of the key features of business behaviour or business situation
1	1-4	**Isolated elements**	**Weak** or **no** relevant application to business examples	An **argument may be attempted** but will be generic and fail to connect cause(s) and/ or consequence(s)/ effect(s)	**No attempt** at a comparison/ judgement/ conclusion/ recommendation
0	0	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response	A completely inaccurate response

Overall Level and Mark Band: Mark Awarded: /20 EBI (Even better if):

WWW (What went well):

DIN Task from assessment (to be completed on the back)

- Write a new knowledge point related to the question
- Link one of your knowledge points to application from the case study
- Analyse the point highlighted from your work (it hasn't been developed enough for AN) Use the sentence starters to develop your work. ***This means/this is because/as a result/the effect of this/the outcome of this/the impact of this/as advantage or disadvantage of this is***
- Evaluate the identified point in its paragraph; critique your point. However/in reality/this depends on/the extent to which...
- Write an evaluation paragraph (MOPS) based on facts from the case study – ANSWER the question – ***overall/on balance/the best outcome/despite the fact***
- Read the chapter in the book & make notes to enhance your knowledge
- See my notes in your work – ask me to explain them

- Other -

3 to 4 direct chains of analysis steps

Decision option.

[redacted]

Essay conclusion

A	**Answer** (use the hook)
J	**Justify**
I	**It Depends**
M	**Most Important Reason**

VID t2u: https://www.tutor2u.net/business/reference/effective-paragraph-technique-pecan-pie

Option 1

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Can

PIE

Option 2

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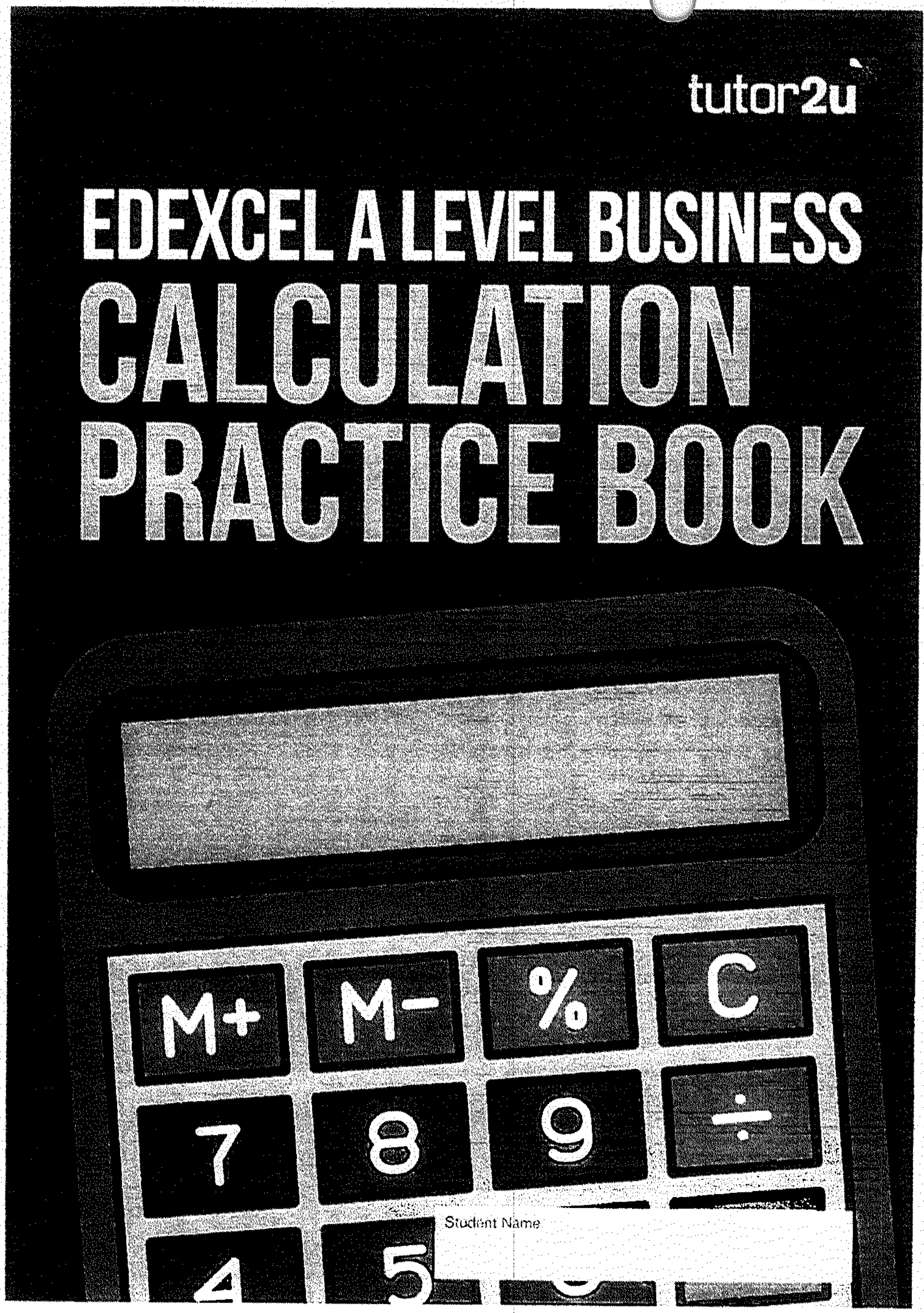
Can

PIE

Answers on Firefly Revision Lab → Calculations → 5



Contents

Remember, always show your workings

1 Market Size and Market Share

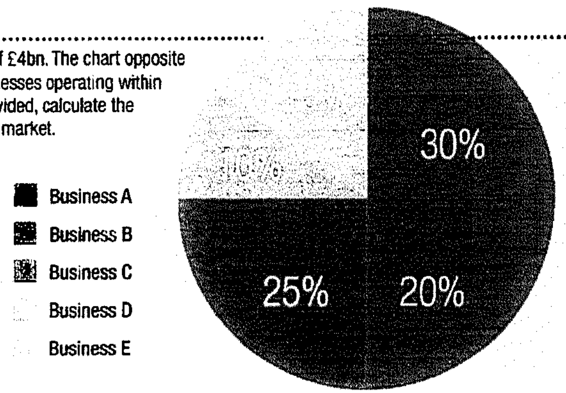
Question 1

Which of the following businesses has the lowest market share?

Business	Market Size by Value	Total Sales
A	£240m	£20m
B	£150m	£18m
C	£80m	£10m

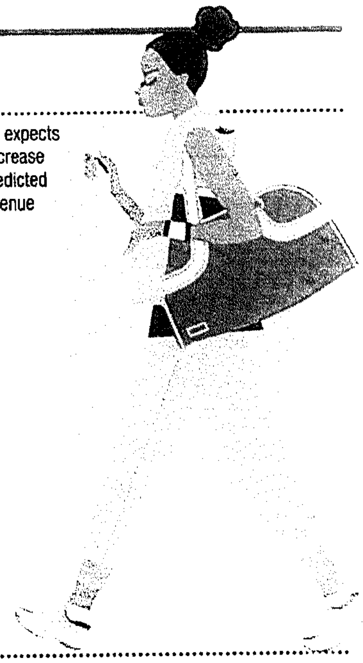
Question 2

A market has a market size by value of £4bn. The chart opposite shows the market share of the 5 businesses operating within this market. Using the information provided, calculate the sales revenue of each business in this market.



Question 3

A gym currently has 100 members. Yearly membership is £480. The gym expects the local market for gym memberships to increase, resulting in a 10% increase in memberships per year, for the next 3 years. The membership fee is predicted to remain the same during this time. Calculate the difference in sales revenue between now and in three years time.



Question 4

This year, the market size of widgets by volume is estimated to be 472,500. This would represent a 5% increase from last year. Calculate the number of widgets sold last year.

Question 5

Last year, a UK manufacturer of condiments achieved its highest sales revenue of £575,000. This represented a 7% share of the total market. Using the information provided, calculate the market size by value of condiments in the UK.

Question 6

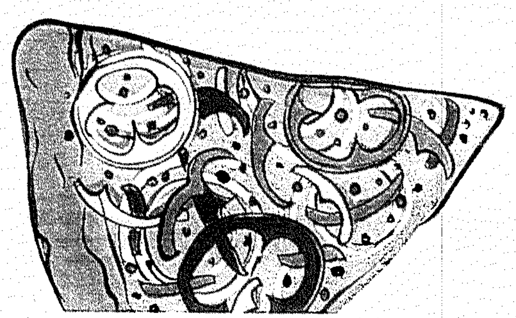
The total market value of a market in 2016 was £5bn. The market has grown, on average, by 6% per year since 2012. If this level of growth continues, calculate the market size by value in 2018.

Question 7

This year, a business estimates that its sales revenue will be £69,525, an increase of 3% from the year before. The market size by value of the market the business operates in is forecast to be £459,000 this year, which is 2% higher than last year. Calculate the market share of the business last year.

Question 8

An Italian restaurant in Weardale is considering offering a takeaway pizza service. The restaurant estimates that it will sell 2,500 pizzas a year, charging £5 per pizza. This would give the restaurant a 10% share of the local market. Calculate the size of the market by volume and value for takeaway pizzas in Weardale.

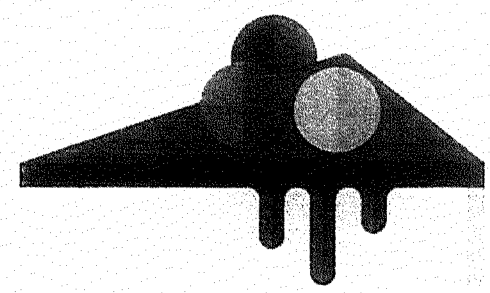


Question 9

Business A sold 150,000 units in the UK last year. It estimates that this will increase by 35% this year and that its market share will be 25%. Calculate the total size of the market by volume.

Question 10

In 2014, the size of a market by value was £4m. In 2015, it was £4.6m and in 2016 it was £5.29m. A business operating in this market estimates that in 2017, its sales revenue will be £1.52m. Calculate the market share of the business in 2017, assuming the same level of market growth that occurred between 2014 and 2016 continues in 2017.



2 Price and Income Elasticity of Demand

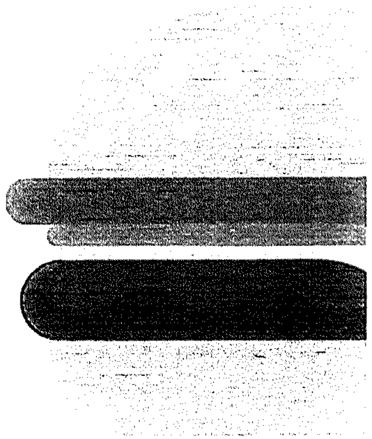
Price Elasticity of Demand

Question 1

A business sells 500 products per week and estimates that the price elasticity of demand for its products is -0.4. The business is considering increasing the price by 10%. Calculate the quantity that will be demanded after the price increase.

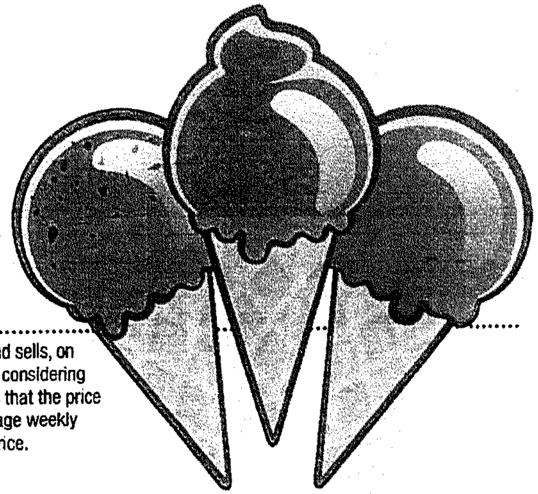
Question 2

A burger van estimates that the price elasticity of demand of its burgers is -2. The owner of the burger van is considering reducing the price of the burgers from £2 to £1.60. The burger van sells an average of 800 burgers per week. Calculate the quantity that will be demanded at the new price.



Question 3

After a business increased the price of its products from £10 to £15, weekly demand fell from 5,000 units per week to 4,000 units per week. Calculate the price elasticity of demand.



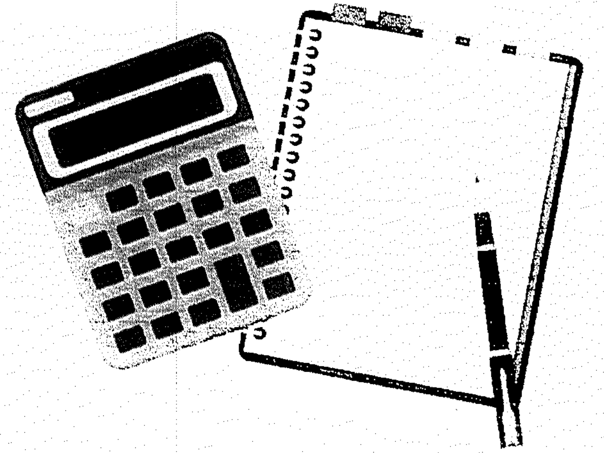
Question 4

An ice cream van charges £1 for an ice cream and sells, on average, 600 ice creams per week. The owner is considering reducing the price by 20%. The owner estimates that the price elasticity of demand is -3. Calculate the percentage weekly increase in revenue if the owner increases the price.

Question 5

Below is a table of data relating to a business. The business estimates that the price elasticity of demand of its products is -0.2 and is considering increasing the price from £50 to £60. Based on this information and the information in the table below, calculate how much extra (weekly) profit the business would make if it increased the price.

Weekly Sales	400 units
Variable Cost Per Unit	£10
Weekly Fixed Costs	£10,000



Income Elasticity of Demand

Question 1

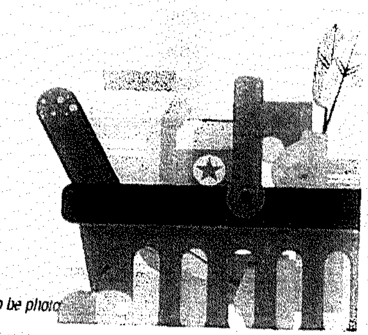
A small coffee shop sells 800 cups of coffee per month and the owner believes that the income elasticity of demand for coffee is +0.8. Demand for coffee has risen to 832 cups per month. Calculate the percentage increase in income in the local area.

Question 2

A luxury TV manufacturer saw sales increase from 5,000 units per year to 6,400 units each year, due to a 7% increase in income levels. Calculate the income elasticity of demand.

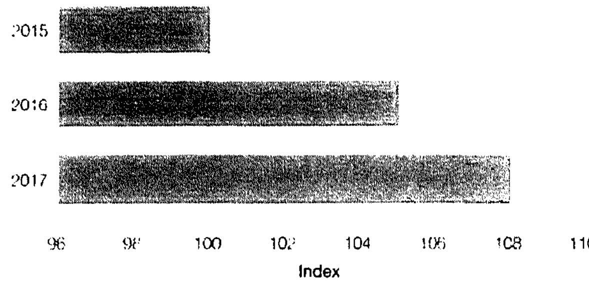
Question 3

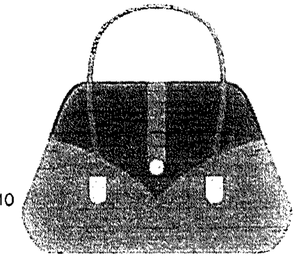
A supermarket selling budget brands estimates that the income elasticity of demand for its products is -0.3. The supermarket sells all products for 99p and sold 25,000,000 units nationwide in 2016. The supermarket estimates that in 2017, incomes will increase nationally by 2.3%. Based on this information, calculate the expected revenue for 2017.



Question 4

Below is chart showing the index for the income of a town in North East England. It is believed that the income elasticity of demand for luxury handbags is +1.3. The base year is 2015, when 1,800 handbags were sold in the town. Using this information, and the information in the chart, calculate the number of luxury handbags sold in the town in 2016.





Question 5

A bakery, which opens Monday to Saturday, sells bread rolls for 24p and ciabattas for £1.35. The bakery estimates that the income elasticity of demand for bread rolls is +0.4 whereas the income elasticity of demand for ciabattas is +2. The local area is suffering from the closure of a large employer, resulting in a fall in the average income of 5%. The bakery currently sells 400 bread rolls and 100 ciabattas per day. Based on the fall in income, calculate the new daily demand for bread rolls and ciabattas and the difference in weekly revenue.

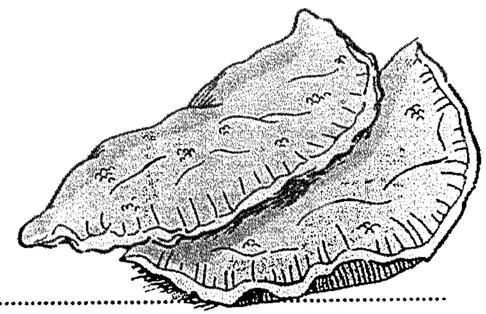
Cost Plus Pricing

Question 1

A table manufacturer adds a 20% mark-up to the unit cost of each table. The unit cost per table is £50. Calculate the selling price per table.

Question 2

A bakery sells its pasties for £1.20 per pasty. The unit cost per pasty is £0.75. Calculate the percentage mark-up.



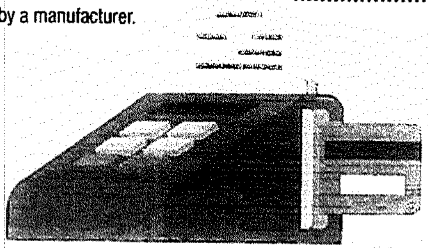
Question 3

A business sells its products for £4 per unit. The unit cost per product is 4/5 of the selling price. Calculate the percentage mark-up.

Question 4

Below is a table showing the unit cost of two products made by a manufacturer.

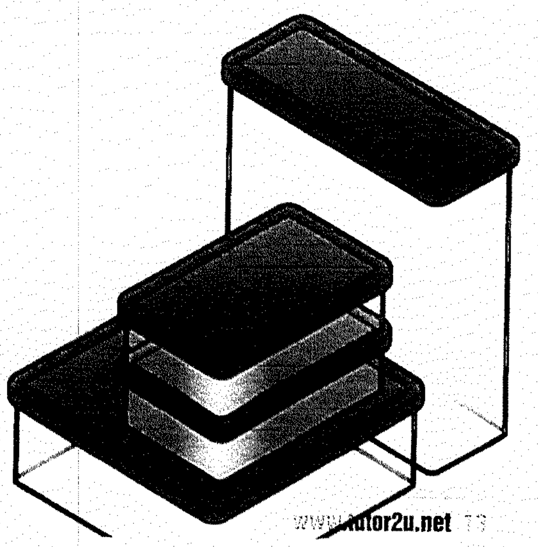
Product	Unit Cost
A	£2.20
B	£2.50



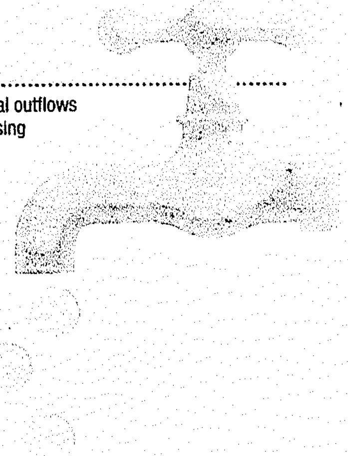
The manufacturer adds a 20% mark-up on each product. Last month, the manufacturer sold 5,000 units of product A and 3,000 units of product B. Calculate the total sales revenue from product A and product B last month.

Question 5

Last month, a plastic box manufacturer sold 8,000 plastic boxes, achieving a total revenue of £40,000. The manufacturer adds a 25% mark-up to the unit cost of each plastic box. Calculate the unit cost per plastic box.



4 Cash Flow Forecasts



Question 1

A business estimates that in October, its total inflows will be £10,000 and its total outflows will be £4,000. The closing balance in September was £8,000. Calculate the closing balance for October.

Question 2

Below is a cash flow forecast for a small business. Complete the cash flow forecast by calculating the missing figures.

	January	February	March
Cash Inflows	£10,000		£13,000
Cash Outflows		£5,000	£5,500
Net Cash Flow	£6,000	£7,000	
Opening Balance	£3,000		£16,000
Closing Balance		£16,000	

Question 3

The business in question 2 now believes that in March, cash inflows will be £15,000 instead of £13,000 and cash outflows will be £7,000 instead of £5,500. Calculate the new closing balance for March.

Question 4

A newsagent estimates that between January and March, total inflows will be £15,000. 25% of the inflows will be in January, 30% in February and the remainder in March. Total outflows between January and March are estimated to be £7,000, of which 15% will be in January, 25% in February and 60% in March. The opening balance in January is £2,500. Using this information, complete the cash flow forecast below.

	January	February	March
Cash Inflows			
Cash Outflows			
Net Cash Flow			
Opening Balance			
Closing Balance			

Question 5

A small restaurant has produced the cash flow forecast shown below.

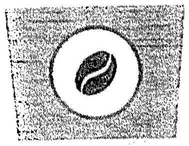
	Quarter 1	Quarter 2
Cash Inflows	£25,000	£33,000
Cash Outflows	£60,000	£21,000
Net Cash Flow	(£35,000)	£12,000
Opening Balance	£24,000	(£11,000)
Closing Balance	(£11,000)	£1,000

The owner now believes that some of the information is incorrect. The owner estimates that in quarter 1, inflows will be 25% higher and outflows will be 10% higher whereas in quarter 2, inflows will be 30% higher and outflows will be 15% higher. The opening balance remains the same. Amend the cash flow forecast based on the information given using the blank cash flow forecast below.

	Quarter 1	Quarter 2
Cash Inflows		
Cash Outflows		
Net Cash Flow		
Opening Balance		
Closing Balance		

Question 6

Opposite is a cash flow forecast for a coffee shop. The owner estimates that in quarter 2, cash inflows will be 3/5 higher than quarter 1, whereas cash outflows will increase by 3/4. Using this information, calculate the closing balance for quarter 2.



	Quarter 1	Quarter 2
Cash Inflows	£7,000	
Cash Outflows	£3,200	
Net Cash Flow	£3,800	
Opening Balance	£2,000	
Closing Balance	£5,800	

Question 7

The owners of a business are drawing up a cash flow forecast for January, February and March. They estimate that in January, revenue will be £20,000. This is expected to rise by 25% each month up to and including March. This is due to the owners spending £4,000 on marketing in January. Other costs are as follows:

- £6,250 per month on wages
- £1,050 loan repayments in February and March
- Additional costs per month equal to 15% of monthly revenue

The opening balance is £15,000. Using the information, complete the cash flow forecast below.

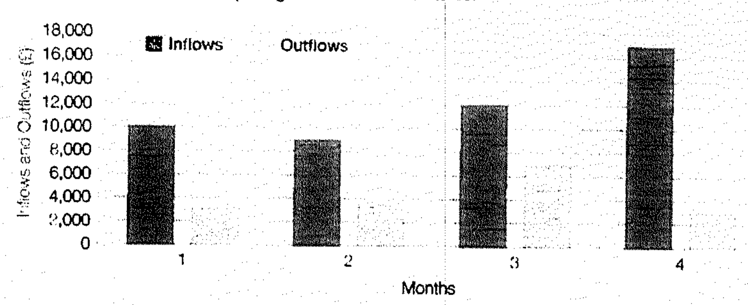
	January	February	March
Inflows			
Revenue			
Total Inflows			
Outflows			
Marketing			
Wages			
Loan Repayments			
Additional Costs			
Total Outflows			
Net Cash Flow			
Opening Balance			
Closing Balance			

Question 8

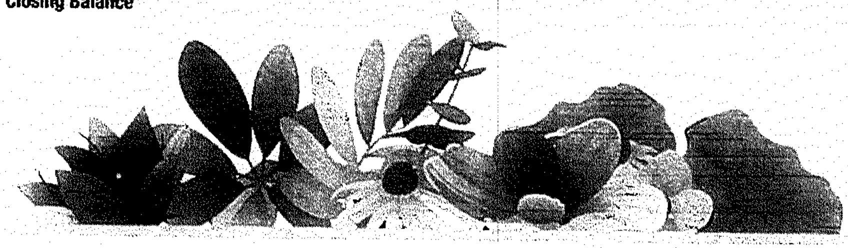
A small manufacturing business has a closing balance of £250,000. Net cash flow is 2/5 of the closing balance and total outflows are 1/4 of the net cash flow. Calculate the total cash inflow figure for the manufacturing business using the information given.

Question 9

Below is a chart showing the forecasted inflows and outflows for a flower shop. Using the information in the chart, complete the cash flow forecast. The opening balance in month 1 is £0.



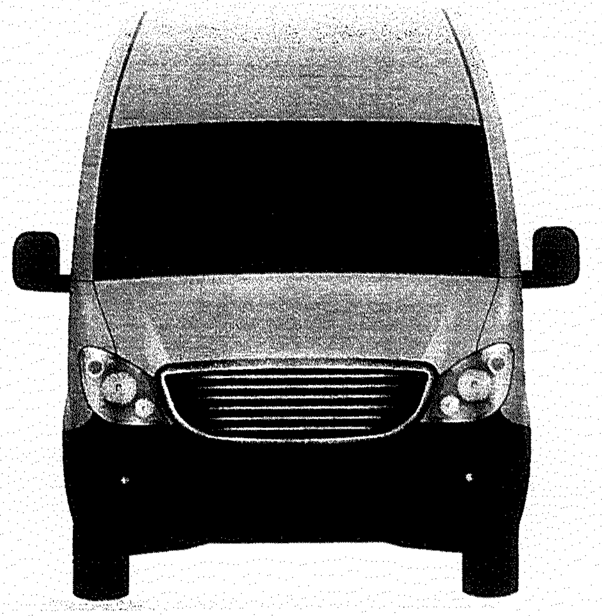
	Month 1	Month 2	Month 3	Month 4
Cash Inflows				
Cash Outflows				
Net Cash Flow				
Opening Balance				
Closing Balance				



Question 10

Next month, a garage that specialises in servicing commercial vehicles, is considering offering 50% of its customers a two month credit period for payment, as opposed to asking all its customers to pay up front. The owner of the garage has also managed to increase the time it needs to make its payments by negotiating with some of its suppliers. As of next month, 60% of the garages outflows will be payable immediately with the rest payable in one month's time. Outflows are estimated to be 2/5 of revenue each month.

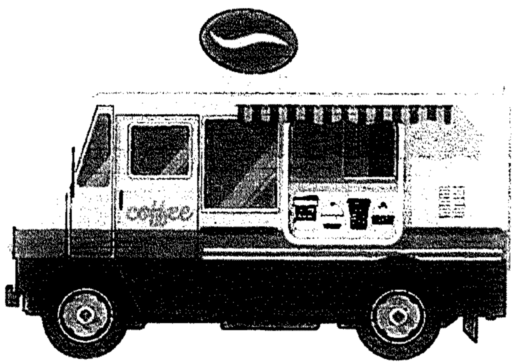
The owner of the garage estimates that revenue next month will be £40,000. Calculate the total cash inflows, total cash outflows and net cash flow for next month.



Sales, Revenue and Costs

Last year, a business sold 250,000 products priced at £2.50 per product. Calculate the sales revenue of the business last year.

A mobile coffee van charges £1.80 for a cup of coffee. Last month, the sales revenue of the coffee van was £9,000 and the total variable costs were £4,000. Calculate how many cups of coffee the van sold last month and the variable cost per cup.



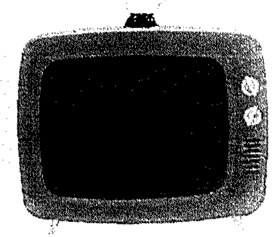
Last year, a business sold 500,000 units priced at £3.50 per unit. Variable cost per unit is £1.50. This year, the business has increased the selling price by 1/5 and the business estimates that this will result in the number of units sold falling by 12%. Calculate the estimated sales volume, sales revenue and total variable costs for this year.

Below is a table of data relating to a business last year.

Number of units sold	150,000
Unit cost	£2 50
Percentage mark-up	10%

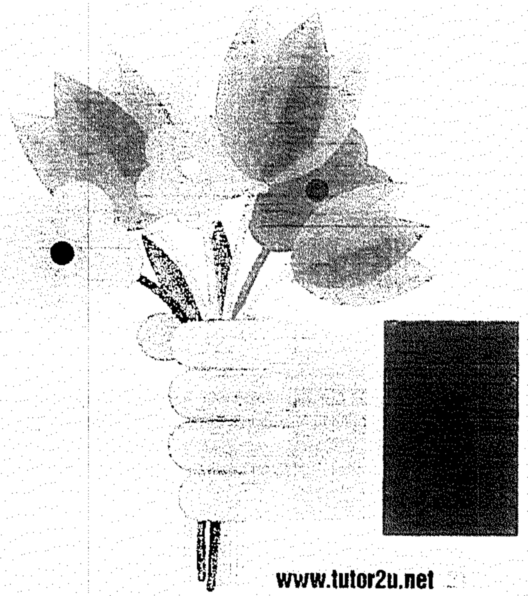
The business estimates that this year, it will sell 15% more units than last year and that due to an increase in supplier costs, the cost per unit will increase by 8%. Calculate the estimated sales volume and sales revenue for this year, assuming the percentage mark-up remains the same as last year.

A television manufacturer sells its televisions to retailers for £120 a set. Variable costs are 2/5 of the selling price, with monthly fixed costs being £75,000. The manufacturer sells 1,400 televisions per month. Calculate the yearly profit of the business.



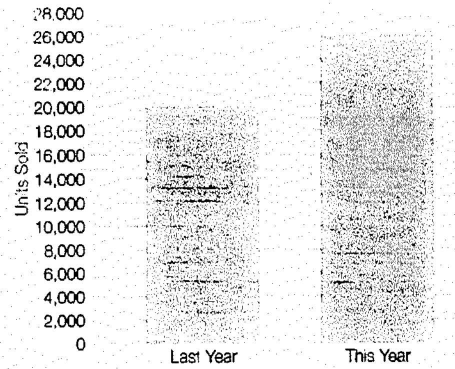
A business estimates that it will make a profit of £250,000 this year. The business estimates that it will sell 150,000 units, with a selling price of £10 per unit. Variable costs per unit are 25% of the selling price. Calculate the estimated fixed costs of the business.

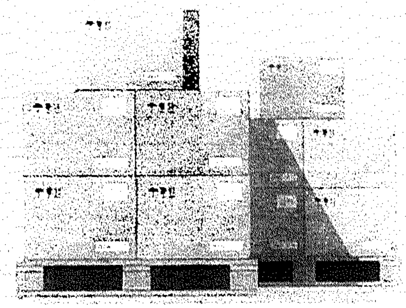
Last month, a florist sold 910 bunches of flowers making a profit of £2,005. Fixed costs are £3,000 per month and the selling price of a bunch of flowers is £7.50. Calculate the variable cost of a bunch of flowers.



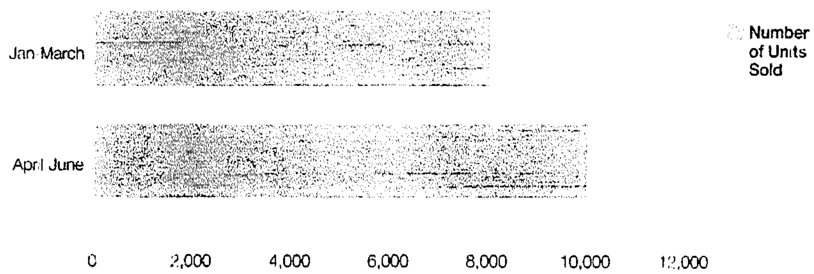
Next year, a business estimates that it will sell 25,000 units at a selling price of £12 per unit. Variable costs per unit are 1/3 of the selling price and the business estimates that the business will make a profit of £80,000. Calculate the fixed costs of the business for next year.

Below is a chart showing the number of units a business sold this year and last year. The variable cost per unit has remained at £1.50 during these two years and the selling price has remained at £2.85. Fixed costs last year were £15,000 but this year, due to expansion and moving to larger premises, they increased by 15%. Calculate the percentage increase in profit between this year and last year.





Below is a chart showing the number of units a business sold over a 6 month period. Between January and March, the selling price per unit was £15 and the variable cost per unit was £5. Due to a change in supplier, the variable cost per unit fell by 20% between April and June. Because of this, the business decided to reduce its prices by 10% during this period. Fixed costs are £60,000 per year. Based on this information, calculate the average monthly profit between January and June.



6 Break-Even

The Edexcel specification states that students only need to interpret break-even charts. However, one activity has been included that requires the construction of a break-even chart as this can deepen understanding.

Question 1

A business has an average selling price of £2.50. Variable cost per unit is 1/5 of the selling price and last month the business sold 20,000 units. Calculate the total contribution for last month.

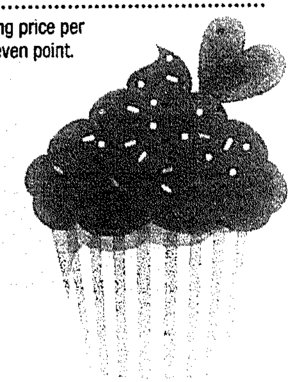
Question 2

Opposite is a table of data relating to a fast food restaurant. The restaurant is considering increasing its average selling price by £0.20. The owner believes that this will result in demand falling by 2%. Based on this information, calculate the difference in total monthly contribution before and after the proposed price rise.

Average Selling Price	£3.00
Variable Cost Per Unit	£1.20
Monthly Units Sold	24,000

Question 3

A cupcake business pays £50 for a stand at a local market on a Saturday. The selling price per cupcake is £2.50 and the variable cost per cupcake is £1.25. Calculate the break-even point.



Question 4

Last year, a business had weekly fixed costs of £5,000. Selling price per unit was £150 and the variable cost per unit was £20. The number of units sold yearly was 6,000. Calculate the yearly margin of safety of the business.

Question 5

A business has fixed costs of £6,000 per month. The selling price per unit is £4 and the variable cost per unit is £0.80. The business is considering moving to larger premises which will result in fixed costs increasing by 4%. The business sells 5,000 units per month. Calculate the difference in the monthly margin of safety before and after the proposed move.

Question 6

An entrepreneur is assessing the viability of opening a new sandwich takeaway business and wishes to calculate the weekly break-even point. He estimates that his fixed costs will be £600 per week. The average selling price of each sandwich will be £4 and his variable cost per unit will equal 50% of the selling price. He anticipates that he will sell 200 sandwiches per day and the business will be open 6 days a week.

6.1 Using this information, complete the table below and construct a weekly break-even chart for the sandwich takeaway business.

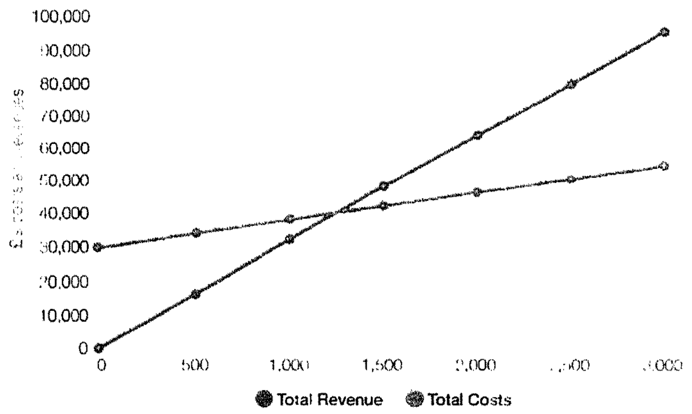
Units	Total Revenue	Variable Costs	Fixed Costs	Total Costs
0				
200				
400				
600				
800				
1,000				
1,200				

6.2 Using the break-even chart, state the weekly break-even point of the business.

6.3 Calculate the weekly margin of safety, if the entrepreneurs predictions for the week are correct.

Question 7

Below is a break-even chart for an established retailing business.



7.1 Using the break-even chart, calculate the total contribution at 2,500 units.

7.2 Using the break-even chart, calculate the variable cost per unit.

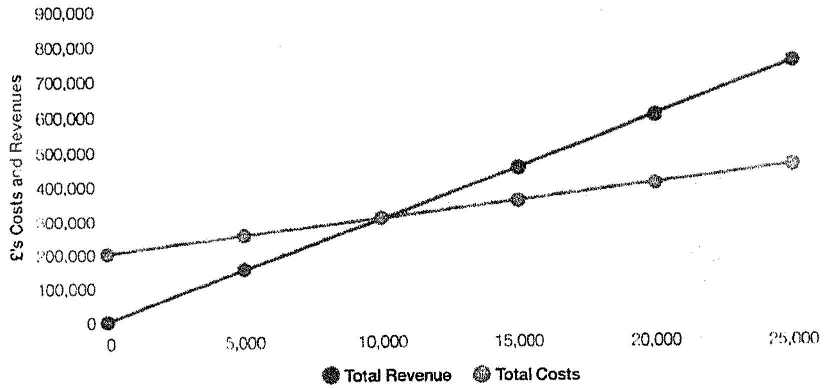
7.3 Using the break-even chart, calculate the profit or loss made at 3,000 units.

Question 8

The monthly break-even situation for a business is shown in the chart below. Due to changes in market conditions, the variable cost per unit of the business is expected to rise by 50%. As a result, the business is now planning to increase its selling price, to ensure it can still maintain the same contribution per unit on each item sold.

8.1 Amend the break-even chart below, to show both the new total revenue line and the new total cost line after the increases to these two variables. Label the new revenue line TR2 and the new total cost line TC2.

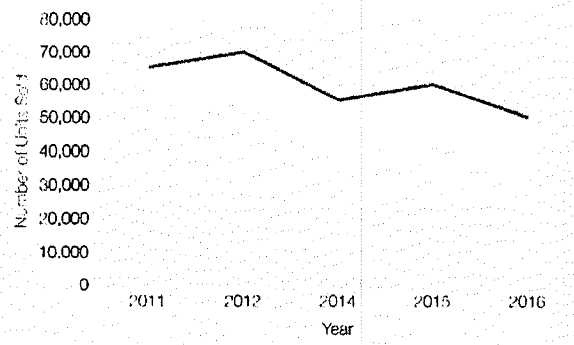
Monthly break-even situation for a Business



8.2 Using the break-even chart, state the difference between the new and original break-even points.

Question 9

Below is a chart which shows the number of units sold by a medium sized business over the last 5 years. In 2016, the business achieved a total contribution of £150,000. The selling price per unit is £5. Based on this information and using the chart below, calculate the variable cost per unit for 2016.



Question 10

Below is a table of data relating to a sweet manufacturer. The sweets are packaged in cardboard tubes, which account for 10p of the variable costs. The business is looking to change supplier, which will reduce the cost of the packaging by 50%. Based on this information, calculate the difference in break-even before and after the proposed change in supplier.

Yearly Fixed Costs	£18,000
Variable Costs	£0.80
Selling price (to retailer)	£1.20

7 Budgets

Question 1

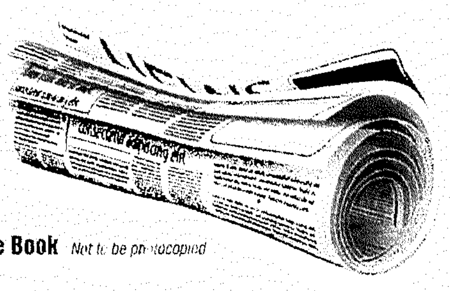
Last year, a business had a profit budget of £450,000. This year its profit budget is 5% higher. Calculate the profit budget of the business for this year.

Question 2

Due to a reduction in costs, a retail business estimates that its expenditure budget this year will be 2% lower than its expenditure budget last year, which was £250,000. Calculate its expenditure budget for this year.

Question 3

In December, a newsagent set a revenue budget of £25,000. Its expenditure budget for December was 1/5 lower than the revenue budget. Calculate the expenditure budget for the newsagent in December.



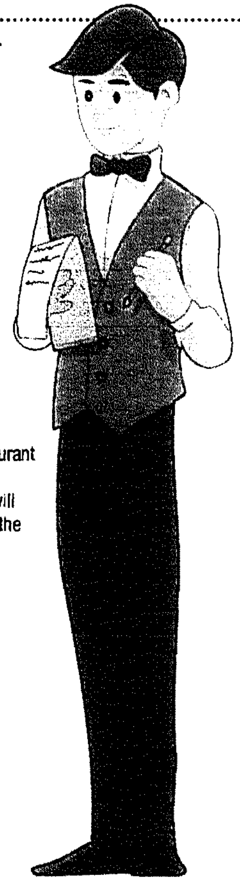
Question 4

In January, the same newsagent had a revenue budget that was 15% higher than the revenue budget set for December. The expenditure budget was also 2/5 higher than the expenditure budget for December. Using this information and your answer to question 3, calculate the profit budget for the newsagent in January.

Question 5

Below is a revenue, expenditure and profit budget for a restaurant in July and August.

	July		August	
	Budget	Actual	Budget	Actual
Revenue				
Food	5,000	5,500	5,250	5,800
Drink	1,500	1,750	1,800	1,900
Total Revenue	6,500	7,250	7,050	7,700
Expenditure				
Stock	1,000	1,100	1,150	1,250
Wages	800	900	900	1,000
Other costs	100	90	110	120
Total Expenditure	1,900	2,090	2,160	2,370
Profit/ Loss	4,600	5,160	4,890	5,330



After analysing the actual revenue and expenditure in August, the owner of the restaurant estimates that in September, revenue from both food and drink will increase by 6%. Expenditure on stock will reduce by 2% due to a change in supplier. All other costs will remain in line with the actual spend for August. Based on this information, calculate the profit/ loss budget for September.

Question 6

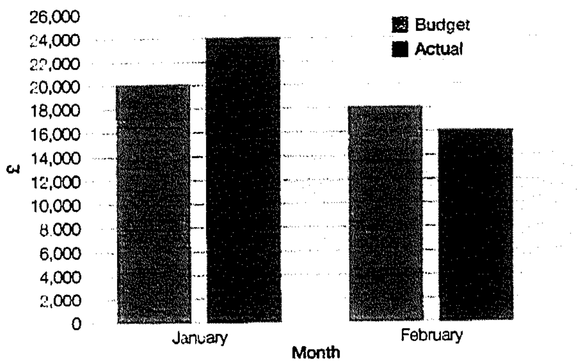
Last year, a manufacturer set a profit budget of £850,000. Its actual profit was £730,000. Calculate the profit variance stating whether it is adverse or favourable.

Question 7

In January, a business set a revenue budget of £325,000. Actual revenue was £50,000 lower than budget. The expenditure budget of the business in January was £210,000. Actual expenditure was 8% higher than budget. Calculate the profit variance of the business for January, stating whether it is adverse or favourable.

Question 8

Below is a chart showing the profit budget and actual profit for a designer clothes store in January and February.

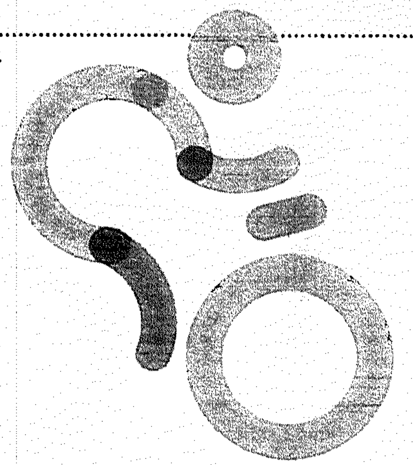


Calculate the total (combined) profit variance for January and February stating whether it is adverse or favourable.

Question 9

Below is an extract from the budget of a cycling shop in October.

	October	
	Budget	Actual
Revenue		
Store Revenue	£22,000	
Online Revenue	£6,000	
Total Revenue		
Expenditure		
Wages	£8,000	
Stock	£6,000	
Other costs	£2,000	
Total Expenditure		

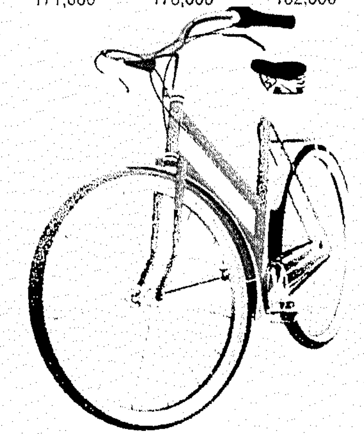


Store revenue was actually 5% higher than budget, whereas online revenue was 4/5 of the amount that had been budgeted. Wages were £500 higher than budget, whereas stock was 2% lower than budget. Other costs (actual) were £2,100. Complete the table and calculate the profit variance for October stating whether it was adverse or favourable.

Question 10

Below shows the budgeted and actual revenue and expenditure for a business in March, April and May. Calculate the total (combined) profit variance for March, April and May, stating whether it is adverse or favourable.

	March		April		May	
	Budget £	Actual £	Budget £	Actual £	Budget £	Actual £
Total Revenue	175,000	184,000	182,000	190,000	205,000	208,000
Total Expenditure	162,000	170,000	171,000	178,000	182,000	181,000



8 Profit

Note: Profit for the year and profit for the year margin are also known as net profit and net profit margin.

Question 1

Last year, a business had sales revenue of £3.25m. The table below shows its profitability margins. Calculate last year's gross profit, operating profit and profit for the year.

	%
Gross profit margin	54
Operating profit margin	12
Profit for the year margin	4.5

Question 2

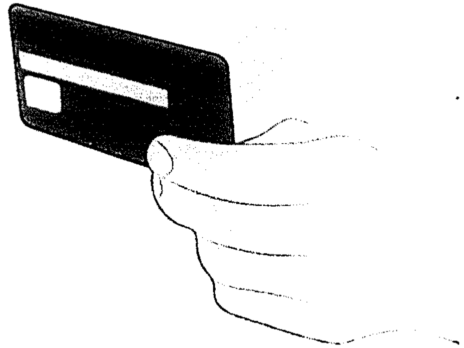
The table below shows the profit figures for a business after a year of trading. Calculate the gross profit margin, operating profit margin and profit for the year margin.

	£
Sales revenue	450,000
Gross profit	85,000
Operating profit	28,000
Profit for the year	15,400

Question 3

Last year, a retailer had the following revenue and cost data (shown in the table below). Calculate the gross profit, operating profit and profit for the year figures and margins of the business.

	£
Revenue	1,255,000
Cost of sales	480,000
Operating expenses	350,000
Interest	85,500



Question 4

The following year, the same retailer had the following changes to its costs and revenue figures. These are shown in the table below. Calculate the gross profit, operating profit and profit for the year figures and the margins for the following year of the business.

	Last Year	Following Year
	£	% change
Revenue	1,255,000	15% increase
Cost of sales	480,000	22% increase
Operating expenses	350,000	5% increase
Interest	85,500	8% increase

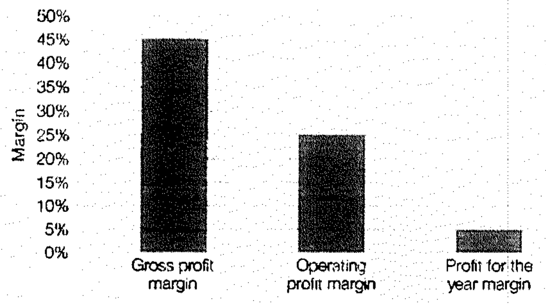
Question 5

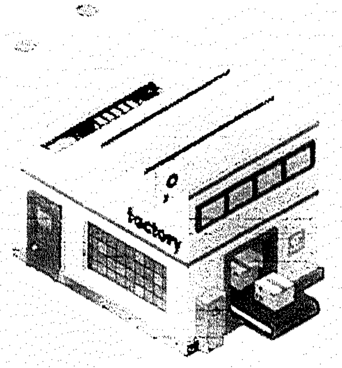
A business has 3 different product lines, A, B and C. Last year, the business had operating expenses of £500,000 and interest of £72,000. Using the revenue and gross profit margins from the table below, calculate the overall operating profit margin and profit for the year margin for last year.

	Revenue	Gross Profit Margin
Product A	£140,000	45%
Product B	£360,000	38%
Product C	£780,500	52%

Question 6

A large manufacturer with sales revenue of £10.6m had the following profit margins for last year. Using the data from the chart, calculate the gross profit, operating profit and profit for the year.



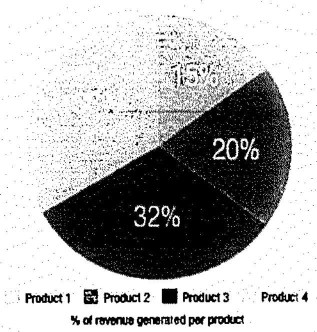


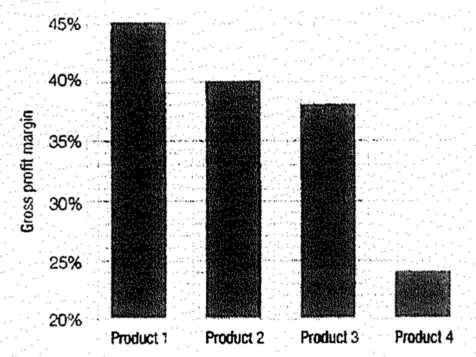
Question 7

The following year, the same manufacturer had an increase in sales revenue of 11%. Its gross profit figure increased by 5%, its operating profit increased by 4%, but its profit for the year figure decreased by 2%, due to a significant increase in finance costs. Using the data from question 6, calculate the gross, operating profit and profit for the year margins for the following year.

Question 8

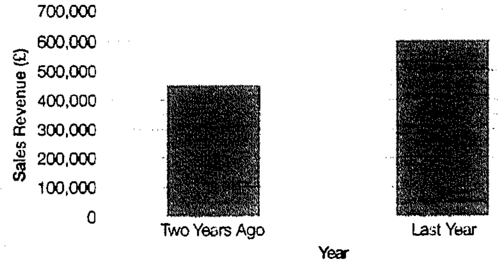
A business with four product lines, 1, 2, 3 and 4, has operating expenses of £450,000 and revenue of £2.8m. The amount of revenue generated by each product is detailed in the pie chart below and its respective gross profit margins are detailed in the bar chart. Using the data in both charts, calculate the overall gross profit margin for the firm and the operating profit margin.





Question 9

The sales revenue of a business for the last two years is shown on the chart below. Last year, the operating profit margin of the business was 12% and two years ago the operating profit margin was 8%. Calculate the profit for the year margin for both years, assuming interest accounted for 5% of operating profit.



Question 10

This year, the business in question 9 is estimating a 15% increase in revenue and operating profit of £52,400. Assuming 5% of operating profit for interest, calculate the operating profit margin and profit for the year margin for this year.

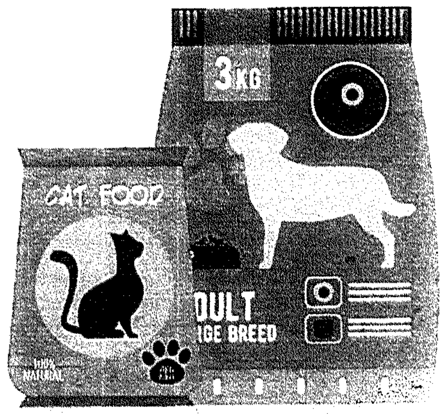
Liquidity

A business has current assets of £200,000 and current liabilities of £160,000. Calculate the current ratio of the business.

The table below shows an extract from the company accounts of a business.

Inventory	£300,000
Receivables	£100,000
Cash	£200,000
Payables	£160,000
Bank overdraft	£240,000

Calculate the current ratio and the acid test ratio of the business.



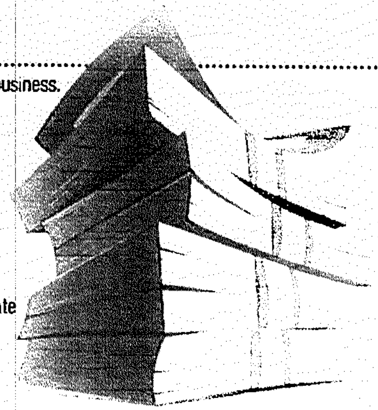
A business has a current ratio of 1.8:1. Its current liabilities are £2 million. Calculate the current assets of the business.

A business has £500,000 of inventory, £100,000 of receivables and £200,000 cash. The current liabilities of the business are 20% lower than the current assets. Calculate the current ratio and acid test ratio of the business.

The table below shows an extract from the company accounts of a business.

Inventory	£200,000
Receivables	£50,000
Cash	£100,000
Payables	£150,000
Bank overdraft	£50,000

The business has decided to purchase £20,000 of inventory using cash as well as clearing the bank overdraft, also using cash. Calculate the current ratio and acid test ratio of the business before and after the purchase of the inventory and the clearing of the overdraft.



10 Capacity Utilisation

Question 1

A business currently has the capacity to produce 50,000 units per week. The business is looking at increasing its capacity by 8%. Calculate the new capacity based on the 8% increase.

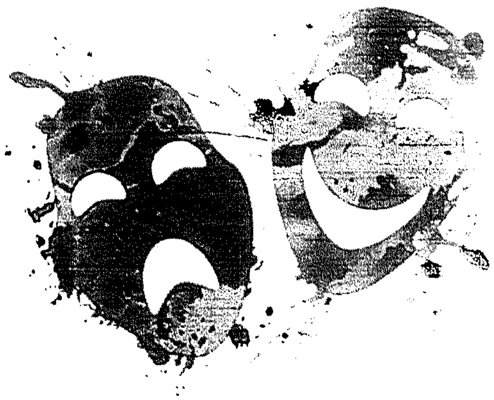
Question 2

This year, a factory has the capacity to produce 441,000 units. Last year, the business's capacity was 5% lower. Calculate the total capacity of the firm last year.

Question 3

A business is currently producing 17,000 units per week. It has the capacity to produce 25,000 units per week. Calculate the capacity utilisation of the business.

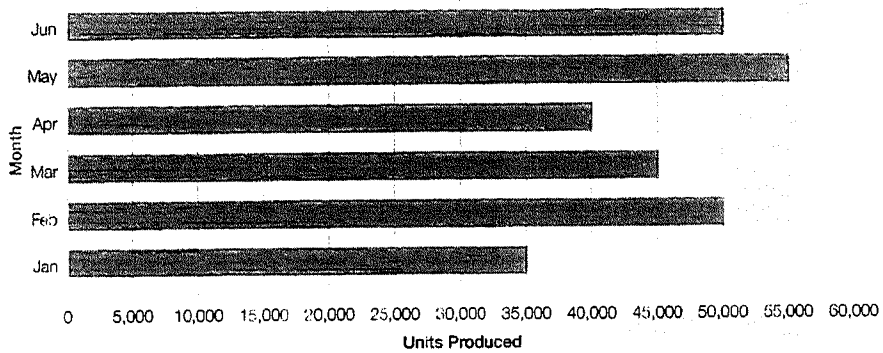
Last Saturday night, 476 people watched a play at a theatre. The capacity utilisation was 85%. Calculate the total capacity of the theatre.



A daily newspaper has the capacity to publish 10 million newspapers a year. Last year, daily sales of the newspaper were 24,000 and all papers produced were sold. The newspaper is available 5 days per week, 50 weeks of the year. Calculate the newpaper's capacity utilisation for last year.

Question 6

Below is a chart that shows how many units a business produced between January and June. The business has the capacity to produce 100,000 units per month. Calculate the average capacity utilisation between January and June.



Question 7

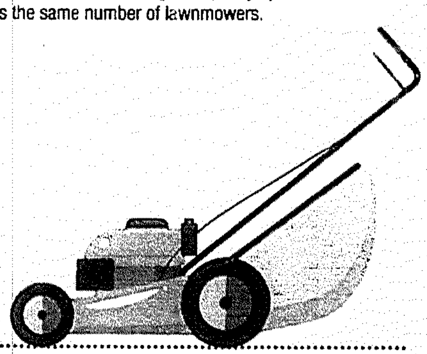
Last season, a football club had an average attendance of 42,750 people per match, a capacity utilisation of 95%. The club is considering extending the ground which will increase total capacity by 20%. Calculate the total increase in capacity after the proposed expansion.

Question 8

A local cinema has 3 screens of equal size. The average capacity utilisation is 60% across the three screens which equates to 450 customers. To increase capacity utilisation, the cinema is considering reducing the number of screens from three to two. Calculate the new capacity utilisation of the cinema, based on on the planned reduction of screens and assuming the number of customers remains the same.

Question 9

A lawnmower manufacturer has a capacity utilisation of 75%. It is looking at increasing its capacity by 10%. Calculate the new capacity utilisation assuming the manufacturer produces the same number of lawnmowers.

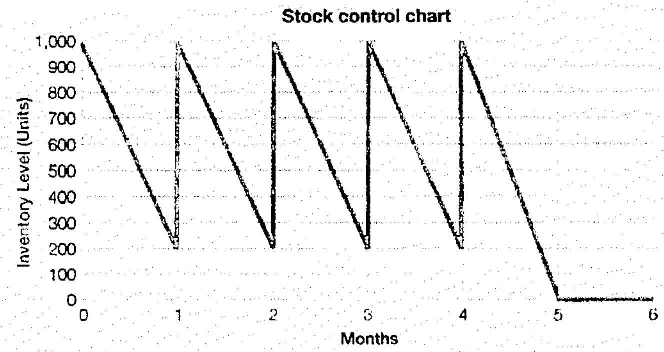


Question 10

A manufacturer is currently operating at 95% capacity utilisation, producing 237,500 units per year. The manufacturer has just secured a new contract to produce a further 100,000 units next year, and is therefore moving to a new factory with a bigger capacity. The new factory has the capacity to produce 7/8 more units than the current factory. Calculate the capacity utilisation for the business next year.

11 Stock Control

Below is a stock control chart for one component that a small manufacturing company uses in its manufacturing process.



Question 1

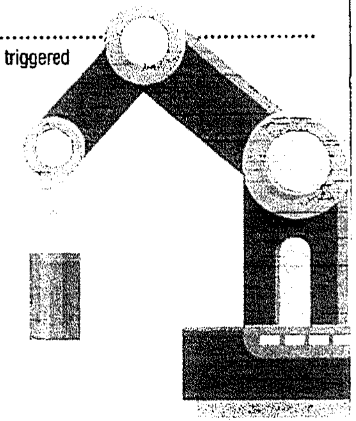
Calculate the average daily usage of this component during months 1-5 inclusive, assuming there are 30 days in each month.

Question 2

What is the normal level of buffer inventory held by the business?

Question 3

For month 1 only, calculate the re-order level of the component, if an order is triggered after 40% of the total firm's inventory holding has been used in that month.



Question 4

Calculate the normal lead time for delivery of the component.

Question 5

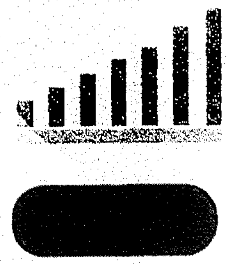
Due to a supplier problem during month 5, the manufacturer needs to increase production in month 6 and therefore requires an additional 75% extra volume of this component to be delivered in addition to the usual delivery. Calculate the required re-order quantity of the component the business needs to receive in month 6, to meet the increased level of demand and return the business to hold the normal level of buffer inventory.

12 Quantitative Sales Forecasting

Question 1

Below is a table of data showing the yearly sales revenue of a business.
Using the data in the table, calculate a three-year moving average.

Year	Sales (£000)	Three-year moving total (£000)	Three-year moving average (£000)
2009	700		
2010	1,100		
2011	1,000		
2012	1,200		
2013	1,400		
2014	1,300		
2015	1,800		
2016	2,000		



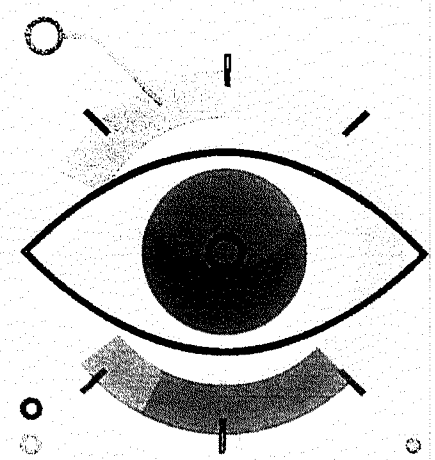
Question 2

Calculate the cyclical variation for 2011 and 2015.

Question 3

Below is a table of data showing the yearly sales revenue of a business. Using the data in the table, calculate a three-year moving average, the cyclical variation for each year and the average cyclical variation.

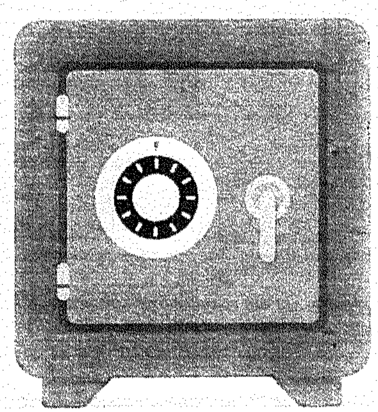
Year	Sales (£000)	Three-year moving total (£000)	Three-year moving average (£000)	Variation (£000)
2007	225			
2008	240			
2009	240			
2010	360			
2011	240			
2012	340			
2013	330			
2014	380			
2015	280			
2016	420			



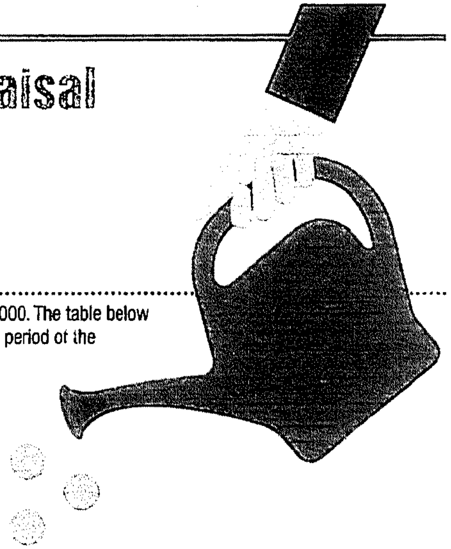
Question 4

Below is a table of data showing the quarterly sales of a business. Using the data in the table, calculate a four-quarter moving average.

Year	Quarter	Sales (units)	Four-quarter moving total (units)	Eight-quarter moving total (units)	Four-quarter moving average (units)
2013	3	8,000			
	4	9,000			
2014	1	11,000			
	2	12,000			
	3	9,000			
	4	10,000			
2015	1	13,000			
	2	15,000			
	3	11,000			
	4	12,000			
2016	1	16,000			
	2	18,000			



13 Investment Appraisal



Payback

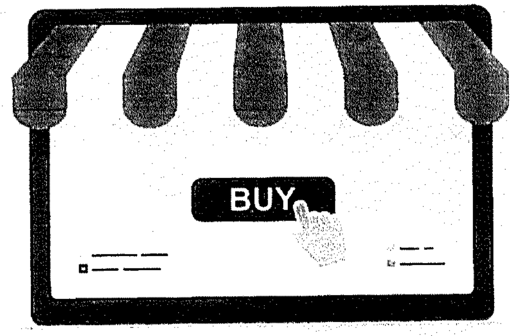
A business is considering an investment at a cost of £200,000. The table below shows the projected net cash flows. Calculate the payback period of the proposed investment.

Year 1	£50,000
Year 2	£60,000
Year 3	£60,000
Year 4	£80,000

The payback on an investment is estimated to be 3 years and 8 months. Net cash flows in Year 1 are estimated to be £60,000, £70,000 in Year 2 and £90,000 in Year 3. The estimated cost of the investment is £300,000. Calculate the estimated net cash flows in Year 4.

A business is looking at investing £325,000 in a new website with an e-commerce facility. The table below shows the projected cash inflows and cash outflows. Calculate the payback period of the new website.

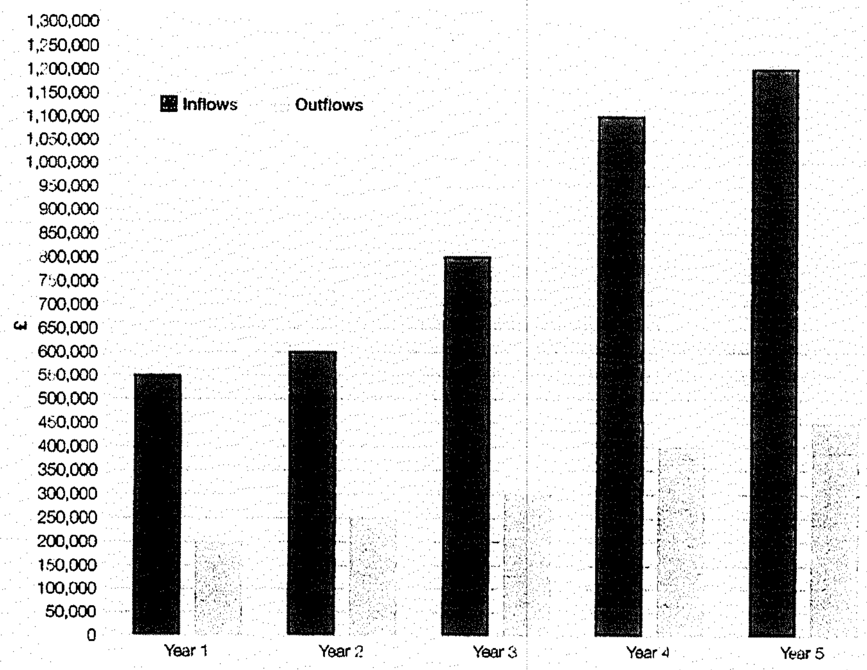
Year	Inflows	Outflows
0		£325,000
1	£150,000	£50,000
2	£180,000	£60,000
3	£200,000	£80,000
4	£250,000	£110,000



After some consideration, the above business believes that in Year 3, the cash inflows and outflows will be 10% higher than estimated. Calculate the new payback period based on this information.

Question 3

A manufacturing business is looking to invest in further automation at a cost of £1.7m. Below is a chart showing the projected inflows and outflows. Calculate the payback period of the proposed investment.



Average (Accounting) Rate of Return (ARR)

Question 1

A small coffee shop is looking to open a second shop. The total cost of the investment will be £120,000. The shop owner believes that net cash flows will be £37,000 each year, for a period of 4 years. Calculate the ARR for the new shop.

Question 2

A business is considering an investment of £140,000. The business estimates that total cash inflows over a 5 year period will be £600,000 and total cash outflows will be £400,000 over a 5 year period. Calculate the ARR of the proposed investment.

Question 3

A large chain of DIY stores is looking to expand into a new town. The business has been presented with two possible sites for a new store, site A and site B.

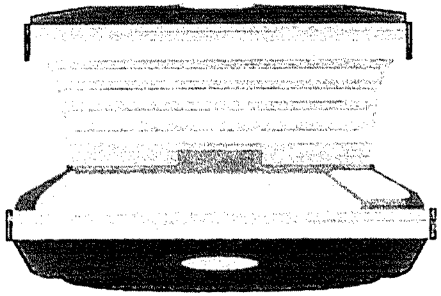
Site A has an initial investment cost of £1,400,000 and estimated cash outflows of £100,000 per year for 5 years. The DIY chain estimates that cash inflows will be £425,000 each year for 5 years.

Site B has an initial investment cost of £2,000,000 and cash outflows of £40,000 per year for 5 years. The DIY chain estimates that cash inflows will be ¼ higher than the yearly estimated cash inflows of Site A.

Calculate the ARR for each potential new site.

To take advantage of a gap in the market, an entrepreneur is looking to open a tanning salon on the local high street. The entrepreneur believes that the intial cost of establishing the business will be £100,000. The table below shows the estimated cash inflows and outflows over the next 5 years. Using the information above and from the table, calculate the ARR of opening the tanning salon.

Year	Inflows	Outflows
0		£100,000
1	£120,000	£220,000
2	£150,000	£170,000
3	£180,000	£130,000
4	£240,000	£130,000
5	£260,000	£120,000



An ice cream seller has two options to expand his business for the summer season, June – September inclusive.

Option 1 is to rent an ice cream van for an initial investment of £4,000, which the seller believes will result in net cash flows of £1,500 in June, increasing by 20% per month each month until September.

Option 2 is to rent a beach shack, which will increase the summer season to October. The cost of renting a beach shack is an initial investment of £6,000 and the seller believes this will lead to net cash flows of £2,500 per month, except in October when net cash flows are expected to fall by 1/5.

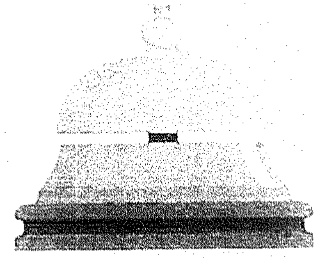
Calculate the monthly ARR of each option for the ice cream seller.

Net Present Value

A hotel is looking at increasing the number of bedrooms and extending the restaurant. The cost of the investment will be £150,000. The owners of the hotel have decided to use a 7% discount rate to assess the proposed investment. Below is a table showing forecasted net cash flows over the next 3 years. Calculate the net present value of the proposed investment.

Year	Net Cash Flows
0	(£150,000)
1	£175,000
2	£220,000
3	£280,000

Year	1	2	3
7% Discount Factor	0.935	0.873	0.816



A manufacturing business is considering investing £120,000 in a new automation system that will help improve productivity. The table below shows the forecasted cash inflows and outflows from the proposed investment. It has decided to assess the investment using a discount rate of 5%. Calculate the net present value of the proposed investment.

Year	Inflows	Outflows
0	0	£120,000
1	£50,000	£20,000
2	£60,000	£20,000
3	£70,000	£30,000
4	£90,000	£35,000
5	£100,000	£20,000

Year	1	2	3	4	5
5% Discount Factor	0.952	0.907	0.864	0.823	0.784

A small bakery business has identified two possible pieces of machinery that can help it increase productivity. The owners have decided to use a 5% discount rate to assess the proposed investment. Based purely on net present value, which machine should the owners choose.

Machine 1: £200,000

Forecasted yearly net cash flows

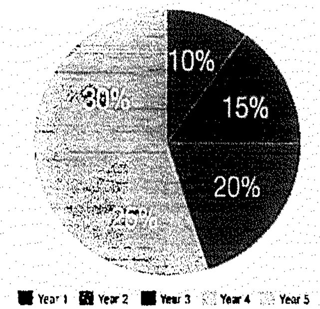
Year 1: £40,000
Year 2: £55,000
Year 3: £70,000
Year 4: £83,000
Year 5: £91,000

Forecasted yearly net cash flows

Year 1: £90,000
Year 2: £94,000
Year 3: £106,000
Year 4: £120,000
Year 5: £125,000

Year	1	2	3	4	5
5% Discount Factor	0.952	0.907	0.864	0.823	0.784

A factory is looking at increasing production space at a cost of £450,000. Over 5 years, the owners believe that it would generate total cash inflows of £1,300,000. The pie chart below shows the percentage of total cash inflows that will be generated in each of the 5 years. The estimated outflows are 5% of yearly cash inflows. The owners have decided to use a discount rate of 10% to assess the investment. Calculate the net present value of the proposed investment.



Year	1	2	3	4	5
10% Discount Factor	0.909	0.826	0.751	0.683	0.621

A business is looking to invest £100,000 in new e-commerce software. Year 1 cash inflows are estimated to be £60,000 and are forecast to increase by 10% per year, for the following two years. The outflows are estimated to be 1/5 of yearly cash inflows. The owners of the business have decided to use a 10% discount rate when assessing the investment. Calculate the net present value of the proposed investment.

Year	1	2	3
10% Discount Factor	0.909	0.826	0.751

Decision Trees

Question 1

A business is considering developing a new product. The probability of the new product being a success is 0.7 and should lead to an extra £500,000 in sales. The probability of failure is 0.3 and this would lead to additional sales of £50,000. Calculate the expected value of the new product.

Question 2

The business in question 1 has re-evaluated the new product option and now believes that the probability of the new product being a success will be 0.6 and the probability of the new product being a failure will be 0.4. The business also believes that if the product is a success then sales revenue will be 5% higher than originally estimated, but if it fails the additional sales generated will be as previously predicted. Calculate the new expected value.

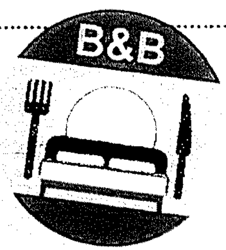
Question 3

A clothes shop is considering opening a second retail outlet. The cost of opening this second outlet is estimated to be £80,000. The probability of the new retail outlet being a success is 0.8 and would result in £220,000 of revenue being generated. The probability of failure is 0.2 which would result in £90,000 of revenue being gained. Calculate the net gain of the proposal.

Question 4

A pub is considering converting its first floor into 10 rooms which can be let out on a bed and breakfast basis. The table below contains the forecasted data of the proposed conversion. Construct a decision tree and calculate the expected value and net gain of the proposed conversion.

Cost of Investment	£180,000
Probability of revenue being £340,000 (high sales) per year	0.6
Probability of revenue being £210,000 (low sales) per year	0.4

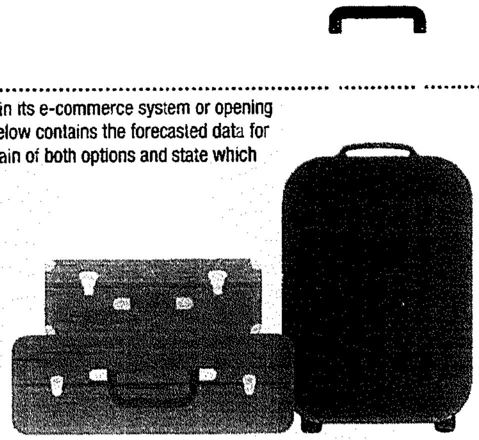


Question 5

A travel agent is considering either investing further in its e-commerce system or opening a new branch in a different part of town. The table below contains the forecasted data for both options. Calculate the expected value and net gain of both options and state which option should be chosen based on the data.

Cost of Investment	£80,000
Probability of revenue being £120,000	0.7
Probability of revenue being £40,000	0.3

Cost of Investment	£65,000
Probability of revenue being £90,000	0.8
Probability of revenue being £55,000	0.2



Question 6

A business is looking at two options to increase sales.

Probability of high sales is 0.6 which would result in sales being £50,000. Probability of low sales is 0.4 and would result in sales being 1/8 lower than if sales were high. The cost of this option is £20,000.

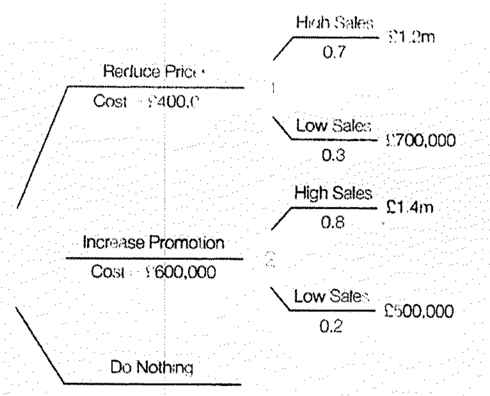
Probability of high sales is 0.7 and would result in sales being 15% higher than if sales were low. Probability of sales being low is 0.3 and would result in sales being £40,000. The cost of this option is £18,000

Calculate the expected value and net gain of both options and state which option should be chosen based on the data.

Question 7

A local supermarket is considering two options to increase sales. One option is to reduce prices; the other option is to increase promotion. Opposite is a decision tree outlining the cost, probability and expected sales from both options.

Calculate the expected value and net gain of both options and state which option should be chosen based on the data.



Question 8

A UK holiday park company is considering two options to increase profits. One option is to open a further park in the UK. The other option is to open a park in the south of France.

UK Park

The cost of opening a further park in the UK is estimated to be £1.5 million. The probability of the venture being a success is 0.7. This would result in estimated sales of £2.2 million. Failure would result in estimated sales of £800,000.

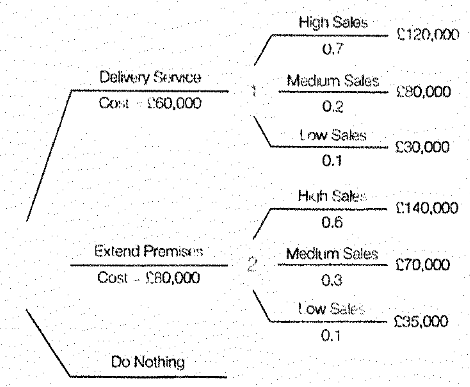
South of France Park

The cost of opening a park in the south of France is estimated to be £2.2 million. The probability of the venture being a success is 0.6. This would result in estimated sales of £3 million. Failure would result in estimated sales of £1.8 million.

Calculate the expected value and net gain of both options and state which option the business should choose based on the data.

Question 9

A restaurant is looking at two options to increase sales. The first option is to offer a delivery service to customers within a 10 mile radius of the restaurant. The second option is to extend the premises to increase overall capacity. Opposite is a decision tree outlining the cost, probability and expected sales from both options. Based on the data, calculate the expected value and net gain of both options and state which option should be chosen.

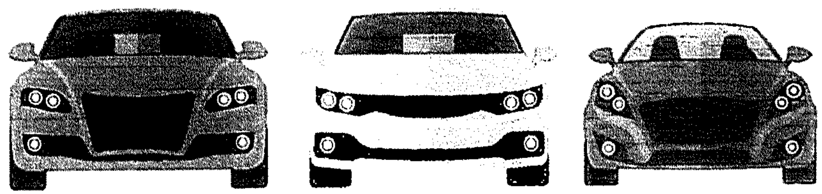


Question 10

A car showroom is considering 2 different options to increase sales. The first option is to increase the size of the sales team by employing 5 new staff. This will cost £200,000. The probability that this will result in high sales is 0.7 and should result in sales of £500,000. The probability of low sales is 0.3 and if sales are low, then this will result in sales of £250,000.

The second option is to extend the size of the showroom to accommodate more vehicles. The cost of the extension is estimated to be £80,000. The probability of high sales is 0.6, the probability of medium sales is 0.3 and the probability of low sales is 0.1. Low sales have been estimated to be £180,000, medium sales have been estimated to be £240,000 and high sales have been estimated to be £350,000.

Construct a decision tree and calculate the expected value and net gain of both options. State which option the business should choose based on the data.

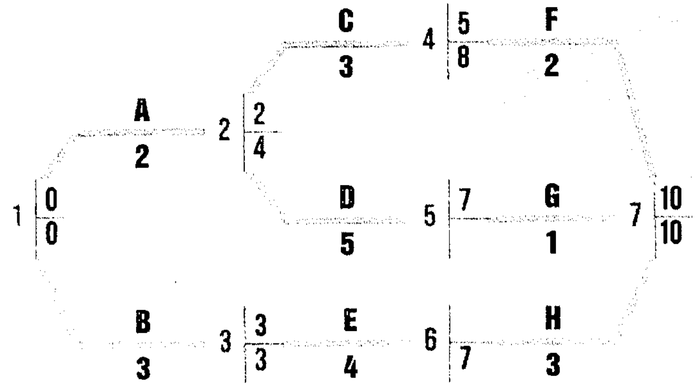


15 Critical Path Analysis

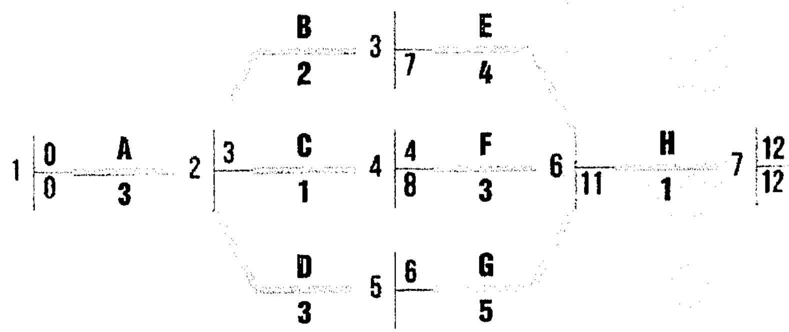
The Edexcel specification does not require students to be able to construct network diagrams, however, two activities have been included that require network diagrams to be constructed, as this can help deepen understanding.

(All the activities are in weeks)

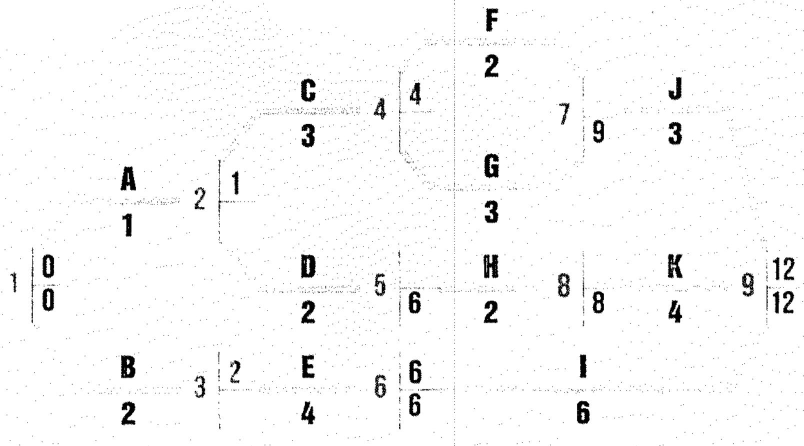
The network diagram below shows the activities involved in extending the premises of a cafe to increase capacity. Calculate the earliest start time for node 6 and the latest finish time for node 5.

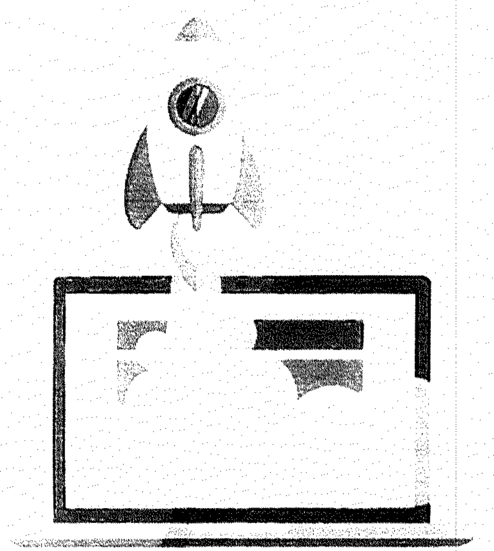


The network diagram below shows the activities involved in a retailer opening a new store. Calculate the earliest start times for nodes 3 and 6 and the latest finish times for nodes 2 and 5.



The network diagram below shows the activities involved in launching a new product. Calculate the earliest start times for nodes 5, 7 and 8 and the latest finish times for nodes 2, 3 and 4.





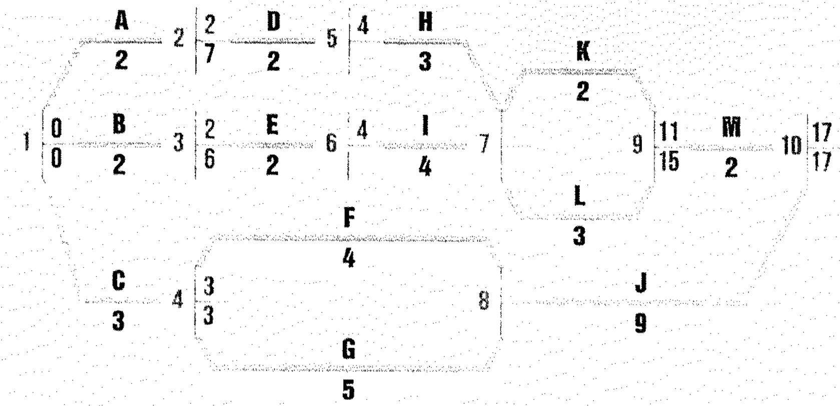
Question 4

The network diagram below shows the activities involved in a manufacturer off-shoring production overseas.

A Calculate the earliest start times for nodes 7 and 8 and the latest finish times for nodes 5, 6, 7 and 8

B Calculate the total float for activity D and activity I

C Write down the critical path



Question 5

The manufacturer in question 4 now believes that activity H will take 9 weeks instead of 3 weeks. Based on this information, calculate the earliest start time for node 7 and the new completion time.

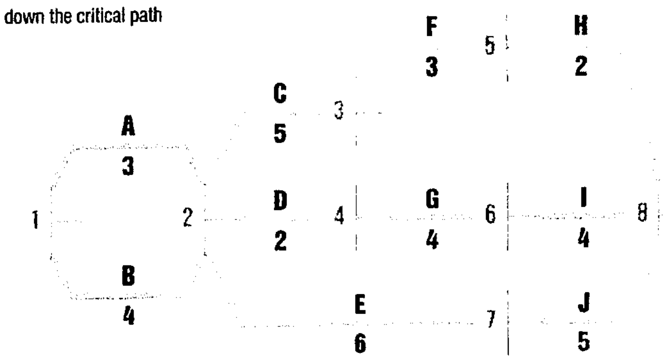
Question 6

The network diagram below shows the activities involved in a new promotional campaign for a business.

A Calculate the earliest start times and latest finish times for each node

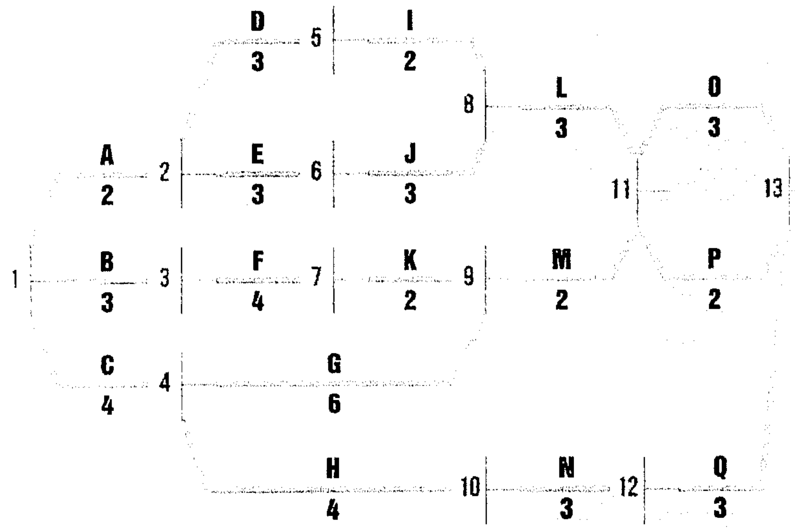
B Calculate the total float for activity G

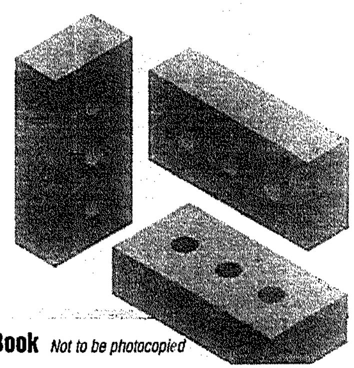
C Write down the critical path



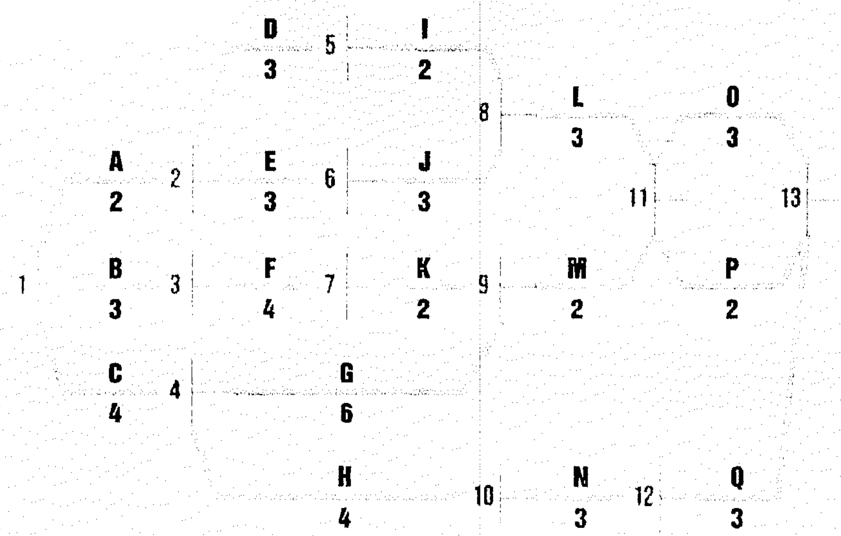
Question 7

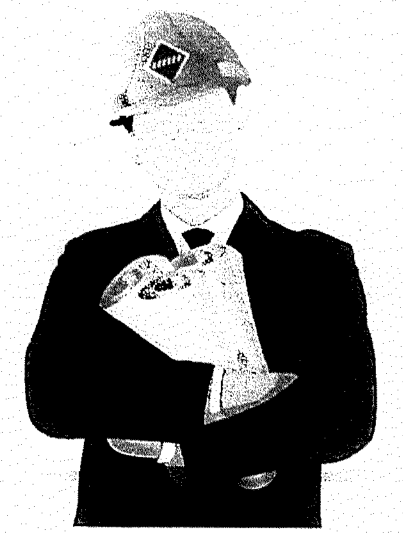
The network diagram below shows the activities involved in a large building project. Calculate the earliest start time and latest finish times for all the nodes and write down the critical path.





A senior construction manager has reviewed the estimated times for the building project in question 7 and believes some of the durations are incorrect. Activity A is estimated to take 3 weeks longer, activity E is estimated to take 2 weeks longer and activity L is estimated to take 1 week longer. Change the durations for activities A, E and L and re-calculate the earliest start times and latest finish times for all the nodes. Write down the new critical path.





16 Ratio Analysis

Gearing

Question 1

A business has non-current liabilities of £300,000 and total equity of £500,000. Calculate the gearing ratio of the business.

Question 2

The table opposite shows an extract from the company accounts of a business.
Calculate the gearing ratio of the business.

Current assets	£5 million
Current liabilities	£2 million
Non-current liabilities	£9 million
Capital employed	£15 million

Question 3

Last year, a business had a gearing ratio of 20%. The capital employed of the business was £5m. Calculate the value of non-current liabilities for the business last year.

Question 4

The table below is an extract from the company accounts of a manufacturer.

Non-current liabilities	£6.75m
Total equity	£8.25 million

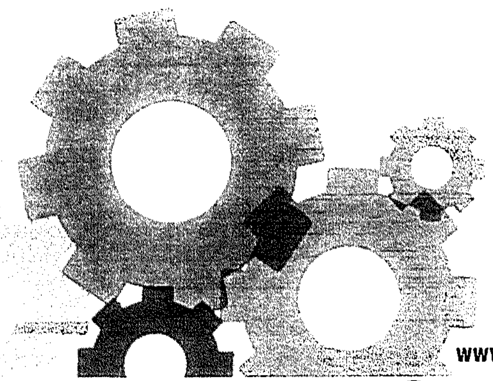
The manufacturer is considering increasing capacity at a cost of £2 million. This would be funded via long-term borrowing. Calculate the current gearing ratio and the new gearing ratio of the business based on the additional long-term borrowing.

Question 5

The table below is an extract from the company accounts of a business.

Current assets	£10 million
Current liabilities	£4 million
Capital employed	£19 million

The non-current liabilities of the business are 90% higher than its current liabilities. The business is considering an investment of £8 million, all of which would need to be funded via long term borrowing. Calculate the current gearing ratio of the business and the new gearing ratio of the business based on the additional long-term borrowing.



Return on Capital Employed

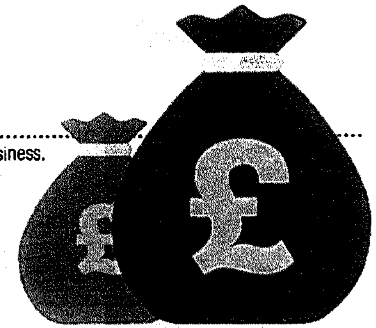
Question 1

A business has operating profit of £4 million and capital employed of £20 million. Calculate the return on capital employed of the business.

Question 2

Last year, a business had a return on capital employed of 15%. Capital employed last year was £12 million. Calculate the operating profit of the business for last year.

Question 3



The table below shows an extract from the company accounts of a business.

Non-current liabilities	£14 million
Total equity	£7 million
Operating profit	£2 million

Calculate the return on capital employed of the business.

Question 4

Last year, a business had an operating profit margin of 8%. Revenue was £2.5 million, total equity was £1 million and non-current liabilities were £250,000. Calculate the return on capital employed for the business last year.

Question 5

The table below shows an extract from the company accounts of a business.

Revenue	£5 million
Cost of sales	£2 million
Operating expenses	£1.9 million
Non-current liabilities	£0.5 million
Total equity	£1.8 million

Calculate the return on capital employed of the business.

17 Human Resources

Labour Productivity

Question 1

Last year, a business produced 364,000 units with a workforce of 4,000. Calculate the weekly labour productivity per worker last year.

Question 2

A business has 84 members of staff of which 5/7 are involved in manufacturing. 50% of the manufacturing staff will work on any individual shift. It is estimated that each member of staff should produce 15 units per shift. Calculate the total production per shift.

Question 3

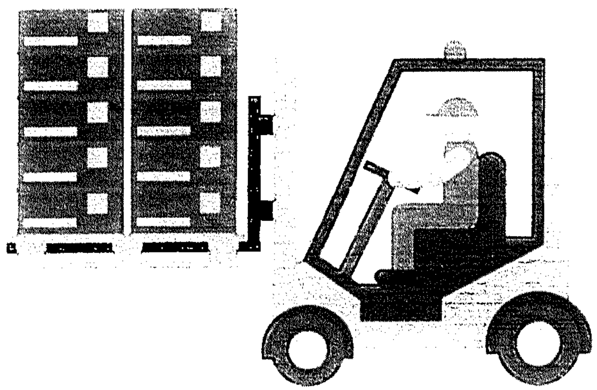
The following year, the firm in question 2 increases its total manufacturing staff by 6 members, which leads to total output rising by 10% per shift. Calculate the labour productivity per shift.

Question 4

A business that employs 40 production staff currently produces 32,000 units per week. After investing in the training scheme, labour productivity per worker increases by 20%. Calculate the weekly output per worker after the training scheme.

Question 5

Last year, a business had labour costs of £748,000 a year, paying each production worker, on average, £22,000 per year. Over the year the business produced 228,480 units. Each worker worked for 240 days. Calculate the daily labour productivity per worker.



Labour Turnover and Retention

Question 1

Last year, a business employed 1,350 employees. During the year, 81 employees left the business. Calculate the labour turnover and retention of the business.

Question 2

A business has estimated that the average cost of replacing an employee is £1,250. Last year, the business employed 80 staff. Labour turnover was 15% and 50% of the employees were replaced. Calculate the total cost of replacing the employees last year.

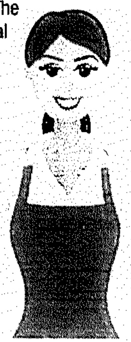
Question 3

Last year, a supermarket chain employed 5,600 workers, 1/16 worked in head office. Last year, 45 head office workers left the business. Calculate the labour retention within head office last year.

Question 4

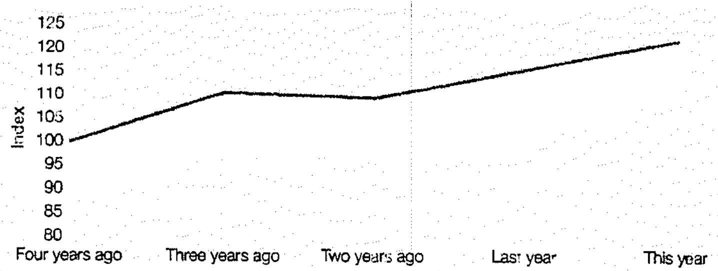
Last year, a business with 6 stores across North East England employed a total of 500 staff. The table below shows the labour turnover of each branch for last year and the percentage of total employees at each store. Calculate the total number of employees who left the business last year.

	Percentage of total staff	Labour turnover %
Store A	12	10
Store B	16	2.5
Store C	18	10
Store D	12	5
Store E	24	7.5
Store F	18	0



Question 5

The chart below shows the index of total employees for a business over the last five years. The base figure four years ago was 320 employees. Calculate the number of employees who left the business last year if labour turnover was 25%.



Absenteeism

Question 1

Last year, a business employing 250 staff had 15 staff absent. Calculate the rate of absenteeism last year.

Question 2

Last year, a business lost 1,560 days due to staff being absent. The business employed 300 staff during that period and each member of staff should have worked 260 days. Calculate the rate of absenteeism last year.

Question 3

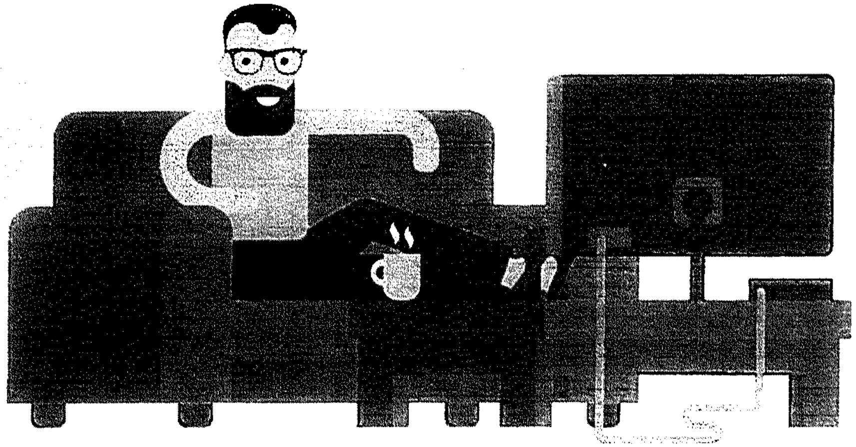
Last week, a business had an absenteeism rate of 8% when 12 staff were absent all week. Each member of staff works 5 days per week. Calculate how many staff were employed by the business last week.

Question 4

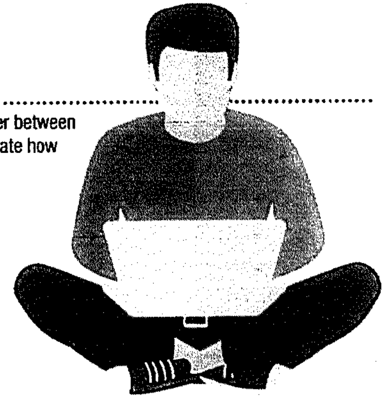
This week, the business in question 3 estimates that absenteeism will fall to 6%. Calculate how many days will be lost due to staff absence this week, assuming the number of staff employed last week is the same as this week and that each member of staff works 5 days per week.

Question 5

Last year, a manufacturing business employed 360 staff. 1/4 of its staff were employed at the businesses head office. The remaining employees were employed in the businesses factory. Factory employees work 300 days per year. 12,150 days were lost in the factory last year due to staff absence. Calculate the absenteeism rate in the factory last year.



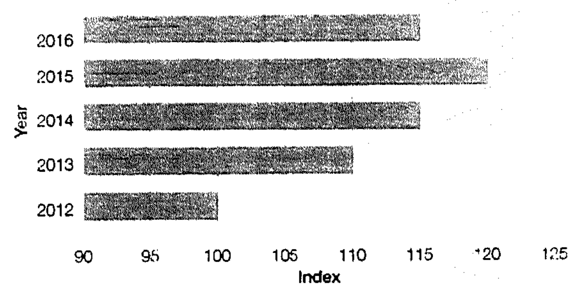
18 Index Numbers



The table below shows the index of laptop sales of a computer retailer between January and May. The base figure in January is 3,240 laptops. Calculate how many laptops were sold in April and May.

January	100
February	110
March	115
April	95
May	120

The chart opposite shows the index of average house prices in a small village between 2012 and 2016. The base figure in 2012 is £195,000. Calculate the difference in average house prices in year 2016 and year 2013.



Below is the index of visitors to a local museum between February and July. The base figure in February is 2,000 visitors. Calculate the average number of visitors over the last 5 months.

February	100
March	105
April	95
May	120
June	110
July	125

Below is a table showing an index of yearly sales between 2012 and 2016 for Business A. The base sales figure in 2012 for Business A is 125,000 units. Calculate the percentage difference in sales between 2015 and 2016.

	2012	**2013**	**2014**	**2015**	**2016**
Business A	100	110	115	120	124

Based on the table of data below, which of the four businesses appears to have the most motivated workforce?

Index Base: Last Year = 100	**Business A**	**Business B**	**Business C**	**Business D**
Index of Labour Productivity	110	95	105	98
Index of Labour Turnover	97	104	102	94