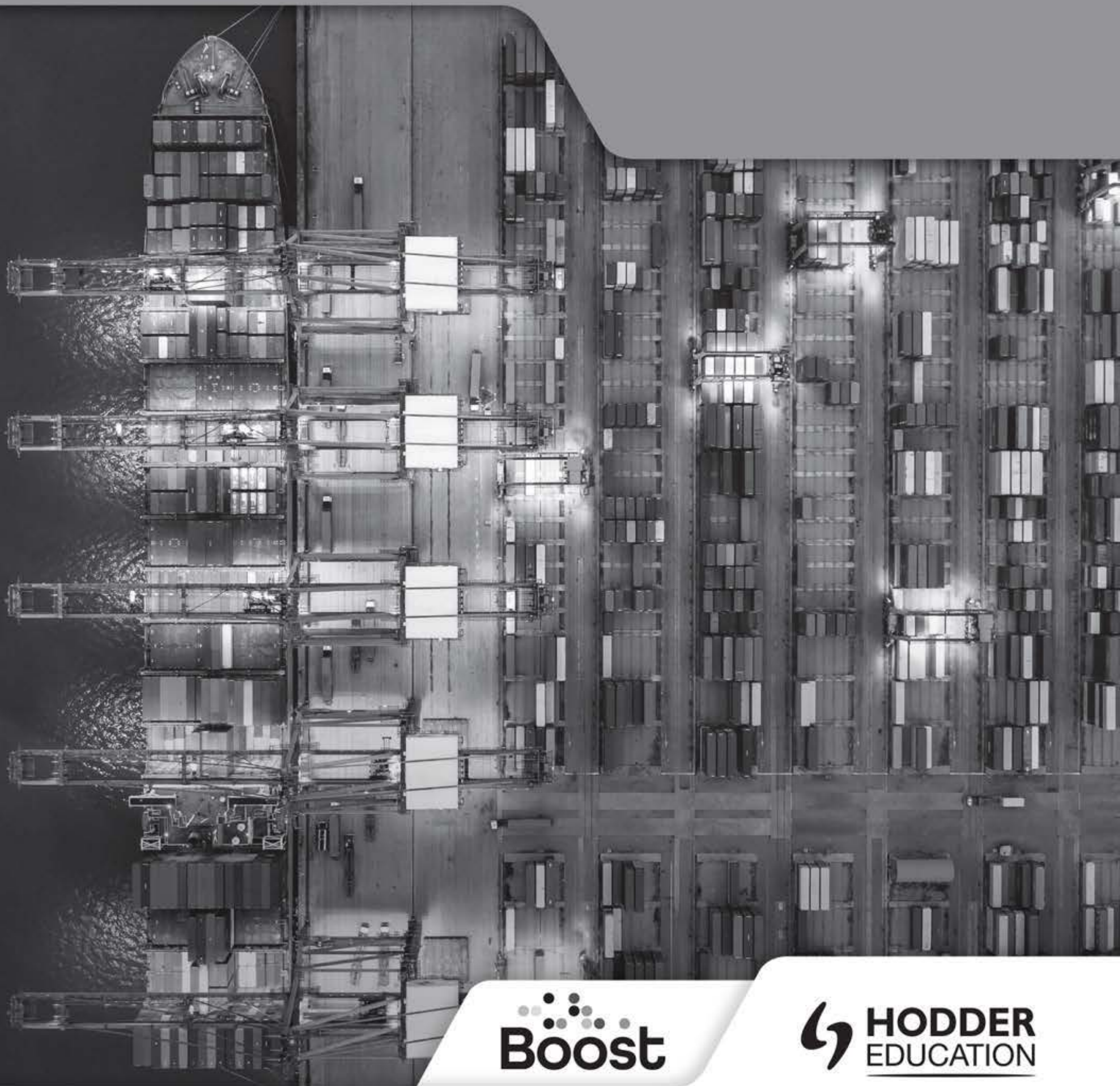



# Business Management

TOOLKIT WORKBOOK



  
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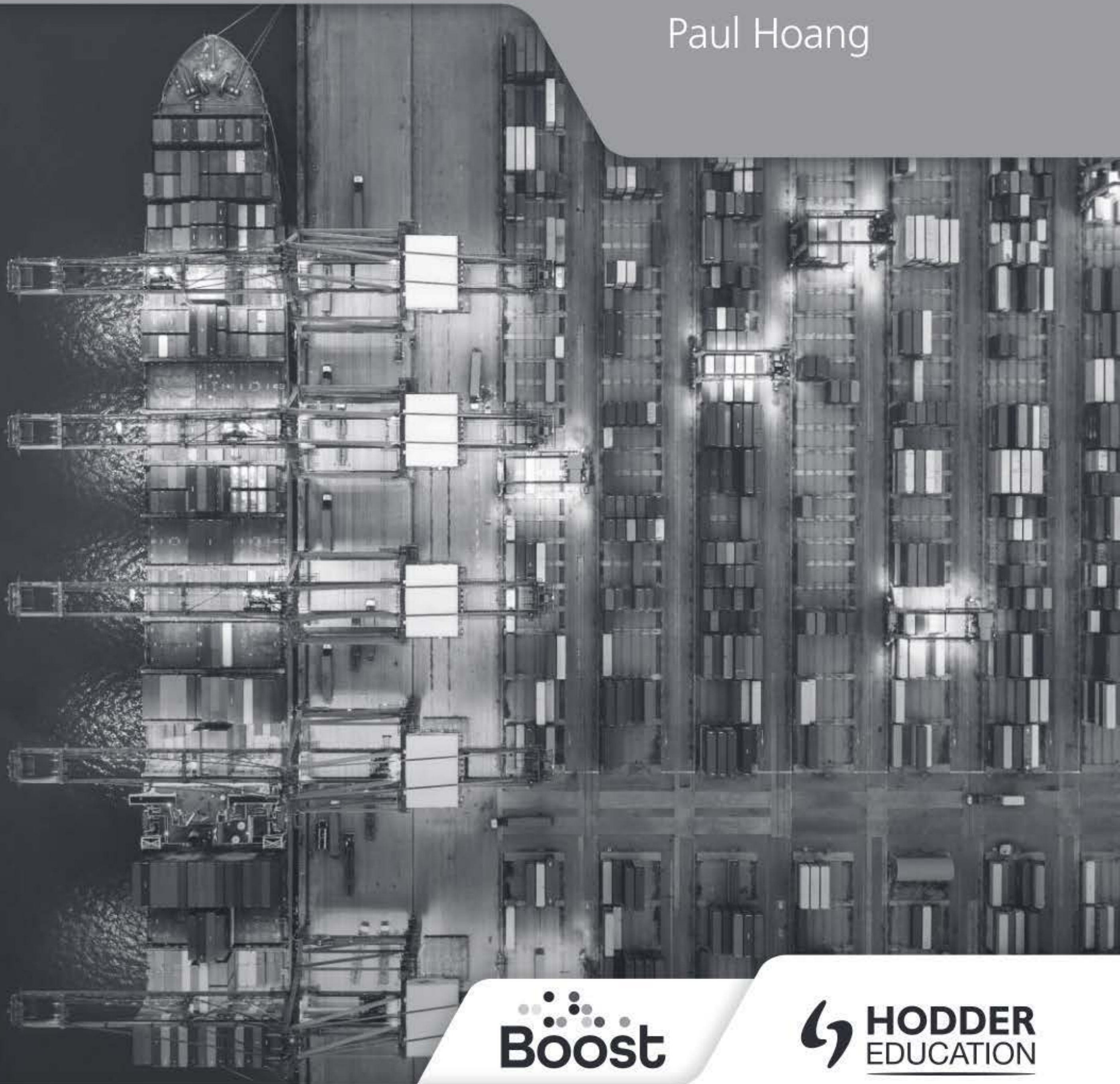


FOR THE  
IB DIPLOMA  
PROGRAMME

# Business Management

## TOOLKIT WORKBOOK

Paul Hoang



  
**Boost**

 **HODDER  
EDUCATION**



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# INTRODUCTION

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A major addition to the new IB business management syllabus is the business management toolkit. This is a set of situational, planning and decision-making tools which are all explained in *Business Management for the IB Diploma* (the student book). The idea is that you can use these tools throughout the course to analyse and evaluate the IB business management syllabus content. The tools provide a valuable set of models and frameworks to analyse different topics and contexts in the course. The tools can also help managers to analyse and make more informed business decisions.

This book, *Business Management Toolkit Workbook for the IB Diploma*, is intended to be used alongside the student book to consolidate your understanding of the tools. Each chapter consists of a set of exam-style questions to test your understanding, ensuring full coverage of the entire business management toolkit.

While the tools have been classified as situational, planning and decision-making tools in the syllabus, it is important to note that these tools may have overlapping applications and, therefore, in some cases one tool could apply in more than one classification.

There are tools for both standard level (SL) and higher level (HL), as well as HL-only tools. By the time you complete the exercises in this workbook, you should be able to apply, analyse and evaluate the following tools in the business management toolkit.

Answers to all questions are available on IB Extras: [www.hoddereducation.co.uk/ib-extras](http://www.hoddereducation.co.uk/ib-extras).



Tools	Relevant to	Classification
<b>1</b> SWOT analysis	Unit 1: Introduction to business management Unit 2: Human resource management Unit 3: Finance and accounts Unit 4: Marketing Unit 5: Operations management	Situational tool
<b>2</b> Ansoff matrix	Unit 1: Introduction to business management Unit 4: Marketing	Decision-making tool
<b>3</b> STEEPLE analysis	Unit 1: Introduction to business management Unit 2: Human resource management Unit 4: Marketing	Situational tool
<b>4</b> Boston Consulting Group (BCG) matrix	Unit 3: Finance and accounts Unit 4: Marketing	Situational tool Decision-making tool
<b>5</b> Business plan	Unit 1: Introduction to business management Unit 2: Human resource management Unit 3: Finance and accounts Unit 4: Marketing Unit 5: Operations management	Planning tool
<b>6</b> Decision trees	Unit 1: Introduction to business management Unit 5: Operations management	Decision-making tool
<b>7</b> Descriptive statistics	Unit 2: Human resource management Unit 3: Finance and accounts Unit 4: Marketing Unit 5: Operations management	Decision-making tool
<b>8</b> Circular business models	Unit 1: Introduction to business management Unit 5: Operations management	Decision-making tool
<b>9</b> Gantt charts <b>(HL only)</b>	Unit 4: Marketing Unit 5: Operations management	Planning tool
<b>10</b> Porter's generic strategies <b>(HL only)</b>	Unit 1: Introduction to business management Unit 4: Marketing	Decision-making tool
<b>11</b> Hofstede's cultural dimensions <b>(HL only)</b>	Unit 2: Human resource management Unit 4: Marketing Unit 5: Operations management	Situational tool
<b>12</b> Force field analysis <b>(HL only)</b>	Unit 2: Human resource management Unit 5: Operations management	Situational tool Decision-making tool
<b>13</b> Critical path analysis <b>(HL only)</b>	Unit 4: Marketing Unit 5: Operations management	Planning tool
<b>14</b> Contribution <b>(HL only)</b>	Unit 3: Finance and accounts Unit 4: Marketing Unit 5: Operations management	Decision-making tool
<b>15</b> Simple linear regression <b>(HL only)</b>	Unit 1: Introduction to business management Unit 4: Marketing Unit 5: Operations management	Decision-making tool



- 1 a Define the term *SWOT analysis*.

[2 marks]

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- b Explain how SWOT analysis is used as a strategic planning tool by managers and decision makers in an organization.

[6 marks]

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- 2 Outline **two** characteristics for each of the components of a SWOT analysis:

- a Strengths

[4 marks]

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- b Weaknesses

[4 marks]

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**c Opportunities**

[4 marks]

**d Threats**

[4 marks]

**3 a Explain two benefits of SWOT analysis.**

[4 marks]

**b Explain two limitations of SWOT analysis.**

[4 marks]



- 4** With reference to an organization that you have studied, outline **two** strengths, weaknesses, opportunities and threats.

**a** Strengths

[2 marks]

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**b** Weaknesses

[2 marks]

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**c** Opportunities

[2 marks]

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**d** Threats

[2 marks]

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- 5 GlaxoSmithKline (GSK) is one of the world's largest pharmaceutical companies. Its product range includes pharmaceuticals, consumer healthcare products, vaccines and sports supplement products. The company is in a strong financial position with high liquidity. However, changes to patent laws in numerous countries have removed some protection for GSK's best-selling products.

a Explain why high liquidity would be a **strength** for GSK.

[2 marks]

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b Explain why changes to patent laws could be a **threat** to GSK.

[2 marks]

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# 2

## Ansoff matrix

- 1 a Define the term *Ansoff matrix*.

[2 marks]

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- b Complete the missing labels in the table below using the four growth strategies from the Ansoff matrix.

[4 marks]

		Markets	
		New	Existing
Products	New	i	ii
	Existing	iii	iv

- 2 In 2021, PayPal announced it was interested in acquiring Pinterest for US\$45bn. PayPal is a financial technologies company based in San Jose, California. Pinterest, based in San Francisco, California, has more than 480 million active users on its social media platform, primarily offering users a way to store and share their favourite images. PayPal had benefited from the boom in e-commerce since the start of the COVID-19 pandemic. PayPal's *takeover* of Pinterest will enable it to compete directly with Meta's Instagram, which is also used as a platform for promoting online retail.

- a Define the term *takeover*.

[2 marks]

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- b** With reference to the Ansoff matrix, explain why PayPal's growth strategy may be described as high risk.

[4 marks]

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- 3** In 2011, McDonald's introduced its McWedding service to some of its restaurants. The service includes hosting weddings, engagements, anniversaries and bridal showers at designated McDonald's restaurants. The wedding party packages include meals from McDonald's menu, unique venue decorations, customized wedding party games and special gifts for the newly-weds as well as guests.

Explain why it might be difficult to classify this growth strategy using the Ansoff matrix.

[4 marks]

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- 4** In 2020, Pret A Manger, the coffee and sandwich retail chain, launched a subscription service in the UK. The service, as part of Pret A Manger's attempt to gain further *market share* in a saturated market, offers subscribers up to five coffees or other drinks each day for a UK£20 (US\$28) monthly fee. Customers who sign up get the first month free as an introductory offer.

- a** Define the term *market share*.

[2 marks]

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- b** With reference to the Ansoff matrix, explain which growth strategy was used by Pret A Manger.

[4 marks]

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c Explain **one** reason why it might be difficult to penetrate a saturated market.

[2 marks]

d Explain **two** benefits to Pret A Manger of using a subscription service as part of its growth strategy. [4 marks]

5 Nike's *mission statement* is to "bring inspiration and innovation to every athlete in the world". This is supported by Nike's growth strategy of market development in different regions across the globe. This has included the use of new distribution channels, namely moving from selling via retail outlets to selling using e-commerce and mail order.

a Define the term *mission statement*.

[2 marks]

b In the context of Nike, outline the meaning of a market development growth strategy.

[2 marks]

c Explain **one** advantage and **one** disadvantage of Nike's market development growth strategy.

[4 marks]



6 With reference to the Ansoff matrix, identify the correct growth strategy in each of the cases below.

a The highest risk growth strategy.

[1 mark]

b A penetration pricing strategy.

[1 mark]

c A loss leader pricing strategy to encourage brand switching.

[1 mark]

d Focusing on new ideas and product extension strategies.

[1 mark]

e Focusing on increasing market share.

[1 mark]

7 Explain **one** advantage and **one** disadvantage of the Ansoff matrix as a decision-making tool.

[4 marks]



- 1 a Define the term *STEEPLE analysis*.

[2 marks]

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- b Explain why STEEPLE analysis is used as a strategic planning tool by managers and decision makers in an organization.

[4 marks]

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- 2 Outline **two** examples for each of the components of a STEEPLE analysis. It may be useful to contextualize your response with reference to an organization of your choice.

- a Social factors

[4 marks]

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- b Technological factors

[4 marks]

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**c** Economic factors

[4 marks]

**d** Environmental factors

[4 marks]

**e** Political factors

[4 marks]

**f** Legal factors

[4 marks]

**g** Ethical factors

[4 marks]



- 3 a** Explain **two** benefits of using STEEPLE analysis. [4 marks]

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- b** Explain **two** limitations of STEEPLE analysis. [4 marks]

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- 4** Explain the difference between a SWOT analysis and a STEEPLE analysis. [4 marks]

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- 5** For each scenario below, explain **one** opportunity and **one** threat to businesses.  
**a** In Japan, there is an aging population (an increase in the average age of the population). [4 marks]

Opportunity:

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Threat:

- b The COVID-19 pandemic caused national lockdowns across the world, leading to businesses and consumers having to rely on e-commerce.

[4 marks]

Opportunity:

Threat:

- c The UK Government has announced that it will ban the sale of new diesel- and petrol-fuelled cars by the year 2030.

[4 marks]

Opportunity:

Threat:



6 Multinational companies are affected by fluctuations in the exchange rate.

a Define the term *exchange rate*.

[2 marks]

b Suppose the exchange rate between the US dollar (USD) and the Euro (EUR) is  $\text{US\$1} = \text{€0.92}$ . Calculate the price for customers in Europe who purchase textbooks priced at  $\text{US\$70}$  from a publisher based in America.

[2 marks]

c Suppose the exchange rate between the pound sterling (GBP) and the Hong Kong dollar (HKD) is  $\text{£1} = \text{HK\$10.5}$ . Calculate how much it costs a British tourist (in pound sterling) to buy an iPad at an Apple Store in Hong Kong that is priced at  $\text{HK\$7,000}$ .

[2 marks]

d Explain how a sustained currency appreciation is likely to impact a multinational company such as Nike (headquartered in the USA) or Adidas (headquartered in Germany).

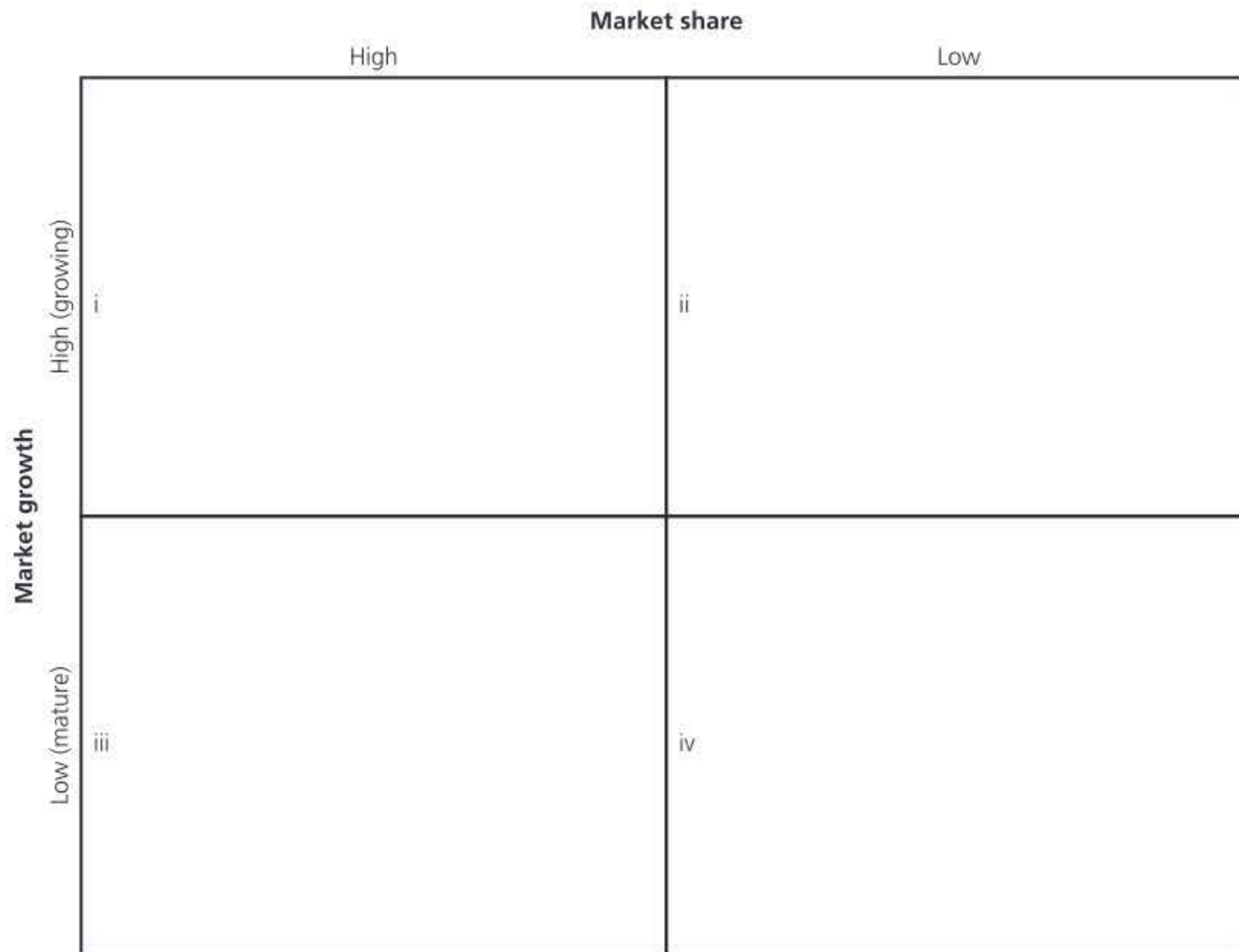
[4 marks]



# 4

## Boston Consulting Group (BCG) matrix

- 1 The figure below shows the Boston Consulting Group (BCG) matrix.



- a Define the term *BCG matrix*.

[2 marks]

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- b Complete the missing labels in the BCG matrix above.

[4 marks]

- 2 The BCG matrix is used to categorize the products of a firm into four categories. Define each of these categories.

- a Cash cows

[2 marks]

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**b** Dogs

[2 marks]

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**c** Stars

[2 marks]

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**d** Question marks

[2 marks]

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**3** State **two** characteristics for each of the product categories in the BCG matrix.

**a** Question marks

[2 marks]

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**b** Stars

[2 marks]

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**c** Cash cows

[2 marks]

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**d** Dogs

[2 marks]

4 Refer to the data below for a firm's product portfolio, including expected sales revenue for next year, then answer the questions that follow.

Product	Market share (%)		Market size (sales in US\$m)		
	Firm	Largest rival	Last year	This year	Next year
A	5.0	20.0	3	5	7
B	1.5	22.0	4	3	2
C	2.0	18.0	15	25	35
D	30.0	15.0	15	20	25
E	24.5	6.5	8	7	7
F	2.0	15.0	13	9	7

**a** Identify the firm's question marks.

[2 marks]

**b** Identify the firm's star.

[1 mark]

**c** Identify the firm's cash cow.

[1 mark]

**d** Identify the firm's dogs.

[2 marks]

**5 a** Explain the use of the BCG matrix as a business management tool for managers and decision makers in an organization.

[4 marks]



- b** Explain the link between the products in a firm's BCG matrix and their product life cycles. [4 marks]

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1 a Define the term *business plan*.

[2 marks]

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b State **two** key elements of a business plan.

[2 marks]

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c Explain **two** reasons why organizations use business plans.

[4 marks]

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2 a Explain the relationship between a SWOT analysis and a business plan.

[4 marks]

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b Explain the relationship between a company's budget and its business plan.

[4 marks]

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**3** New businesses often face numerous problems when setting up.

- a** Explain **two** problems that new businesses are likely to face that might be identified in a business plan.

[4 marks]

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- b** Explain why it is important for a new company to include financial information in its business plan.

[4 marks]

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**4** For each stakeholder group listed below, explain **one** reason why it would be interested in an organization's business plan.

- a** Entrepreneurs

[2 marks]

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- b** Commercial banks

[2 marks]

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- c** Potential investors

[2 marks]

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5 A business plan will typically include elements of the *marketing mix* and *marketing plan*.

a Define the term *marketing plan*.

[2 marks]

b Define the term *marketing mix*.

[2 marks]

c Explain **two** benefits of having a marketing plan included in a business plan.

[4 marks]



- 1 A business is considering developing and launching a new product at an estimated cost of US\$250,000. The manager has decided to use a decision tree with a 65% probability of the new product being a commercial success. If so, this should lead to an additional US\$500,000 in sales revenue. The probability of failure is 35%, which would lead to additional sales of only US\$50,000.

a Define the term *decision tree*.

[2 marks]

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b Calculate the expected value of the new product for the business.

[2 marks]

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c Explain **one** advantage of using decision trees as a decision-making tool for the business.

[2 marks]

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- 2 Ed Jaen runs a car repairs and restoration business in Panama City. He is deciding whether to open a new outlet in the city or upgrade the entire machinery at the existing site. The data below show the figures forecast for each option.

Option one: Opening a new outlet	
Cost of investment	US\$80,000
Probability of revenue being US\$120,000	0.7
Probability of revenue being US\$40,000	0.3

Option two: Upgrading entire machinery at existing site	
Cost of investment	US\$60,000
Probability of revenue being US\$90,000	0.8
Probability of revenue being US\$60,000	0.2

- a Calculate the expected value and net gain of **both** options. [4 marks]

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- b Based on the data, outline which growth option Ed Jaen should choose. [2 marks]

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- c Explain **two** advantages of using decision trees. [4 marks]

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- d Explain **two** disadvantages of using decision trees. [4 marks]

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- 3 The management at Virginie Srienzen Roigt Consulting (VSRC) is considering whether to introduce a new advertising campaign (which would cost US\$80m) or spend more money on an existing campaign (which would cost US\$30m) in an attempt to increase sales revenue. The probability of each option is shown below.

There is an estimated 60% chance of success if the new campaign is chosen, which is expected to gain VSRC US\$130m in sales revenue.

There is a 40% chance of failure for the new advertising campaign, with expected sales revenues of only US\$75m.

If VSRC sticks with the existing campaign, there is an 80% chance of success of earning US\$80m.

If the project fails, for which there is a 20% chance, the likely outcome is revenue of just US\$35m.

- a Use the information above to construct a decision tree for VSRC.

[6 marks]

- [2 marks]

- 4 Tilak KC Co. is considering expanding into one of three locations. The expected costs and revenues are shown in the table below. The company has the resources to pursue only one of these options.

Location choice	Probability (%)	Cost (US\$m)	Revenue (US\$m)
Ahmedabad		95	
High sales	60		220
Low sales	40		85
Bengaluru		85	
High sales	50		200
Low sales	50		75
Chennai		100	
High sales	65		190
Low sales	35		90



- a Construct a decision tree diagram for Tilak KC Co., showing which project is best on financial grounds. Show all your working and include an appropriate key in your diagram.

[6 marks]

- b Comment on the findings shown in the decision tree for Tilak KC Co.

[2 marks]

- 5 Marcia Holtz Bikes (MHB) produces bicycles in a large factory. Government data suggest that there is a 45% chance of the economy improving during the next three years, with a 35% chance of it remaining unchanged and only a 20% chance of it worsening. Hence, MHB is considering three growth options:
- Option one: launch a new line of foldable bikes, costing an estimated US\$2.5m.
  - Option two: build a new factory to increase productive capacity, costing an estimated US\$4.5m.
  - Option three: diversify by building skateboards to add to its current product portfolio, costing an estimated US\$1.5m.

The estimated sales revenue of these options is shown below.

State of economy	Option one (US\$m)	Option two (US\$m)	Option three (US\$m)
Improves	5	8	3
Unchanged	3	5	2
Worsens	2	3	−1

- a Construct a decision tree diagram for MHB and calculate the predicted outcome for each option.

[6 marks]



- b** With reference to the decision tree, comment on which growth option MHB should pursue. [2 marks]

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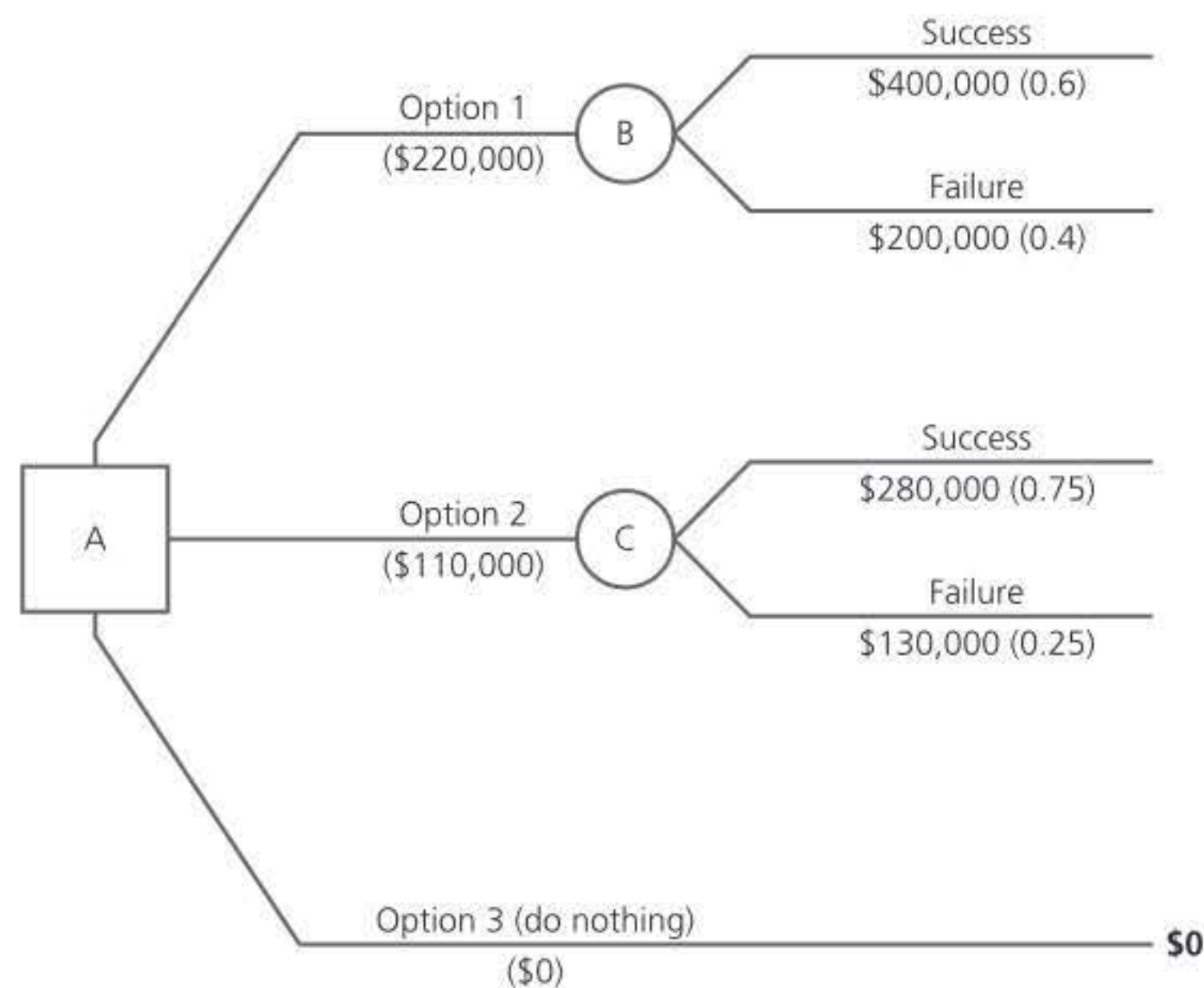
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- 6** In line with the firm's mission statement, Gözde Torun Florists is considering two growth options:
- Option one: open a second store in a nearby location.
  - Option two: refurbish its existing store, which has not happened since the owner opened for business over five years ago.

There is also the option to do nothing if these growth options both prove to be too risky.

Parts of the decision tree for Gözde Torun Florists are shown below.



- a** Complete the decision tree above to determine which project Gözde Torun Florists should pursue (show all your working out). [4 marks]

Working out:

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- b** Explain **two** reasons in favour of Gözde Torun Florists opening a second store in a nearby location (option one). [4 marks]

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- c** Explain **two** reasons in favour of Gözde Torun Florists refurbishing its current store (option two). [4 marks]

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7 Kinny Baloo Corp. is considering alternative methods of promotion for its latest product line of garden furniture:

- Option one: above the line (ATL) promotion.
- Option two: below the line (BTL) promotion.
- Option three: through the line (TTL) promotion.

	Cost (\$)	Probability of success	Estimated revenue (\$)	
			Success	Failure
Option one: ATL	150,000	0.7	500,000	150,000
Option two: BTL	50,000	0.5	400,000	100,000
Option three: TTL	100,000	0.6	450,000	125,000

a Define the term *through the line (TTL) promotion*.

[2 marks]

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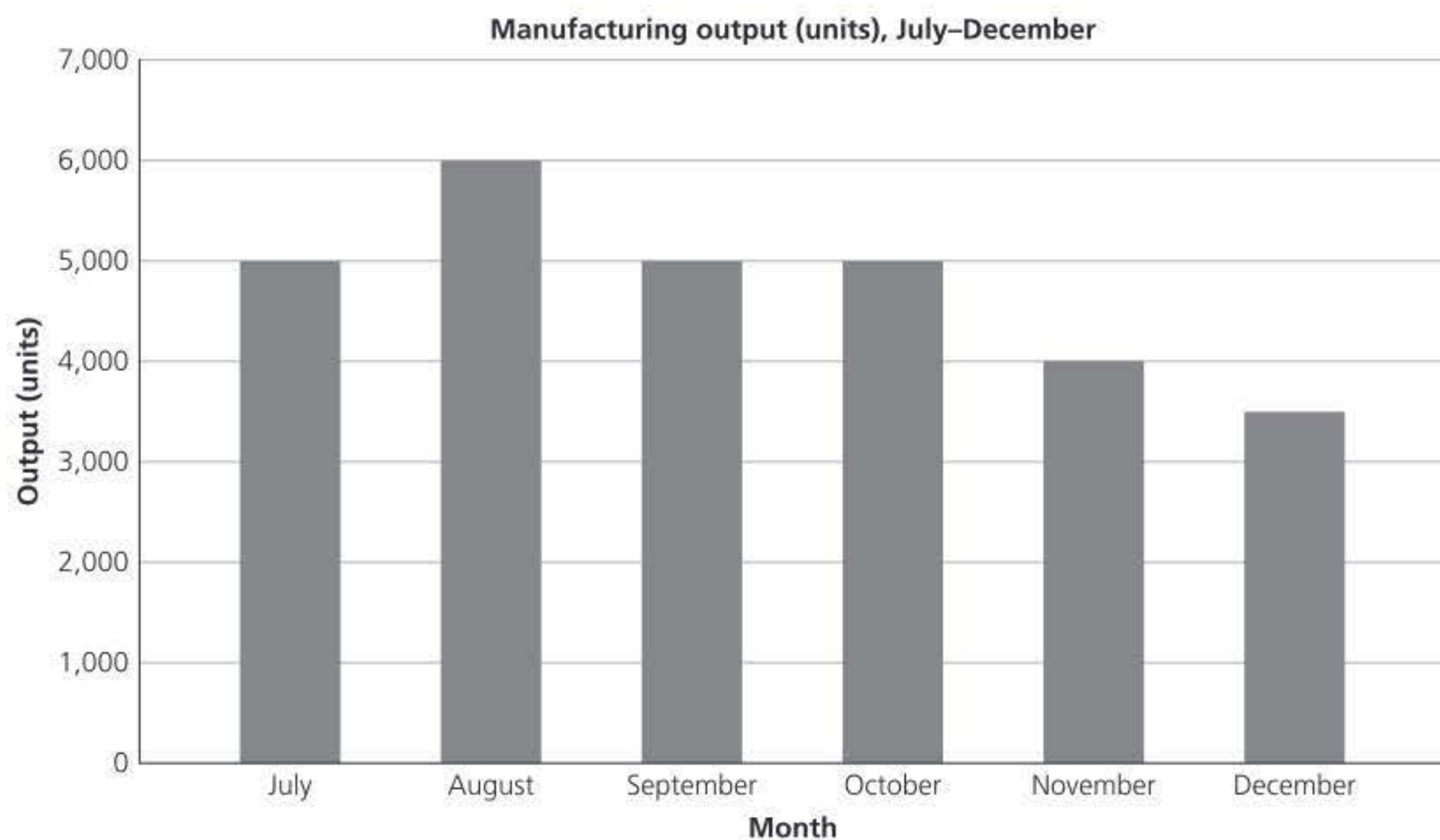
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b Construct a decision tree diagram for Kinny Baloo Corp. and calculate the predicted outcome for each option.

[6 marks]

# Descriptive statistics

- 1 The following bar chart shows the volume of output (units) for a manufacturer during the last six months of this year.



- a Define the term *mean* (arithmetic mean).

[2 marks]

- b State the **modal** average output level per month for the manufacturer over the period shown.

[1 mark]

- c Calculate the **mean** average level of output per month for the manufacturer over the period shown.

[2 marks]

- d Calculate the **median** average level of output per month for the manufacturer over the period shown.

[2 marks]



- 2 The table below shows the survey responses from 100 customers about the maximum price they would be willing to pay for a particular item.

Maximum price (US\$)	Frequency (number of customers)
5.00	10
4.50	15
4.00	20
3.50	25
3.00	30

- a Use the data above to construct an appropriate bar chart.

[4 marks]


- b Describe the purpose of using a bar chart.

[2 marks]

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.....

- c Use the data above to calculate the mean average price that consumers would be willing to pay for the product.

[3 marks]

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**d** Outline **one** advantage and **one** disadvantage of using bar charts.

[2 marks]

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**3 a** Describe what is meant by a *pie chart*.

[2 marks]

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**b** The data below show the monthly units of sales for a retailer of children's toys. Construct a suitable pie chart to represent the data.

[4 marks]

Product	Sales of toys per month (units)
Toy 1	800
Toy 2	400
Toy 3	200
Toy 4	100
Toy 5	500



- c Outline **two** limitations for managers and decision makers of the information shown in the pie chart you constructed for the previous question.

[4 marks]

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- 4 a Define the term *infographic*.

[2 marks]

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- b Suggest why a large multinational business might be interested in this particular infographic.

[2 marks]

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- c Outline **one** benefit and **one** limitation of using infographics to represent information.

[4 marks]

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The infographic below shows the extent to which countries were on track to have vaccinated 40% of their population with at least one dose by the end of 2021.

### COVID-19: which countries are on track to have vaccinated 40% of the population with at least one dose by the end of 2021?

Projections are based on each country's last reported vaccination coverage, and the number of people vaccinated for the first time in the last 14 days.



Source: <https://ourworldindata.org/covid-vaccination-global-projections>



- 5 a Outline the purpose of using quartiles.

[2 marks]

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- b Explain the meaning of the interquartile range.

[2 marks]

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- c Describe what is meant by the *standard deviation* in a data set.

[2 marks]

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- d The data below show the sales of five different products at a retail store. Use the data to calculate the standard deviation.

[4 marks]

Product	Sales (US\$ <i>k</i> )
A	25
B	30
C	15
D	30
E	50

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- 6 The data below represent the five most popular Group 3 subjects in the IB Diploma Programme, as measured by candidate numbers for the May examination session over a five-year period.

G3 subject	M21	M20	M19	M18	M17
Business management	25,692	24,196	21,687	20,277	18,636
Economics	25,955	25,831	25,569	25,147	24,235
Geography	8,937	9,245	9,365	8,892	8,443
History	47,810	50,133	51,382	52,055	50,919
Psychology	23,166	22,739	21,468	21,757	20,382
Total	131,560	132,144	129,471	128,128	122,615

Source: adapted from IB Statistical Bulletin

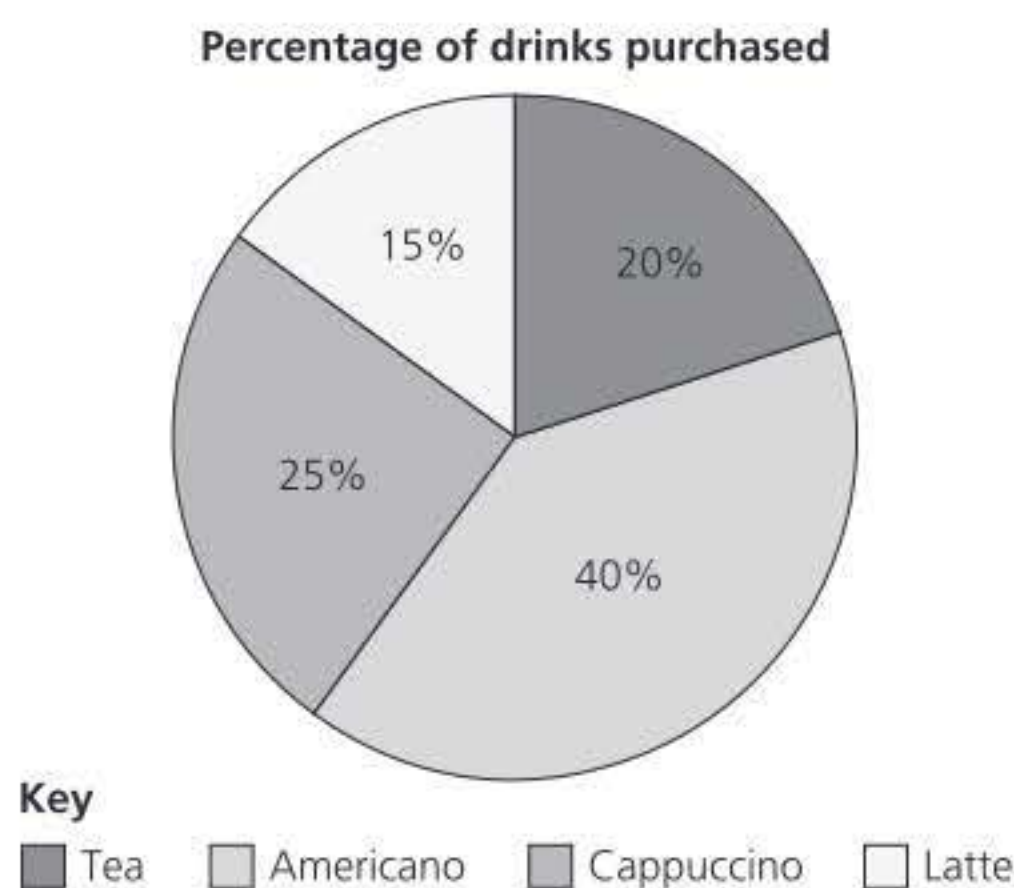
- a Identify the median number of candidates who studied geography. [1 mark]

- b Calculate the mean number of candidates for (i) business management, and (ii) economics. [3 marks]

- c Construct a suitable pie chart to show the data for May 2021. [3 marks]



- 7 The pie chart below shows the percentage of drinks purchased by 3,000 customers at a local coffee shop during the past week.



- a Calculate the number of customers who purchased a cappuccino last week. [2 marks]

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- b Calculate the number of customers who did *not* purchase cappuccino last week. [2 marks]

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- c The average price of an Americano is US\$3.75. Calculate the sales revenue from the sale of Americanos last week. [2 marks]

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- d Explain why it is not possible to determine the most profitable drink from the pie chart. [4 marks]

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- 1 a Explain how traditional business models differ from circular business models. [4 marks]

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- b Describe what is meant by a disposable society. [2 marks]

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- c Explain **two** advantages for a business that adopts a circular business model. [4 marks]

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- 2 a Outline the purpose of businesses moving away from a traditional and disposable society to a circular business model approach. [2 marks]

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- b Define the term *circular supply model*. [2 marks]

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3 a Define the term *resource recovery model*. [2 marks]

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b Explain **two** benefits of using a resource recovery circular business model. [4 marks]

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c Define the term *product life extension model*. [2 marks]

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d Explain **two** benefits of using a product life extension model. [4 marks]

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- 4 a In the context of circular business models, define the term *sharing models*. [2 marks]

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- b Explain **one** benefit of a sharing model such as the use of Airbnb, where the company does not own any of its own hotels or resorts. [2 marks]

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- 5 a Define the term *product service system model*. [2 marks]

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- b Explain **two** limitations of adopting a circular business model. [4 marks]

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1 a Define the term *Gantt chart*.

[2 marks]

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b State **two** things that can be identified in a Gantt chart.

[2 marks]

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c Explain **two** advantages of using Gantt charts.

[4 marks]

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2 a State **two** features of a Gantt chart.

[2 marks]

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b Explain **two** limitations of using Gantt charts.

[4 marks]

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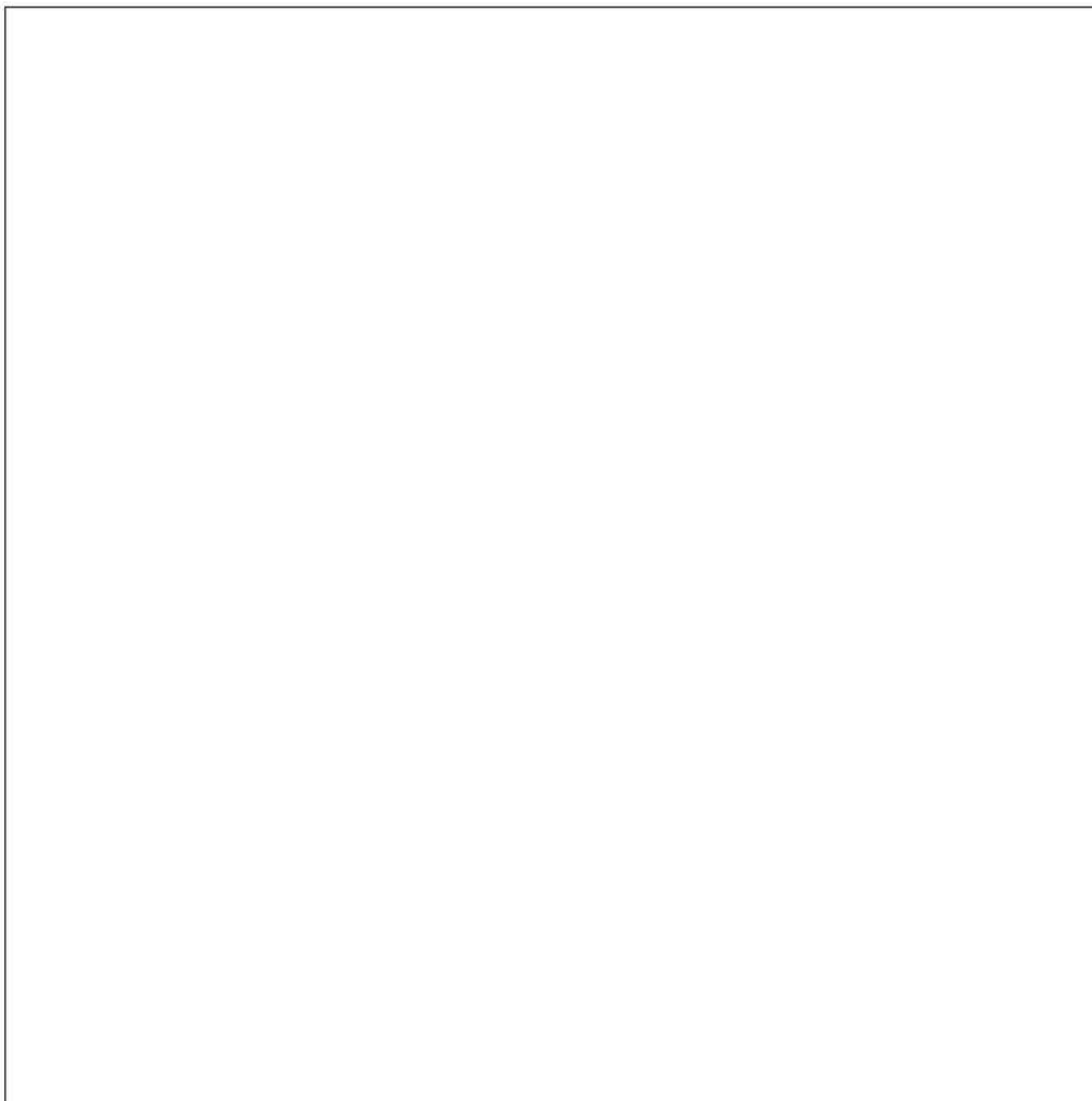
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- 3 Elvy Verton Construction Co. has been appointed to fully renovate the house of a client.

Activity	Order	Duration (weeks)
A	-	2
B	A	4
C	A	3
D	B	2
E	C	1
F	D and E	2

- a Construct a Gantt chart for the project from the data above.

[4 marks]



- b Identify the shortest time that the project can be completed in.

[1 mark]



- 4 Greberman Education publishes educational textbooks for university students. The typical publication goes through the process below.

Activity	Order	Duration (months)
A	-	1
B	-	2
C	A	3
D	B	4
E	C and D	1
F	E	2
G	E	2
H	G	1
I	F and H	2

- a Using the data in the table above, draw a Gantt chart for a typical publication project of the business. [4 marks]

- b** Explain why it is important for Greberman Education to regularly monitor and, if necessary, to update the Gantt chart.

[2 marks]

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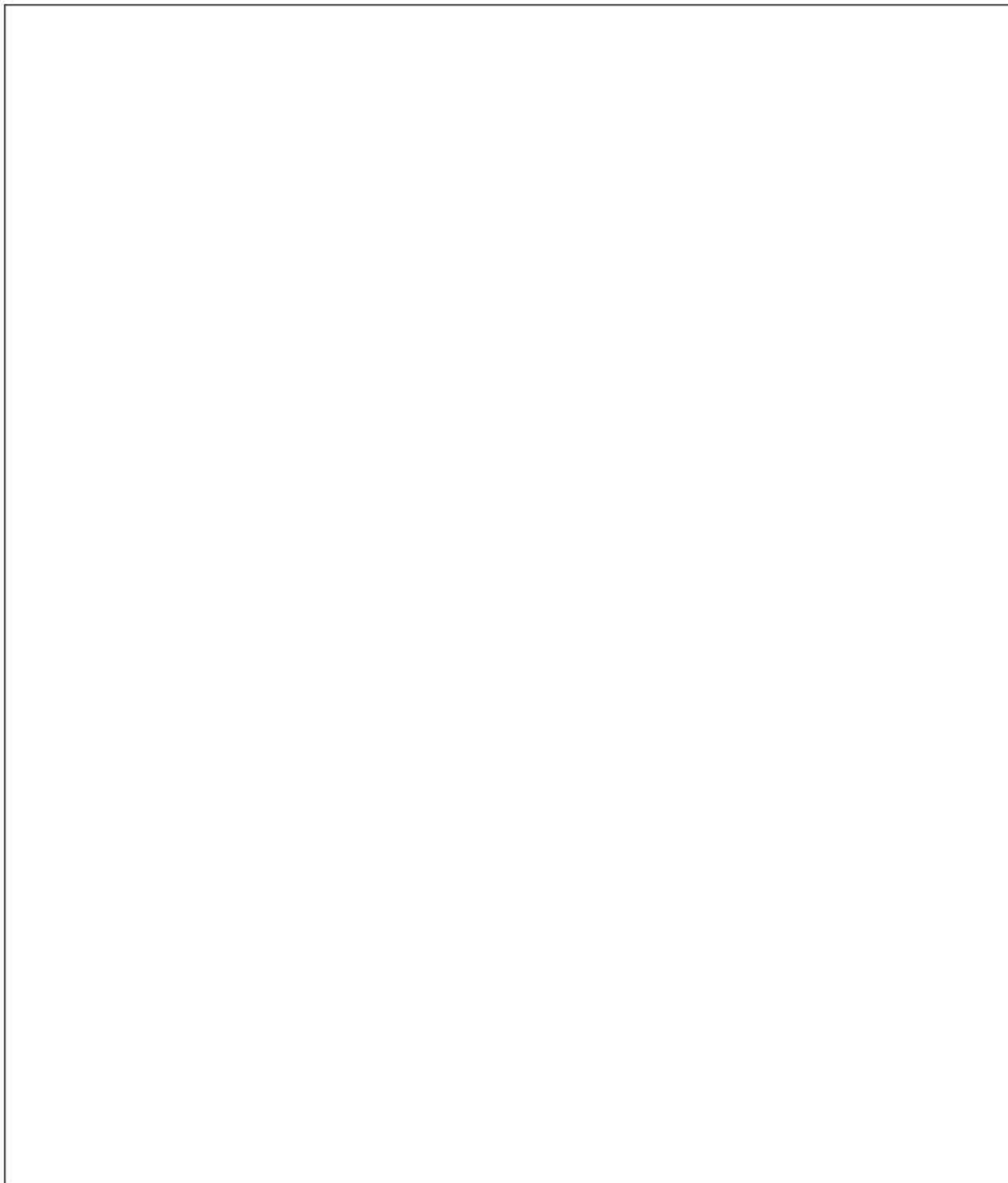
- 5** The table below shows the various activities, preceding activities and durations for a project.

Activity	Duration (days)	Preceding activities
A	2	-
B	4	-
C	3	A
D	2	A
E	4	B
F	2	C, D
G	2	E, F
H	3	E, F
I	1	G, H



- a** Use the data in the table above to construct a Gantt chart for the project.

[4 marks]



- b** Comment on the shortest completion time for the entire project if a Gantt chart is used.

[2 marks]

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# Porter's generic strategies (HL only)

- 1 Michael Porter's generic strategies enable entrepreneurs and decision makers to consider various ways to gain competitive advantages.

a Define *Porter's generic strategies*.

[2 marks]

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b Describe the meaning of competitive advantage.

[2 marks]

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- 2 a Describe Porter's *cost leadership strategy*.

[2 marks]

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b Explain **two** different methods a business might use to achieve a cost leadership strategy.

[4 marks]

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- c Porter referred to two different types of cost leadership strategy. Distinguish between *cost leadership with proximity* and *cost leadership with parity*.

[4 marks]

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- 3 a Define Porter's *differentiation strategy*.

[2 marks]

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- b State **two** ways that a large supermarket chain might differentiate itself from competitors in the industry.

[2 marks]

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- c Tesla is an American electric vehicle producer. The company claims its cars have the quickest acceleration of any electric vehicle in production. Explain **two** possible advantages of a differentiation strategy used by Tesla.

[4 marks]

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- 4 a Describe what is meant by a *focus strategy*.

[2 marks]

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- b** Explain how a local car repair business might use a focus strategy to attract customers. [4 marks]

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- 5 a** In the context of business strategy, explain what Porter meant by being “stuck in the middle”. [2 marks]

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- b** Explain why being “stuck in the middle” carries risks. [2 marks]

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- 6** Identify the relevant generic strategy in each of the cases below.

- a** Ambani Superstore provides customers with lower prices because of its ability to exploit economies of scale and implement highly efficient methods of distribution. [1 mark]

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- b** Katia Jewelry Company produces inexpensive jewelry, gifts and other accessories targeted at teenagers. [1 mark]

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- c** KIN Cosmetics sells handmade bath and beauty products that are sustainably sourced and not tested on animals. [1 mark]

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- d** SinoEuroTours specializes in providing exclusive access to live football matches for clients based in China who are fanatics of European football leagues. [1 mark]

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- [2 marks]

- [4 marks]

- [2 marks]

- [2 marks]

- [2 marks]

3 One of Hofstede's cultural dimensions is power distance.

a Explain the link between power distance as a cultural dimension and a firm's organizational structure. [4 marks]

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b Explain why differences in power distance as a dimension of culture might cause culture clashes within an organization.

[4 marks]

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4 One of Hofstede's cultural dimensions is uncertainty avoidance.

a Define the term *uncertainty avoidance*.

[2 marks]

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b Suggest why a difference in the degree of uncertainty avoidance within an organization can cause conflict.

[2 marks]

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- 5 In 2014, a US\$35bn merger that should have resulted in the world's largest advertising agency was abandoned due to culture clashes between US-based advertising giant Omnicom and its French equivalent Publicis. Omnicom's CEO stated, "There are strong *corporate cultures* in both companies that delayed us reaching an agreement."

a Define the term *corporate culture*.

[2 marks]

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b Explain why an understanding of cultural dimensions may have prevented the merger between Omnicom and Publicis from failing.

[4 marks]

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c Explain **two** limitations of Hofstede's cultural dimensions as a business management tool.

[4 marks]

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d Explain **two** consequences of culture clashes for business organizations, such as Omnicom and Publicis.

[4 marks]

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1 a Define the term *force field analysis*.

[2 marks]

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b Distinguish between driving forces and restraining forces.

[2 marks]

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2 a Explain **two** advantages of using force field analysis as a framework for decision-making.

[4 marks]

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b Explain **two** limitations of using force field analysis as a framework for decision-making.

[4 marks]

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- 3 A business is considering whether to increase the productive capacity of its factory. The management team has identified the following factors to consider in this decision, along with their weightings (1 = weak, 5 = strong).
- Costs of the upgrade will have a direct impact on the firm's liquidity position (4).
  - New government regulations require more environmentally friendly production techniques (2).
  - The maintenance costs for the current machinery and equipment have been increasing (2).
  - There are likely to be staff redundancies, which will need to be handled with care and sensitivity (3).
  - There has been an increase in customers for the past four years (4).
  - There is a need to upgrade the current machinery in order to stay competitive (3).
  - Training costs to upskill workers to use the new factory machinery and equipment (3).
- a Construct a force field analysis of the driving and restraining forces associated with the goal of increasing the capacity of the factory. [4 marks]



- b Comment on the results of your force field analysis for the business. [2 marks]



- 4 A business is considering whether to convert from a private limited company to a public limited company.
- a State **three** important steps in the construction of a force field analysis. [3 marks]
- .....
- .....
- .....
- .....
- .....
- .....
- b Prepare a force field analysis for the business. Include *three* driving forces and *three* restraining forces in your diagram. Also include relevant weights for each force, where 1 = weak and 5 = strong. [4 marks]



- 5 Due to the prolonged COVID-19 pandemic, working from home has become the new normal for many employees across the world. According to *The Economist*, Americans spent around 5% of their working time at home before the pandemic. By spring 2020, the figure was around 60%. Despite people working longer hours, analysts have reported higher levels of employee happiness and labour productivity, as well as the absence of costs and frustrations associated with commuting to and from work.

However, not all employers are able to trust the work ethic of their remote employees, nor are they always comfortable communicating with their employees working from home. Due to these concerns, micromanagement has increased in many organizations, causing problems for both employers and their staff. As national and regional lockdowns lift, coupled with COVID-19 vaccine rollouts, working from home is likely to stay, with both opportunities and potential limitations for businesses.

Explain how a business can apply the principles of Lewin's force field analysis in implementing its plan of allowing more employees to work from home. [4]

[4 marks]

- 1 a Define the term *critical path analysis*.

[2 marks]

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- b Explain **two** advantages of using critical path analysis.

[4 marks]

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- c Explain **two** limitations of using critical path analysis.

[4 marks]

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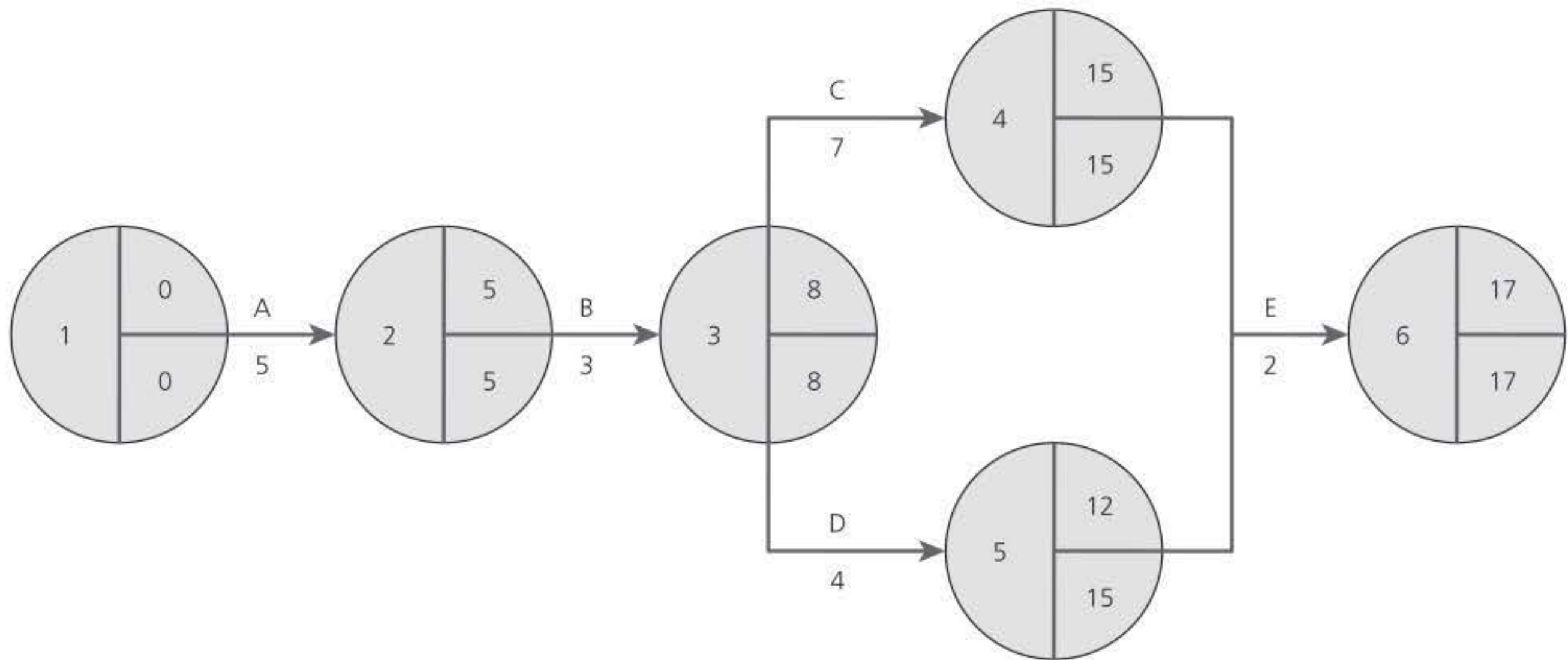
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- 2 The following network diagram shows the duration of all the various activities for a particular project. The duration of each task is shown in number of weeks.



- a Define the term *network diagram*.

[2 marks]

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- b Explain the critical path from the network diagram above.

[2 marks]

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- c Calculate the float time for activity D of the project.

[2 marks]

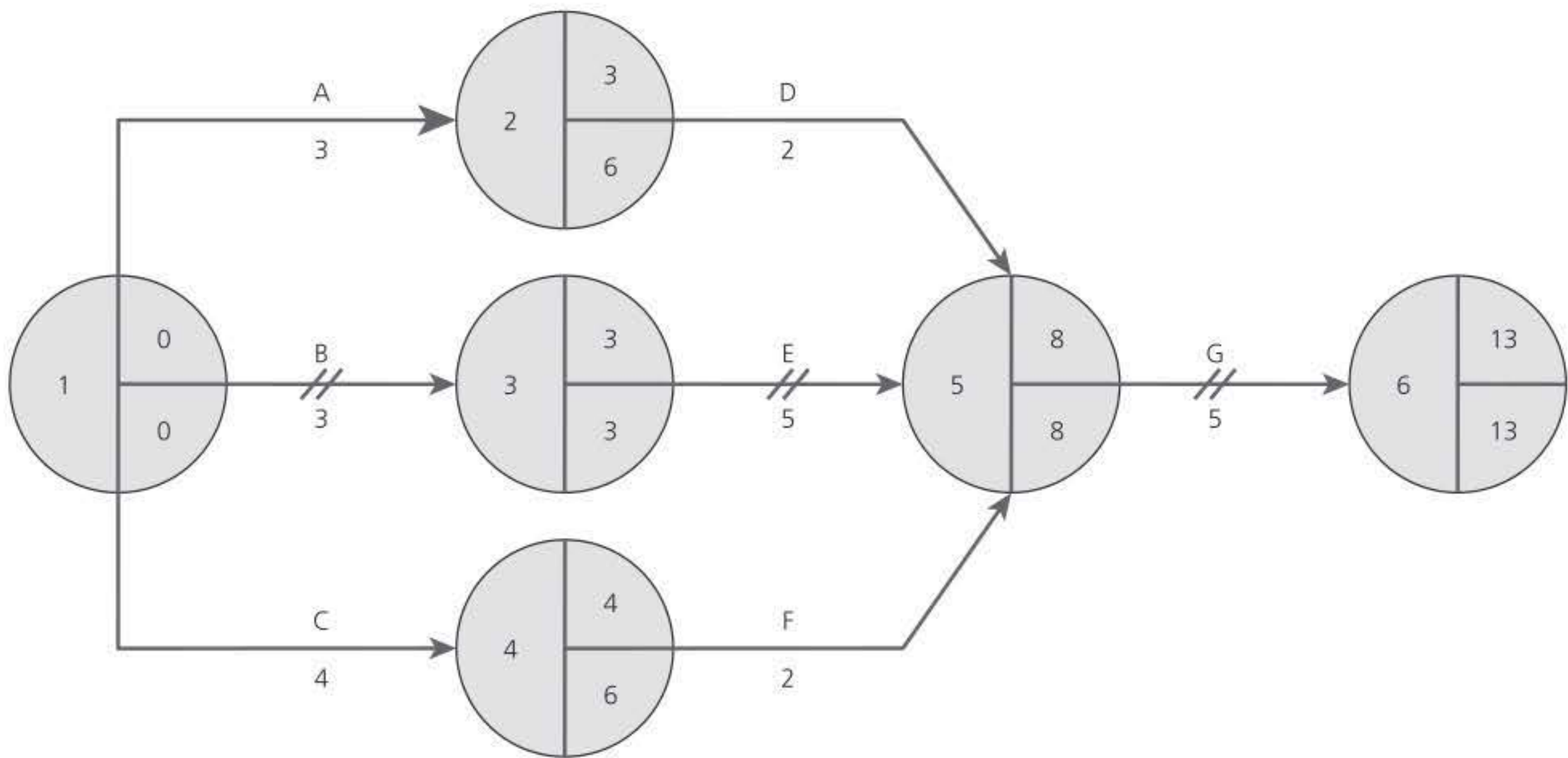
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- 3 Use the network diagram below to answer the questions that follow. The duration of the tasks is in number of days.



- a Identify the critical path for the project.

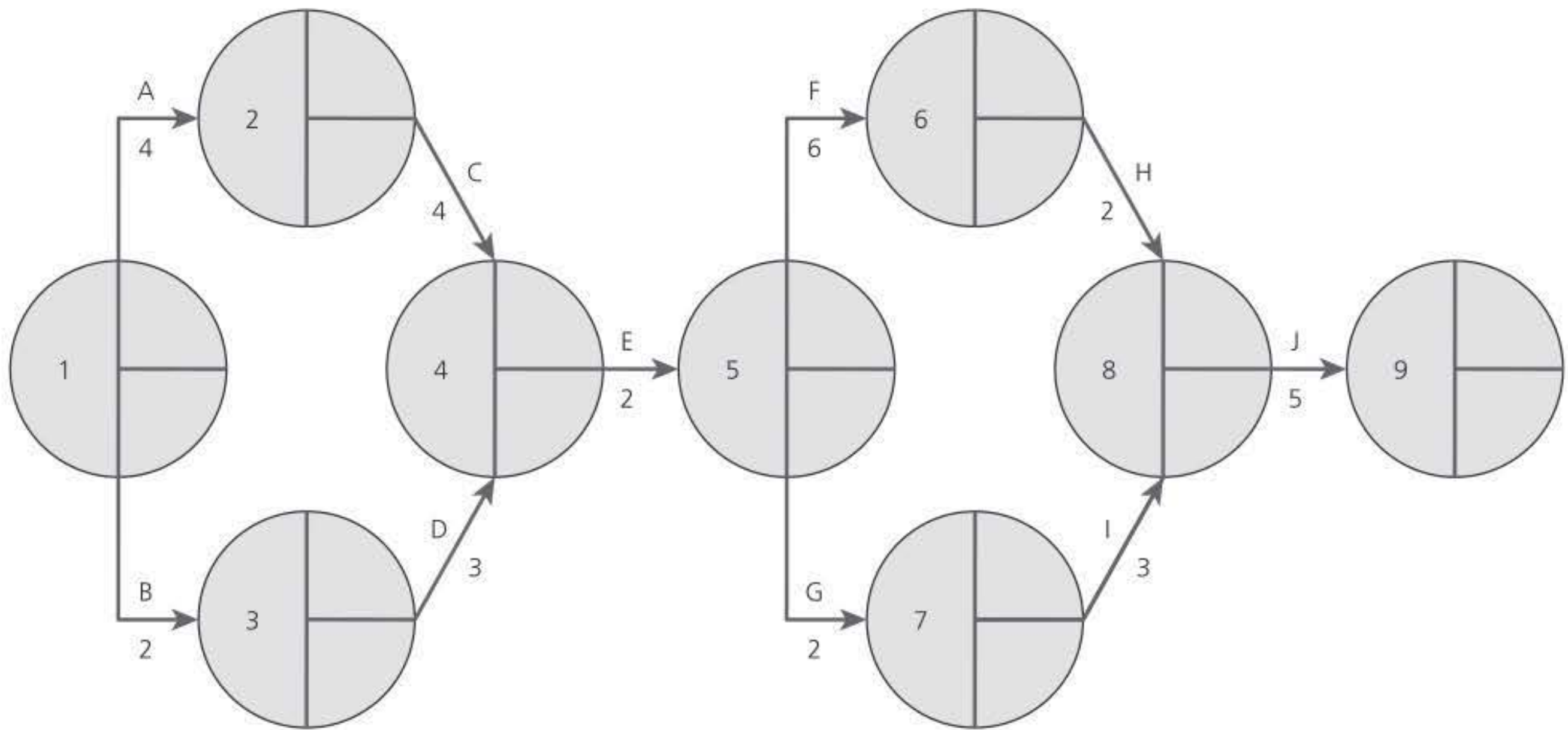
[1 mark]

- b Calculate the free float times for activity D and activity F.

[3 marks]

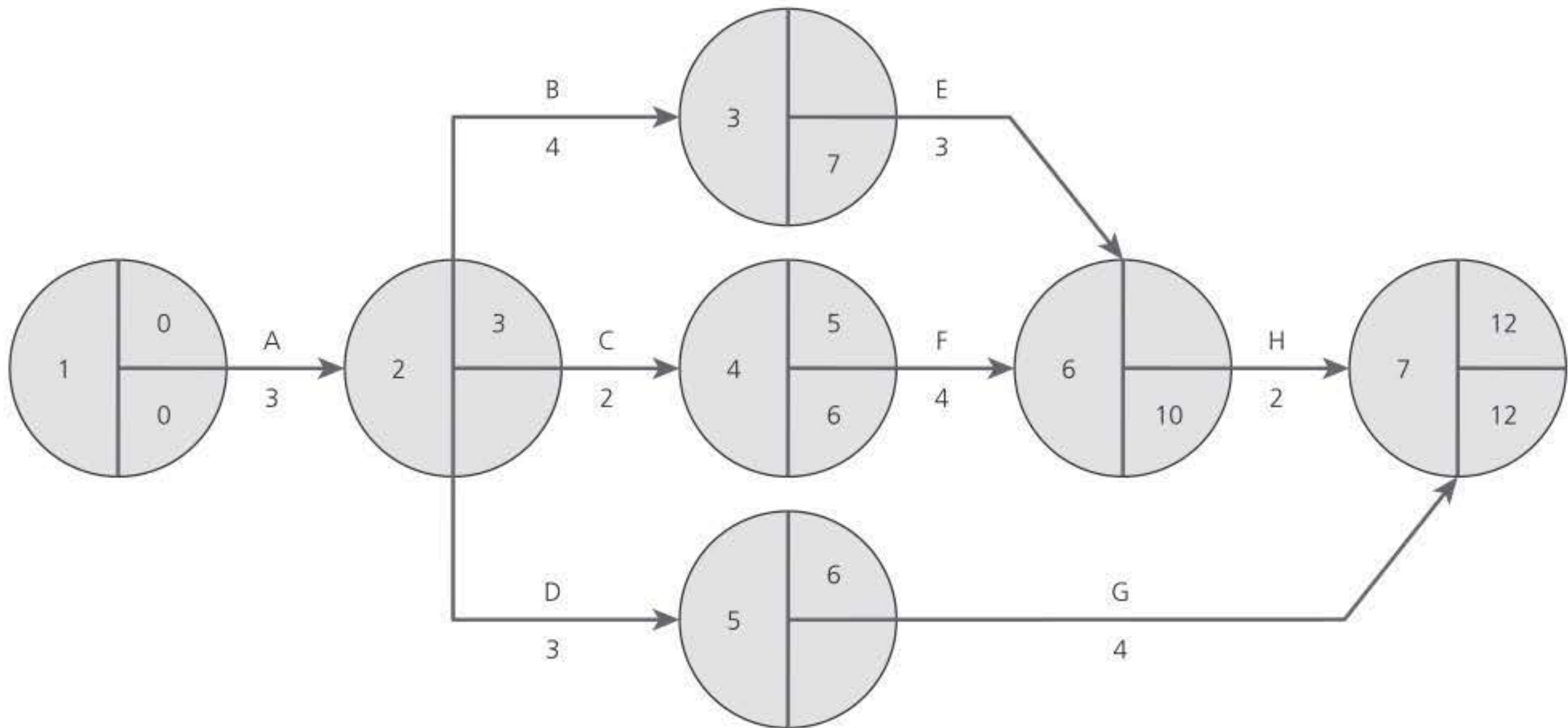


- 4 Use the network diagram below to answer the questions that follow. The duration of the tasks is in number of months.



- a Complete the network diagram by calculating the earliest start times (EST) and the latest finishing times (LFT) for each node. [4 marks]
- b Identify the critical path for the project. [1 mark]
- c Calculate the total float times for activity D and activity I. [3 marks]
- d Suppose activity G is delayed by two months. Comment on how this might affect the overall completion time of the project [2 marks]

- 5 Use the network diagram below to answer the questions that follow. The duration of the tasks is in number of weeks.



- a Calculate the EST for nodes 3 and 6.

[2 marks]

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- b Calculate the LFT for nodes 2 and 5.

[2 marks]

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- c Identify the critical path.

[1 mark]

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- d Calculate the total float times for activities C and D.

[3 marks]

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- e Calculate the free float times for activities F and G.

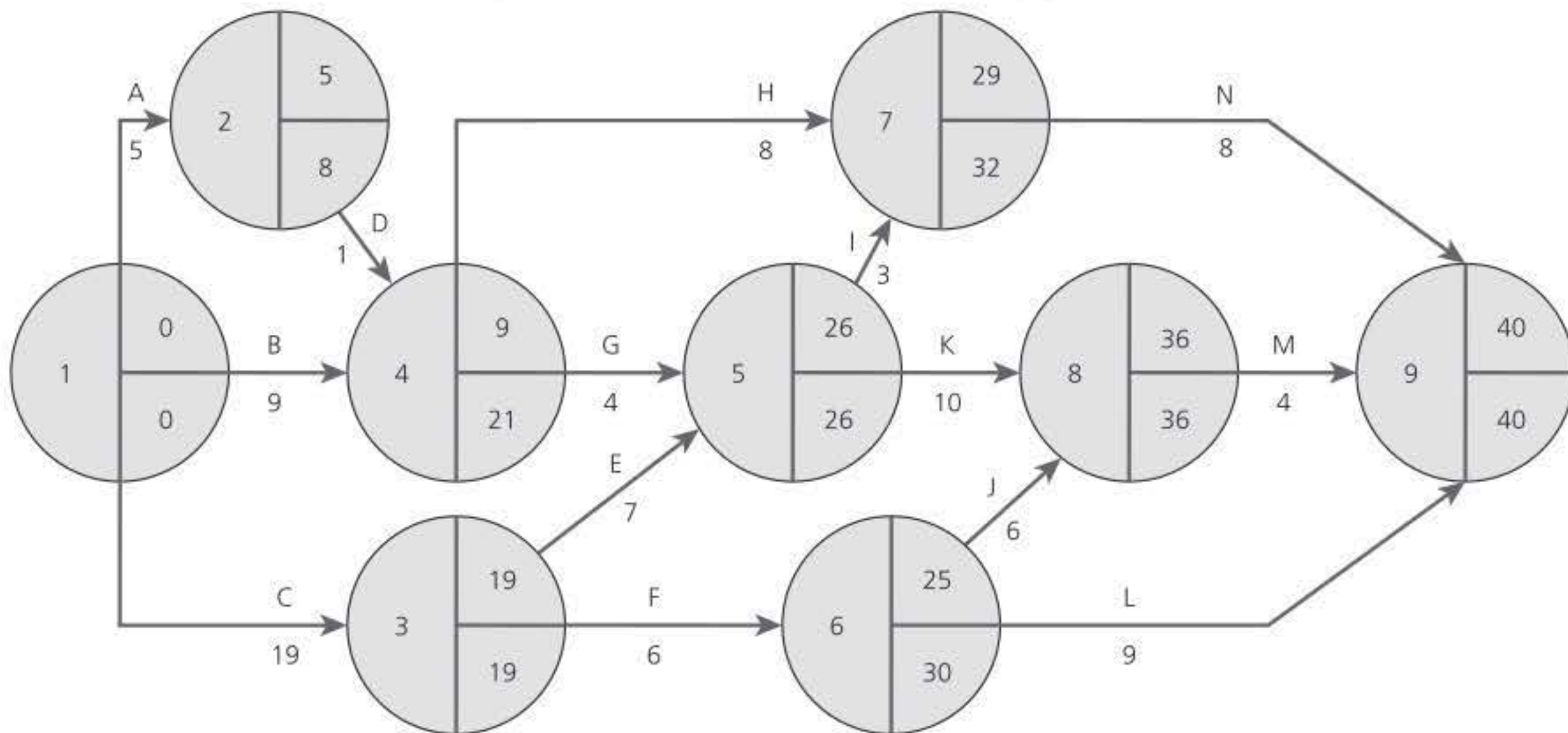
[3 marks]

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6 Use the data in the network diagram below to answer the following questions.



a Calculate the total float of each activity.

[5 marks]

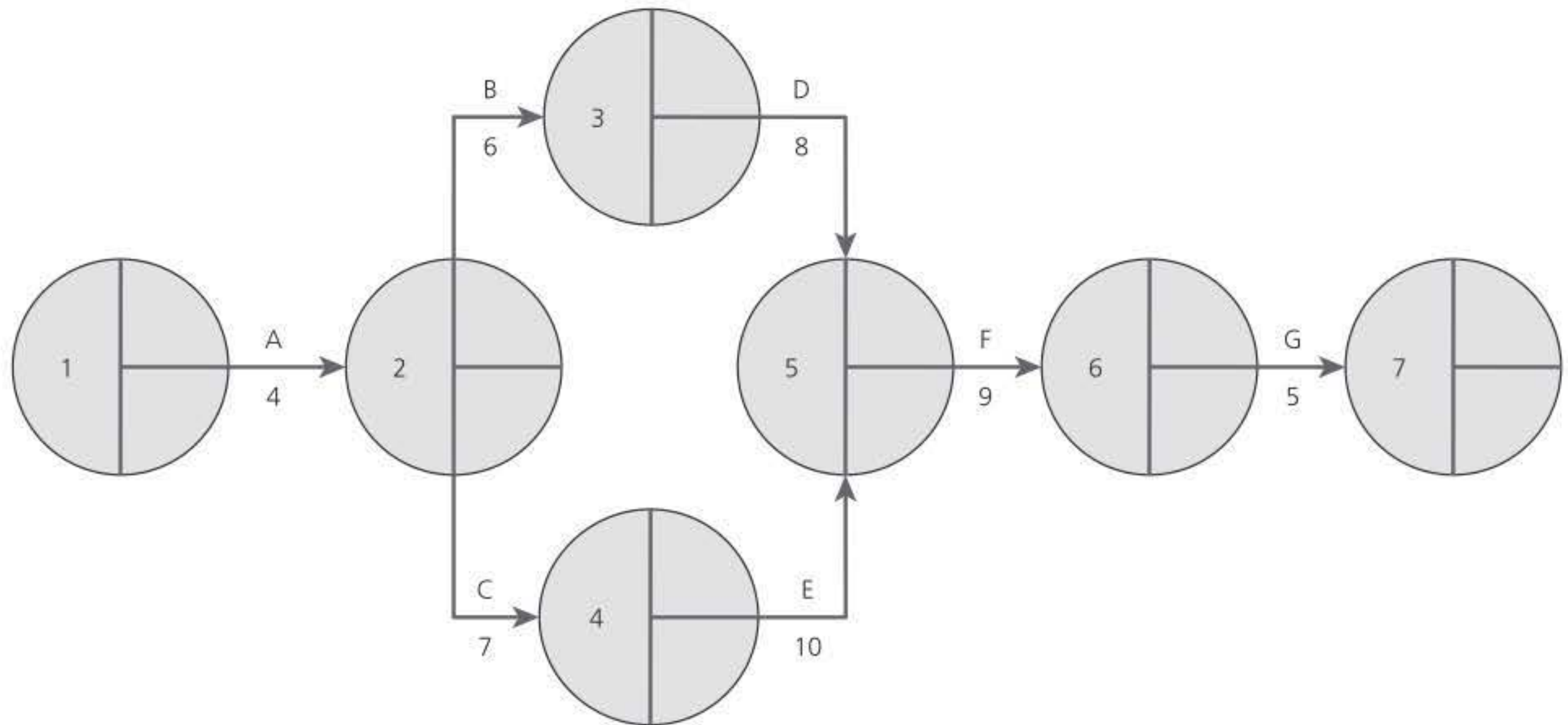
Activity	LFT	Duration	EST	Total float
A		5		
B		9		
C		19		
D		1		
E		7		
F		6		
G		4		
H		8		
I		3		
J		6		
K		10		
L		9		
M		4		
N		8		

b Calculate the free float of each activity.

[5 marks]

Activity	EST (at end)	Duration	EST (at start)	Free float
A		5		
B		9		
C		19		
D		1		
E		7		
F		6		
G		4		
H		8		
I		3		
J		6		
K		10		
L		9		
M		4		
N		8		

7 The following questions relate to the network diagram below.



- a Complete the network diagram by calculating the earliest start times and latest finishing times for each node. The durations of each activity are in number of days. [4 marks]
- b Identify the shortest time in which the project can be completed. [1 mark]

- c Identify the critical path **and** show this on the network diagram above. [2 marks]

- d Use the network diagram above to calculate the free float and total float times in the table below. [5 marks]

Activity	Number of days		EST	LFT	Free float	Total float
	Duration					
A	4					
B	6					
C	7					
D	8					
E	10					
F	9					
G	5					



- 1 Don Pak can purchase equipment for in-house production for US\$250,000 and produce the needed component parts for US\$10 each. Alternatively, the company can use an external supplier that would produce and ship these parts for US\$15 each.

a Define the term *contribution*.

[2 marks]

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b Using make or buy analysis, calculate the number of component parts needed to reach break-even. [2 marks]

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c Comment on your answer to **question 1b** above.

[2 marks]

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- 2 Rachel Proffitt Pumps (RPP) can purchase the necessary capital equipment for in-house production for \$20,000 and manufacture the pumps for \$90 each. Alternatively, a local supplier can make the pumps for \$110 each. The sale forecast for RPP's product is 2,500 units. The firm faces a make or buy decision.

a Define the term *make or buy decision*.

[2 marks]

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b Calculate the cost to make (CTM) and the cost to buy (CTB) for RPP. Comment on your findings. [4 marks]

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- c Explain **two** factors that a business, such as RPP, might need to consider in a make or buy analysis. [4 marks]

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- 3 The table below shows the fixed costs, variable costs and selling price of a sweet (candy) manufacturer. The producer is considering using a different supplier for its packaging for the wrapping of the sweets. This option would reduce its packaging costs by 50%.

Cost and revenue	Value (US\$)
Fixed costs	15,000
Packaging cost per unit	0.20
Other variable costs per unit	0.60
Selling price per unit	1.10

- a Distinguish between *fixed costs* and *variable costs*. [4 marks]

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- b Using the data above, explain whether the sweet manufacturer should switch to a different supplier for its packaging. [4 marks]

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- c Based on your answer to **question 3b**, outline whether the sweet manufacturer should or should not use a different supplier for its packaging. [2 marks]

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- 4 The table below shows the revenue and direct costs for the four products (cost centres) of a business. All figures are in US\$k. The firm's indirect costs are US\$140,000.

	Product A	Product B	Product C	Product D	Total
Sales revenue	120	150	80	95	
Direct costs	70	90	50	60	
Contribution per product					
Indirect costs					
Profit					

- a Define the term *cost centre*.

[2 marks]

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- b Complete the table above in order to determine the contribution per product **and** the overall profit for the business if it uses contribution costing.

[4 marks]

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- 5 The table below shows the revenue and costs for the three profit centres of a business. All figures are in US\$**k**.

Profit centres	Department A	Department B	Department C	Total
Sales revenue	250	200	300	
Direct costs	137.5	130	150	
Contribution				
Allocation of fixed costs				150
Profit per department				

- a Complete the table above to determine the profit of **each** department if the business uses absorption costing to allocate indirect costs *equally* between the profit centres. [4 marks]

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- b Suppose the business decides to allocate the indirect costs based on the *proportion of sales revenue* from each profit centre. Complete the table below to show the allocation of fixed costs for each department **and** the profit for each profit centre. [4 marks]

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Profit centres	Department A	Department B	Department C	Total
Sales revenue	250	200	300	
Direct costs	137.5	130	150	
Contribution				
Proportion of sales				
Allocation of fixed costs				150
Profit per department				



- c With reference to your answer to **question 5b** above, explain the benefit for the business of using absorption costing as a business management tool.

[4 marks]

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# Simple linear regression (HL only)

- 1 a Define the term *linear regression*.

[2 marks]

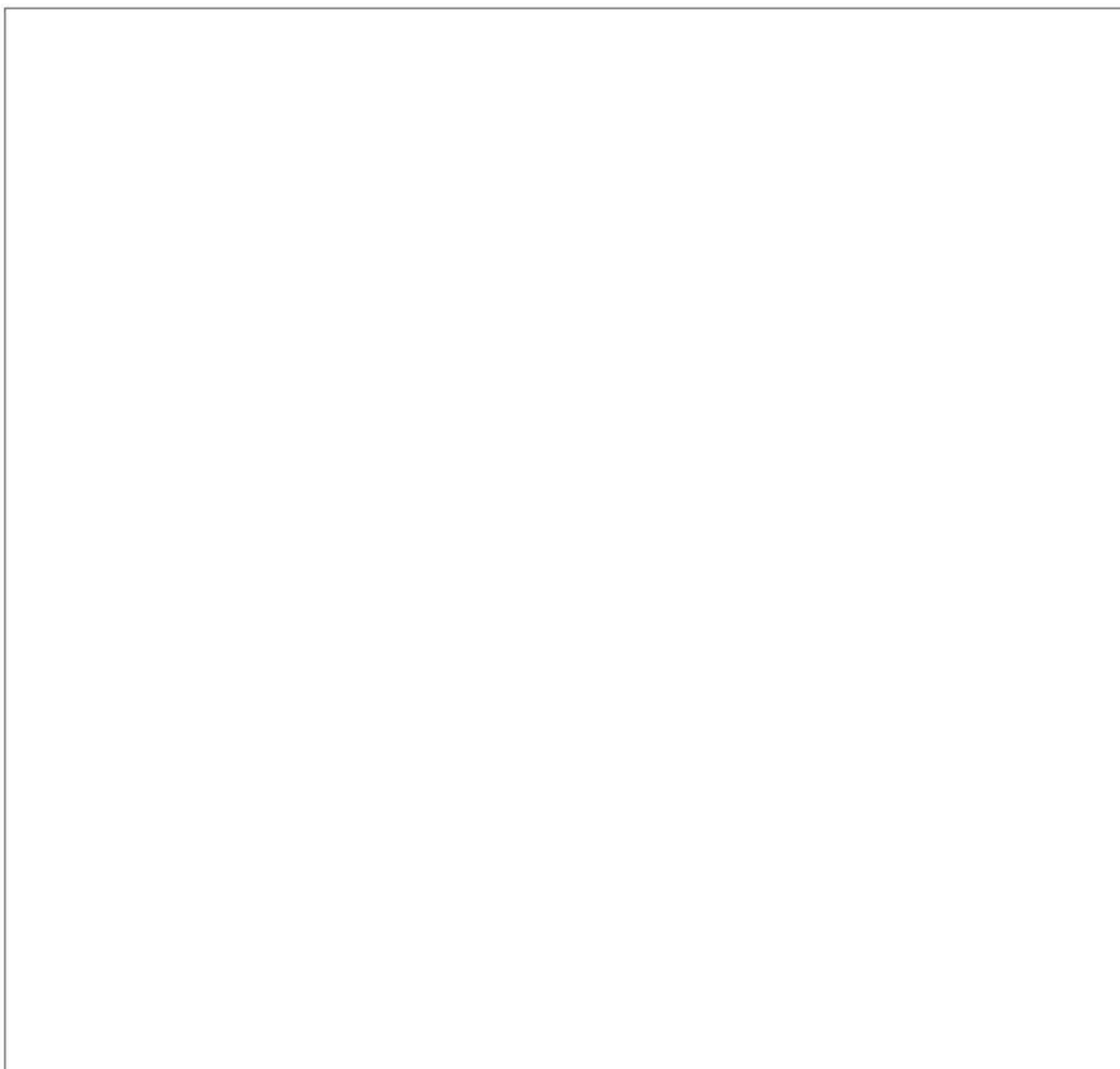
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- b Nike and Adidas are fierce rivals in the sports apparel industry. It is therefore assumed that if one competitor raises its prices, there will be a subsequent increase in the demand for the products of the rival firm. Sketch a suitable diagram to show this correlation and explain your answer.

[4 marks]





- 2 a** Describe the meaning of a scatter diagram.

[2 marks]

- b** The data below depict a firm's advertising spending and the corresponding sales revenue. Use the data to plot a scatter diagram. [4 marks]

[4 marks]

Advertising spending (US\$k)	Sales revenue (US\$k)
5	20
10	22
15	35
20	45
25	60
30	80
35	90

[illegible]

- [2 marks]

- 3** The data below show the exam results of 10 IB World Schools and the average number of years their teaching staff have worked at the school. The figures have been rounded to the nearest whole number.

School	Length of service (average number of years)	IB exam results (average score)
1	7	35
2	2	25
3	3	28
4	6	30
5	6	28
6	4	30
7	10	37
8	9	28
9	12	38
10	8	41

- [4 marks]

[illegible]



- b** Use your scatter diagram to determine a line of best fit. [1 mark]
- c** Describe the meaning of a *line of best fit*. [2 marks]

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- d** With reference to the line of best fit, explain why the correlation shown might be misleading. [4 marks]

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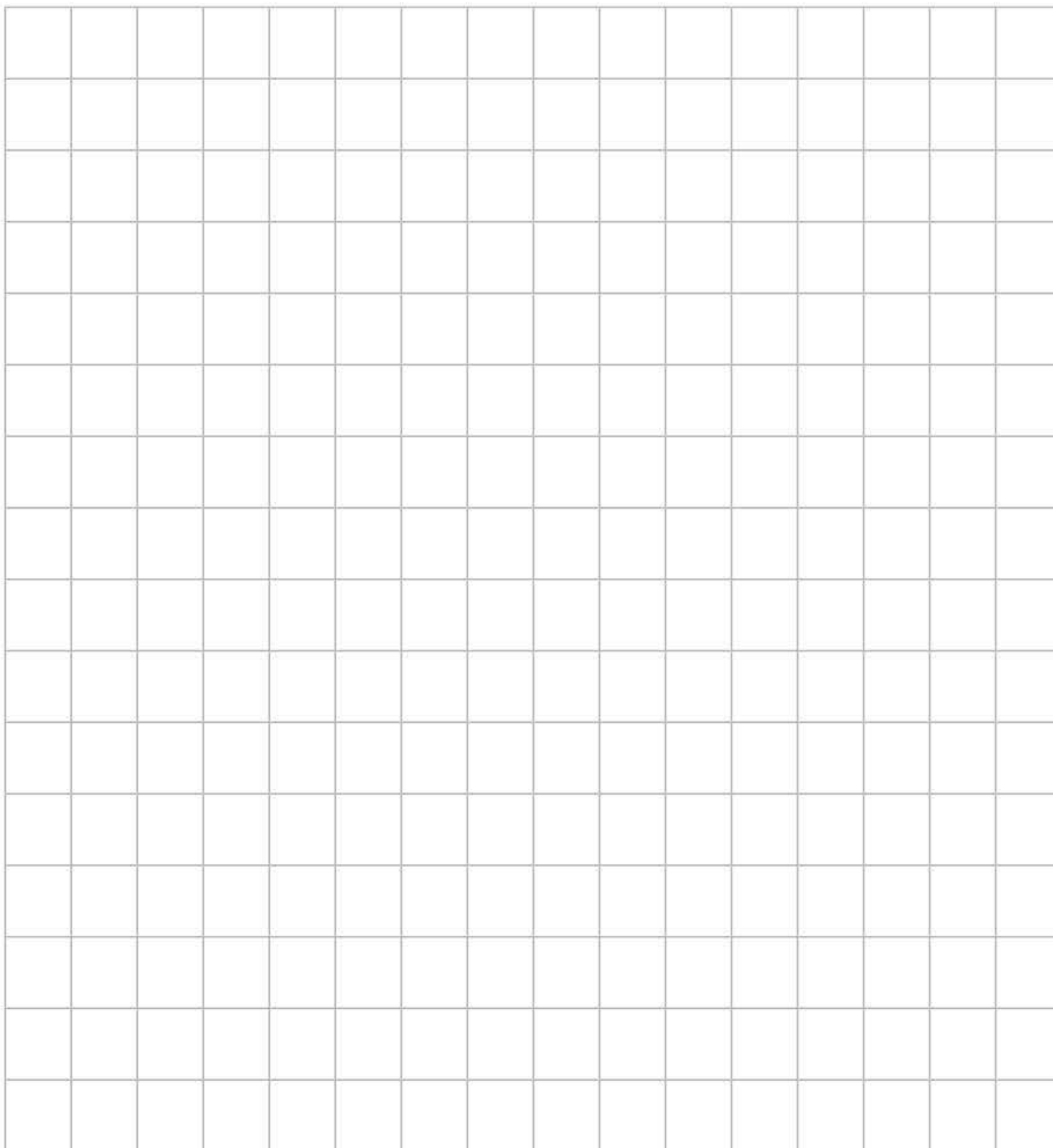
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- 4 The data below are from a mobile ice cream vendor, showing the average sales of ice cream (in units) and the temperature in degrees Celsius.

Daily temperature (°C)	8	11	14	17	20	23	26	29
Average daily sales (units)	15	25	33	47	62	100	130	170

- a Use the data to construct a scatter diagram for the mobile ice cream vendor. [4 marks]



- b Use your scatter diagram to determine a line of best fit for the mobile ice cream vendor. [1 mark]
- c Use your line of best fit to estimate the sales of ice cream if the temperature reaches 25°C. [1 mark]

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5 a Define the term *extrapolation*.

[2 marks]

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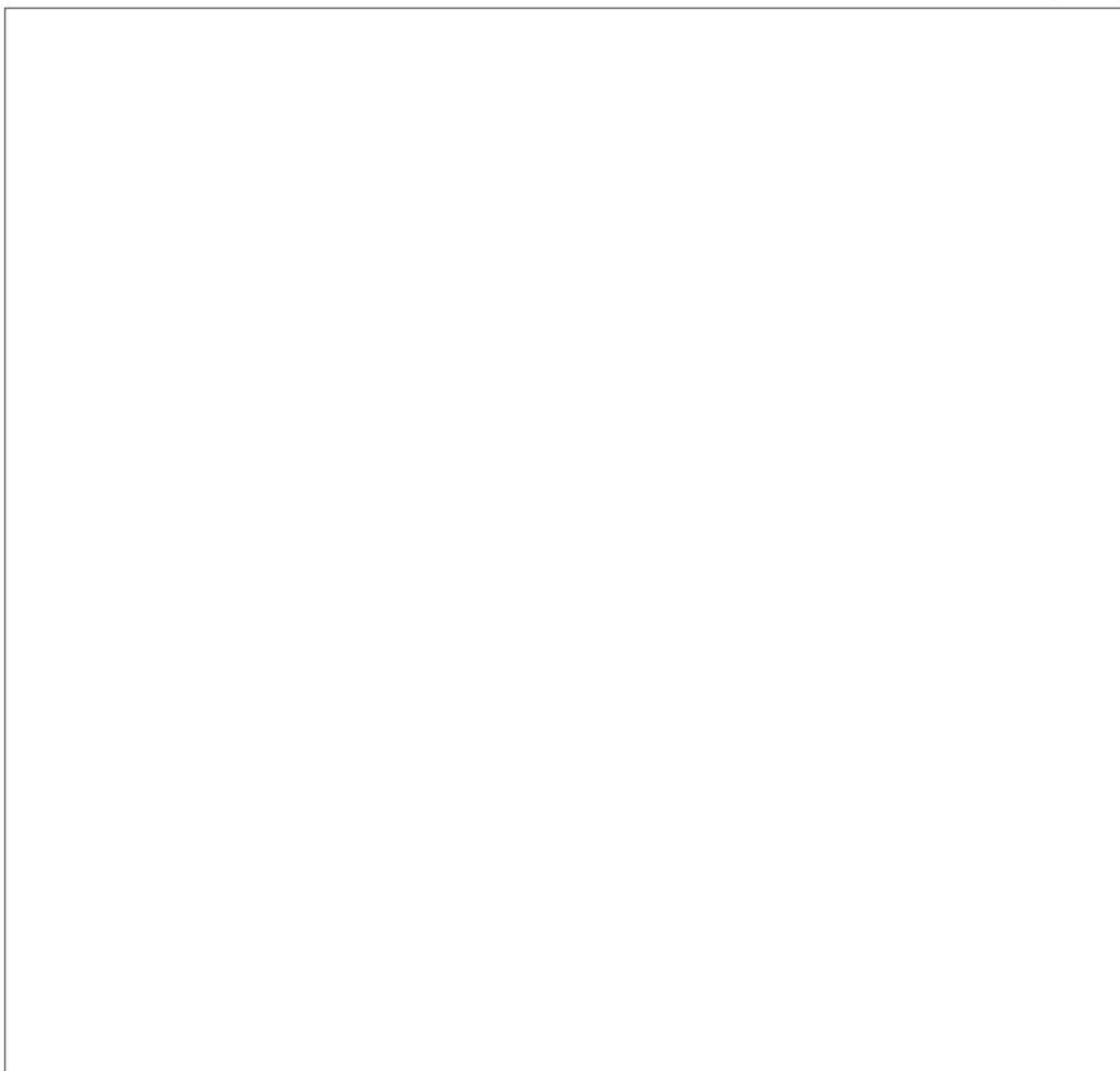
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b Sketch an appropriate diagram to show how an extrapolated trend can be determined from the trend line for actual sales of a retailer.

[2 marks]



c Explain **one** limitation of using extrapolation to predict a firm's sales revenue figures.

[2 marks]

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