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School code

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School name

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Given name/s

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Family name

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Attach your
barcode ID label here

Book

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of

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books used

External assessment 2025

Question and response book

General Mathematics

Paper 2

Time allowed

- Perusal time — 5 minutes
- Working time — 90 minutes

General instructions

- Answer all questions in this question and response book.
- Write using black or blue pen.
- QCAA-approved scientific calculator permitted.
- QCAA formula book provided.
- Planning paper will not be marked.

Section 1 (38 marks)

- 7 short response questions

Queensland
Government

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& Assessment Authority



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Section 1

Instructions

- Questions worth more than one mark require mathematical reasoning and/or working to be shown to support answers.
 - If you need more space for a response, use the additional pages at the back of this book.
 - On the additional pages, write the question number you are responding to.
 - Cancel any incorrect response by ruling a single diagonal line through your work.
 - Write the page number of your alternative/additional response, i.e. See page ...
 - If you do not do this, your original response will be marked.
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QUESTION 1 (4 marks)

At various times of the day, a store manager recorded the number of customers in the store and the number of open checkouts.

	Time of the day				
	8 am	10 am	12 pm	2 pm	4 pm
Number of customers	6	10	22	18	14
Number of open checkouts	1	2	5	4	1

Use a scatterplot display of the data to explain how many additional checkouts should have been open at 4 pm to be consistent with the data.



Note: If you make a mistake, cancel it by ruling a single diagonal line through your work and use the additional response space at the back of this book.

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QUESTION 3 (5 marks)

Stormwater flows through a network of pipes from a source (A) to a river (E). The table shows the maximum flow rate (L/sec) through each pipe connecting different parts of the network.

		To			
		B	C	D	E
From	A	32	38	—	—
	B	—	12	—	—
	C	—	—	20	24
	D	—	—	—	20

An engineer will upgrade only one pipe to change the maximum flow from A to E to 45 L/sec.

Use a flow network diagram to determine the new maximum flow rate for the upgraded pipe.

Note: If you make a mistake, cancel it by ruling a single diagonal line through your work and use the additional response space at the back of this book.

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QUESTION 4 (5 marks)

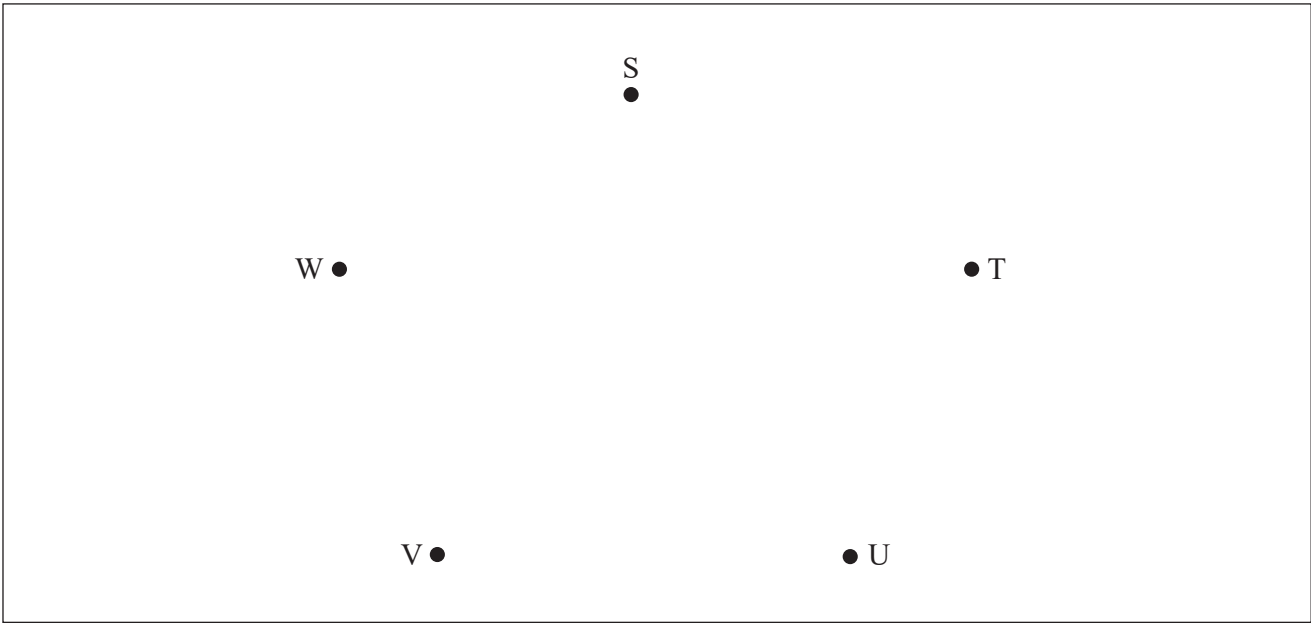
Marli drives a round trip in which she leaves a storage warehouse, S, refills vending machines at four venues, T, U, V and W, and returns to the storage warehouse. The tables show the distance (km) between the locations and the number of vending machines at each venue.

Road connecting locations	S–T	S–U	S–V	S–W	T–U	T–V	T–W	U–V	U–W	V–W
Distance (km)	3	12	10	9	4	7	5	8	2	6

Venue	T	U	V	W
Number of vending machines	2	3	4	3

Marli is paid \$25 per vending machine and a driving allowance of 80 cents per kilometre based on the minimum total distance for a round trip.

Use a weighted graph representing the road network to calculate Marli’s total payment.



Note: If you make a mistake, cancel it by ruling a single diagonal line through your work and use the additional response space at the back of this book.



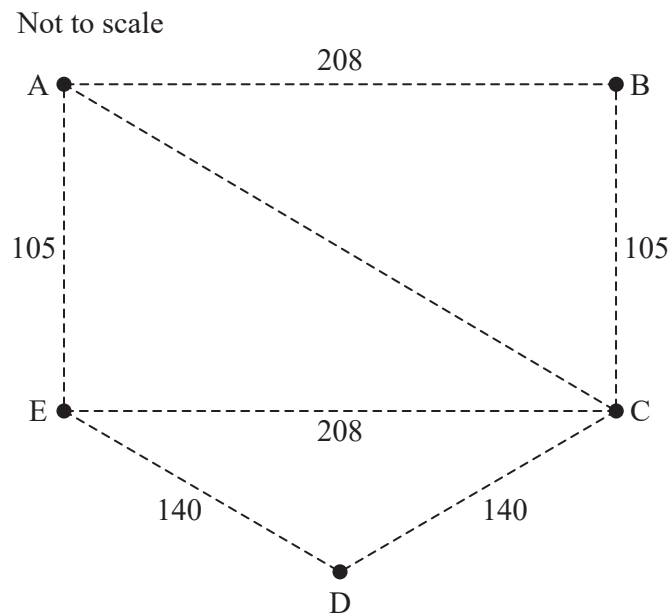
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QUESTION 5 (7 marks)

The diagram represents seven walkways joining five benches (A–E) in a park. Walkway distances are shown in metres. The walkway between A and B is perpendicular to the walkway between B and C.



Helen's usual daily walk involves completing an open Eulerian trail beginning at A. On Tuesday, when one walkway could not be used, Helen used the available walkways to complete a closed Eulerian trail starting at A.

If Helen's usual daily walk takes 17 minutes, justify whether she completed her walk on Tuesday in under 15 minutes. Assume Helen's walking speed doesn't change.

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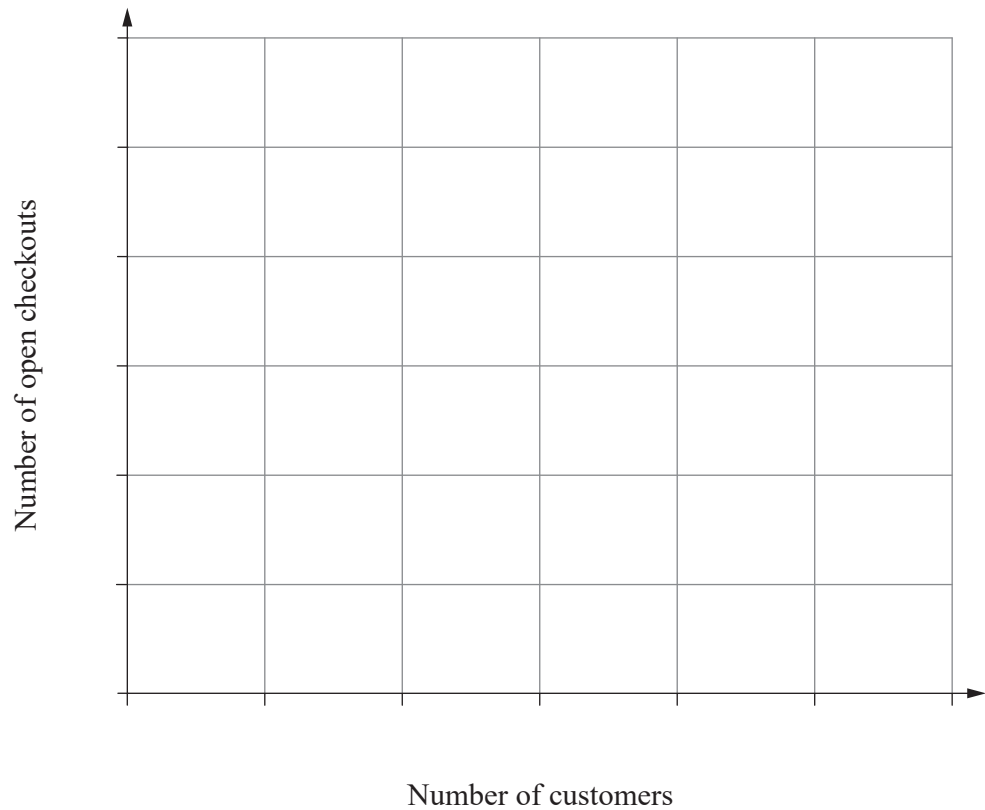
ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.

Do not write outside this box.

ADDITIONAL RESPONSE SPACE FOR QUESTION 1

If you want this response to be marked, rule a single diagonal line through your previous response.



Do not write outside this box.

ADDITIONAL RESPONSE SPACE FOR QUESTION 4

If you want this response to be marked, rule a single diagonal line through your previous response.

S

W •

• T

V •

• U

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