LUI | | | | | | | | | | |

School code | | | | |

School name

Given name/s

Family name

Attach your barcode ID label here

Book | | of | | books used

External assessment 2026

Question and response book

Clear zone — margin trimmed off after completion of assessment

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
- Predicted paper written by Tangent Tuition. Not QCAA material.

THIS PAGE WILL NOT BE MARKED

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.

DO NOT WRITE ON THIS PAGE

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Do not write outside this box.

QUESTION 1 (4 marks)

A council recorded the daily maximum temperature (°C) and the number of visitors to a public swimming pool on six days.

Daily maximum temperature (°C)	22	25	27	29	31	34
Number of visitors	410	380	550	490	620	580

The council claims that more than 75% of the variation in the number of visitors is explained by the variation in the daily maximum temperature.

Evaluate the reasonableness of the council's claim.

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QUESTION 2 (5 marks)

A sales manager will assign each of four sales representatives, Ruby, Tom, Isla and Kai, to a different region. The table shows each representative's expected monthly sales ($ thousand) in each region.

	North	South	East	West
Ruby	27	15	12	23
Tom	18	20	13	18
Isla	23	18	26	26
Kai	24	28	24	15

Use the Hungarian algorithm to determine the allocation of representatives to regions that maximises the total expected monthly sales, and the maximum total expected monthly sales.

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QUESTION 3 (5 marks)

Mina has $12 350 in a savings account that pays interest at 5.4% p.a., compounding monthly. She will also deposit an equal amount into the account at the end of each month.

Mina wants the account balance to be $64 000 at the end of 5 years.

Determine the monthly deposit Mina must make.

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QUESTION 4 (5 marks)

A school is renovating its library. The table shows the activities involved, their duration (days) and their immediate predecessors.

Activity	Duration (days)	Immediate predecessor/s
A	4	—
B	6	—
C	3	A
D	5	A
E	2	B, C
F	7	D
G	4	E
H	3	F, G

Activity C is delayed and will take 5 days longer than planned.

Use a project network diagram with completed forward and backward scanning to determine the effect of this delay on the minimum time to complete the renovation.

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)

A pilot flies a mail plane from its base, W, to four stations, J, K, L and M. The plane lands once at each station and then returns to W. The table shows the flight distance (km) between locations. Two distances are not shown.

Flight	W–J	W–K	W–L	W–M	J–K	J–L	J–M	K–L	K–M	L–M
Distance (km)		465	120	345		194	435	347	272	272

The table shows the coordinates of W, J and K.

Location	Latitude	Longitude
W	25.0° S	141.0° E
J	25.0° S	143.5° E
K	21°30′ S	143.5° E

The plane flies at an average speed of 260 km/h and spends 40 minutes on the ground at each station. The pilot leaves W at 9:15 am and flies the shortest possible round trip.

Determine the earliest time the pilot can arrive back at W.

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QUESTION 6 (6 marks)

Two online newspapers, X and Y, record their number of paying subscribers at the end of each month.

- Newspaper X had 18 000 subscribers at the end of month 1 and 20 225 subscribers at the end of month 3. Its number of subscribers grows geometrically.
- Newspaper Y had 30 000 subscribers at the end of month 1 and 33 480 subscribers at the end of month 5. Its number of subscribers grows arithmetically.

Newspaper X charges each subscriber $28 per month and Newspaper Y charges each subscriber $24 per month.

Determine the difference between the two newspapers' monthly subscription income at the end of the first month in which Newspaper X has more subscribers than Newspaper Y.

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QUESTION 7 (6 marks)

A real estate agent analysed the median house price in a town at the end of each year from 2016 to 2025. The median house price was \$516 000 at the end of 2016 and \$708 000 at the end of 2025. Let x be the number of years after 2015 and y be the median house price (\$ thousand).

$\bar{x}$	s_x	$\bar{y}$	s_y	Coefficient of determination, R^2
5.5	3.03	612	78.4	0.9409

The agent predicts that the median house price in the town will be more than \$1 million at the end of 2035.

Evaluate the reasonableness of the agent's prediction.

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END OF PAPER

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ADDITIONAL PAGE FOR STUDENT RESPONSES

Write the question number you are responding to.

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ADDITIONAL RESPONSE SPACE FOR QUESTION 4

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

Do not write outside this box.