EXAM PAPER

Maths Year 8 — Practice Exam 1

PREVIEW
This file has the first 30 of the 60 questions in this paper. The rest is locked: it comes with a PrepNest plan, or with the paper itself for VCE.

Total time: 80 minutes

SECTIONS IN THIS PAPER

- Numeracy — non-calculator — 40 min (no calculator)
- Numeracy — calculator — 40 min (calculator allowed)

INSTRUCTIONS

Answer every question you can. Write your working in the space provided for long-answer questions. Marking guidance and full explanations are provided in the separate answer key.

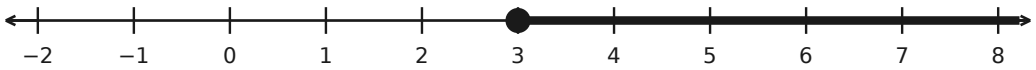
Numeracy — non-calculator

40 minutes • No calculator

1. Mia's bank account was overdrawn. Her balance was −$35.
She then deposited $120.
What is her balance now?

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2. Which inequality is shown on the number line?



A. $x \geq 3$

B. $x > 3$

C. $x < 3$

D. $x \leq 3$

3. The point (−4, 1) is translated 6 units right and 3 units down.
What are the coordinates of its image?

A. (−10, 4)

B. (2, 4)

C. (−1, −5)

D. (2, −2)

4. A survey asks: “Don’t you agree that the new park is wonderful?”
What is the problem with this question?

A. It collects numerical data.

B. It is a leading question.

C. The answers cannot be counted.

D. It can only be asked in a census.

5. Which expression is the same as $3(2x + 5)$?

A. $6x + 5$

B. $5x + 8$

C. $6x + 8$

D. $6x + 15$

6. Solve the equation $4m − 7 = 29$.

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7. Three coins are tossed.
How many outcomes are in the sample space?

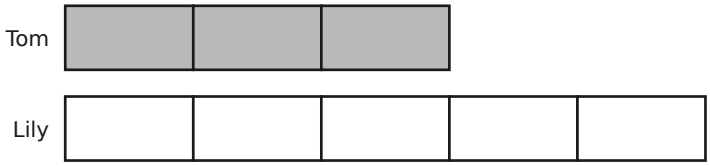
A. 3

B. 6

C. 8

D. 9

8. Tom and Lily share $48 in the ratio 3 : 5, as the bar model shows.
How much does Lily get?



A. $16

B. $18

C. $24

D. $30

9. Which list is in order from smallest to largest?

A. 0.4, 3/8, 0.45, 1/2

B. 0.4, 0.45, 3/8, 1/2

C. 3/8, 0.45, 0.4, 1/2

D. 3/8, 0.4, 0.45, 1/2

10. A jacket normally costs $60.
It is on sale for 15% off.
What is the sale price?

A. $9

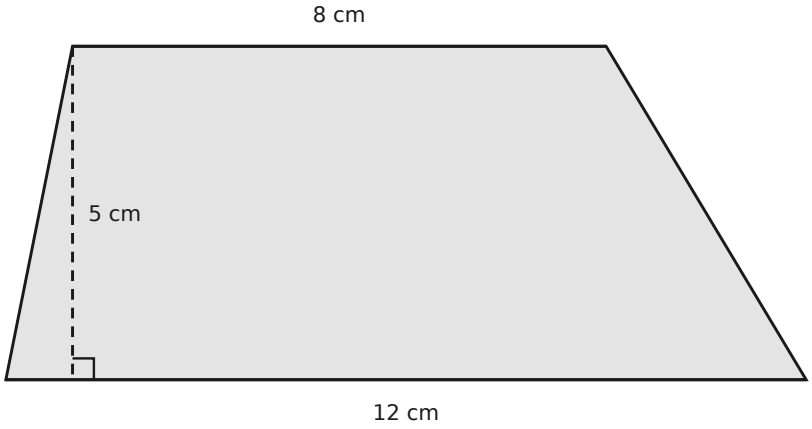
B. $45

C. $57

D. $51

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11. What is the area of this trapezium, in square centimetres?



not to scale

12. The stem-and-leaf plot shows the scores of a class in a quiz.
What is the range of the scores?

Stem	Leaf
3	5 8
4	0 2 6 9
5	1 3 3 7
6	4

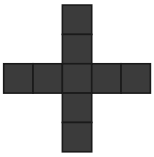
Key: 4 | 2 means 42

13. Each plus-shaped design has 4 more tiles than the one before.
How many tiles are in Design 10?

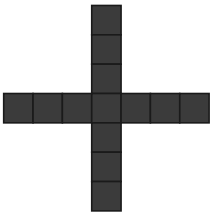
Design 1



Design 2



Design 3



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14. How many square centimetres are in 3.2 m²?

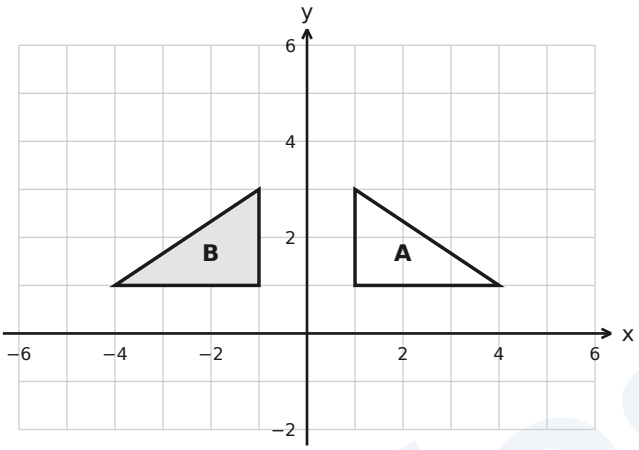
A. 320

B. 3200

C. 32 000

D. 320 000

15. Triangle A is transformed to triangle B.
Which transformation was used?



A. A reflection in the y-axis

B. A reflection in the x-axis

C. A rotation of 180° about the origin

D. A translation 5 units to the left

16. One letter is chosen at random from the word MATHEMATICS.
What is the probability that it is a vowel?

A. 4/11

B. 3/11

C. 4/7

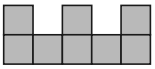
D. 7/11

17. Priya makes this pattern with tiles.
Which rule gives the number of tiles, t, in Design n?

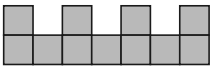
Design 1



Design 2



Design 3



A. t = 3n + 2

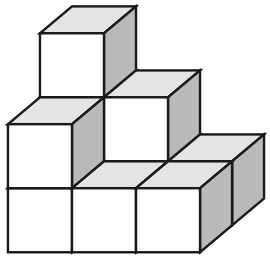
B. t = n + 4

C. t = 2n + 3

D. t = 5n

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18. The stack is made of identical cubes with no gaps.
How many cubes are in the stack?



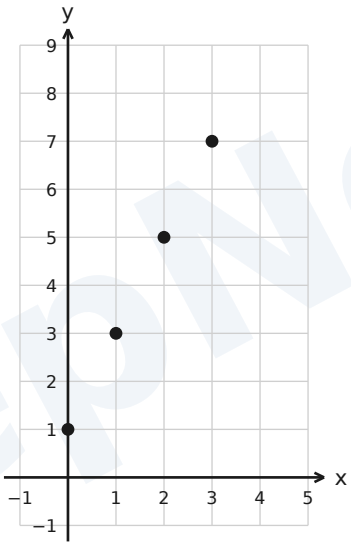
A. 8

B. 9

C. 10

D. 12

19. Which rule matches all the points plotted on the grid?



A. y = x + 1

B. y = 2x + 1

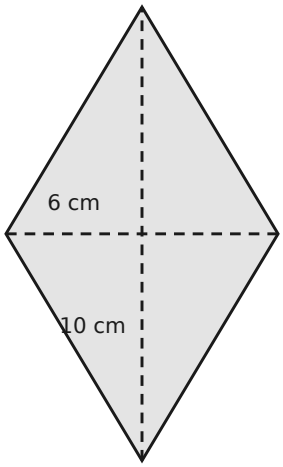
C. y = 2x − 1

D. y = x + 2

20. If p = −2 and q = 4, what is the value of $p^2 - 3q$?

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21. The diagonals of this rhombus are 10 cm and 6 cm long.
What is its area?



not to scale

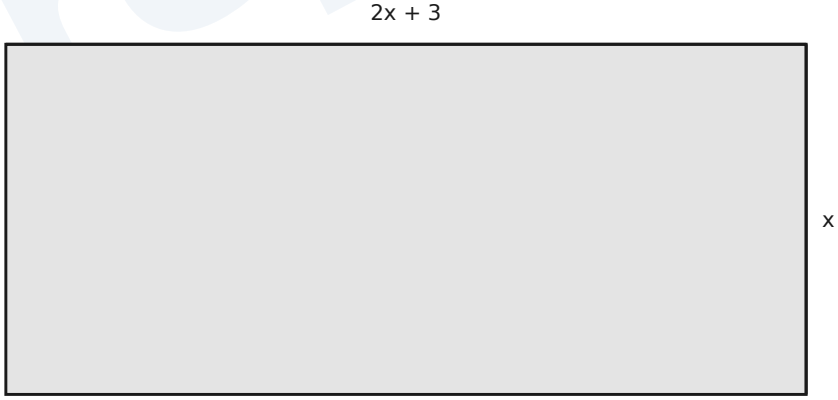
A. 16 cm²

B. 30 cm²

C. 32 cm²

D. 60 cm²

22. The rectangle has the side lengths shown.
Which expression gives its perimeter?



A. 3x + 3

B. 6x + 3

C. 6x + 6

D. 2x² + 3x

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23. What fraction of 2 hours is 45 minutes?

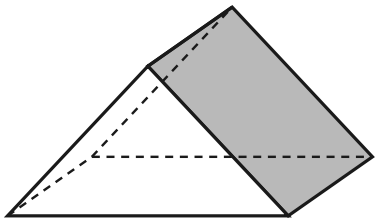
A. 3/8

B. 45/2

C. 3/4

D. 9/20

24. A prism has a triangular cross-section with a base of 6 cm and a height of 4 cm. The prism is 10 cm long.
What is its volume, in cubic centimetres?



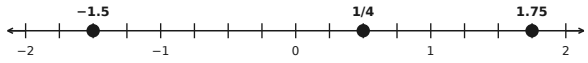
25. Find the value of 5a − 2b when a = 4 and b = −3.

26. Which number line shows the correct positions of −1.5, 1/4 and 1.75?

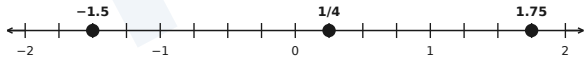
A



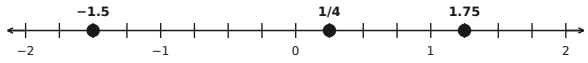
B



C



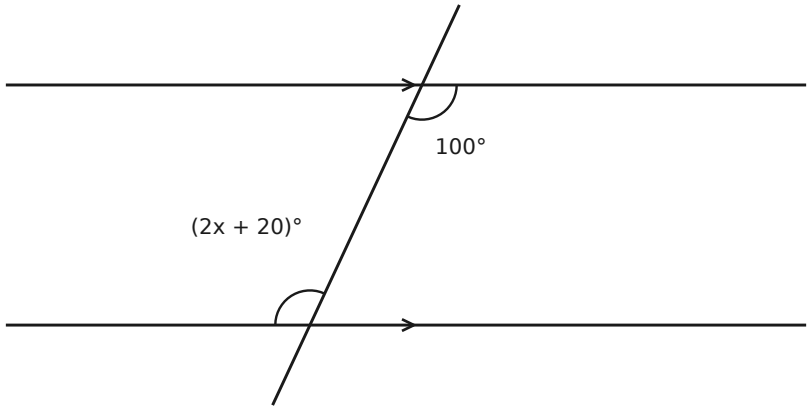
D



27. The mean of four numbers is 12. A fifth number is added and the mean becomes 13.
What is the fifth number?

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28. The horizontal lines are parallel. What is the value of x?



not to scale

29. The ages of five people in a lift are 34, 36, 38, 41 and 41.
A 90-year-old gets into the lift.
Which statement is true?

A. The mean increases by more than the median does.

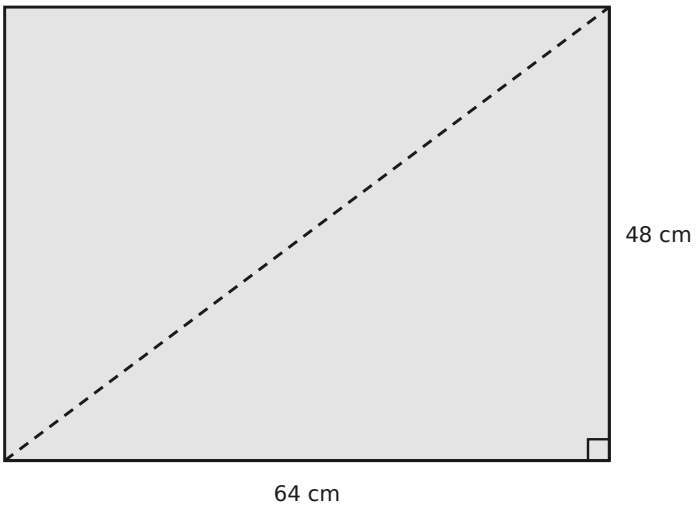
B. The median increases by more than the mean does.

C. The mean and the median both stay the same.

D. The mode changes.

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30. A television screen is 48 cm high and 64 cm wide.
How long is the diagonal of the screen?



cm

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31.

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60.

30 questions locked, up to question 60.

PREVIEW

That’s the end of the preview

You’ve seen the first 30 of the 60 questions in Maths Year 8 — Practice Exam 1. The full paper is worth 60 marks.

STILL TO COME	QUESTIONS	MARKS
Numeracy — calculator	30	30

The full paper comes with

- Every question, printed exactly like the ones in this preview
- The complete answer key, with the working behind every mark
- A topic report after marking, showing what to practice next

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