EXAM PAPER

Maths Year 8 — Practice Exam 4

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. A 2-litre bottle of juice is poured into glasses.
Each glass holds 250 mL.
How many glasses can be filled?

_____ glasses

2. Which expression is equal to 4a × 3b?

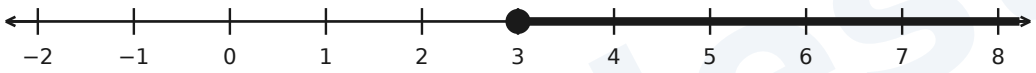
A. 7ab

B. 12a + b

C. 12ab

D. 43ab

3. Which inequality is shown on the number line?



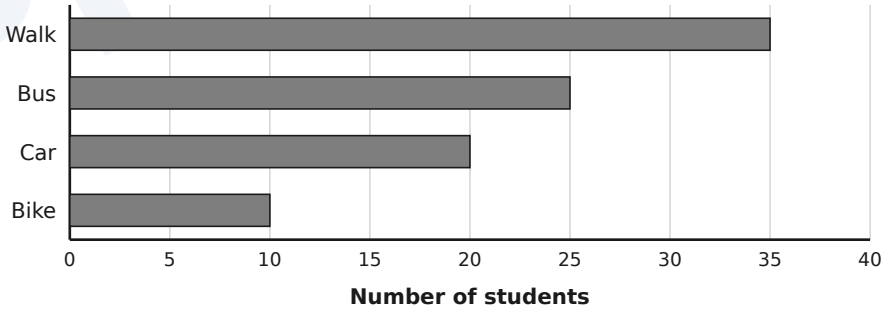
A. x ≥ 3

B. x > 3

C. x < 3

D. x ≤ 3

4. The graph shows how the students in Year 8 travel to school.
How many more students walk than ride a bike?



A. 15

B. 20

C. 25

D. 45

5. The area of a trapezium is A = ½(a + b)h.
What is A when a = 6, b = 10 and h = 5?

_____

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6. Which is the best estimate of 21.8 × 4.9 ÷ 0.51?

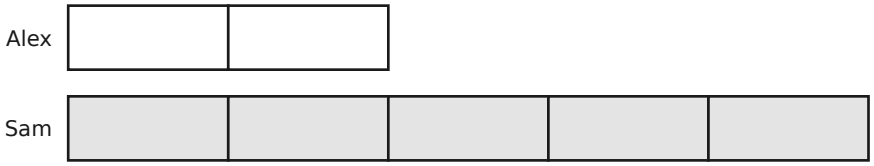
A. 20

B. 50

C. 200

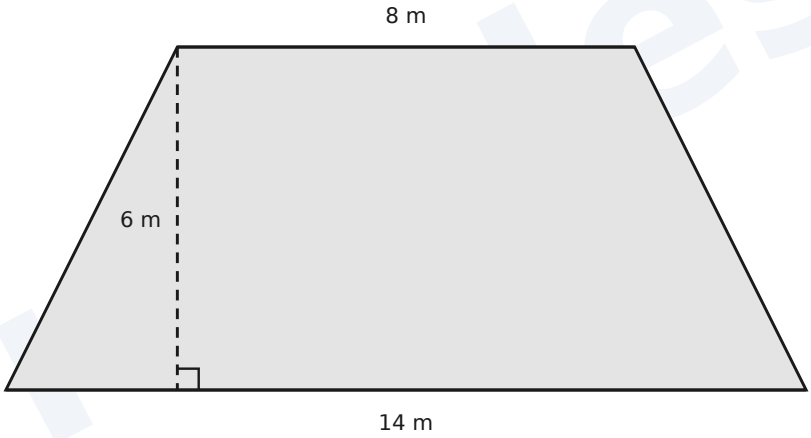
D. 2000

7. Alex and Sam share $84 in the ratio 2 : 5, as the bar model shows.
How much does Sam get?



$ ____

8. A garden bed is in the shape of a trapezium.
What is its area?



not to scale

____ m²

9. A council wants to know what all its residents think about building a new skate park.
Which survey is most likely to give a fair picture of residents' views?

A. Asking people at the existing skate park

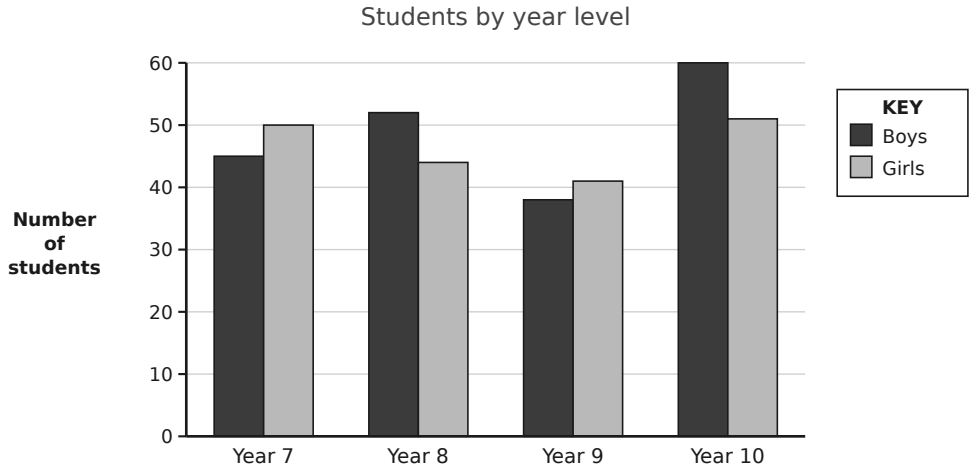
B. Asking a random sample of residents from across the whole council area

C. Asking the council's own staff

D. Putting a poll on the skate park's social media page

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10. Which year level has the greatest difference between the numbers of boys and girls?



A. Year 10

B. Year 8

C. Year 7

D. Year 9

11. Which inequality gives all the values of x for which $2x + 1 > 9$?

A. $x > 4$

B. $x > 5$

C. $x < 4$

D. $x > 8$

12. The table shows values of x and y.
Which rule connects x and y?

x	1	2	3	4
y	7	10	13	16

A. $y = x + 6$

B. $y = 3x + 4$

C. $y = 4x + 3$

D. $y = 7x$

13. Which of these is enough to show that two triangles are congruent?

A. all three pairs of sides are equal

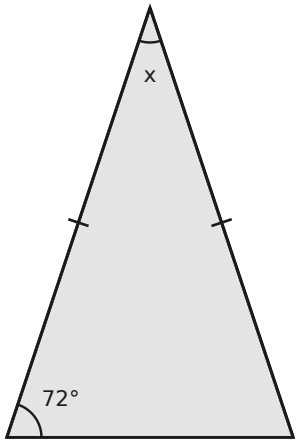
B. all three pairs of angles are equal

C. one pair of sides is equal

D. two pairs of angles are equal

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14. The triangle is isosceles. What is the value of x?



A. 36°

B. 54°

C. 72°

D. 108°

15. A circle has a diameter of 10 cm. Using π ≈ 3.14, what is its circumference?

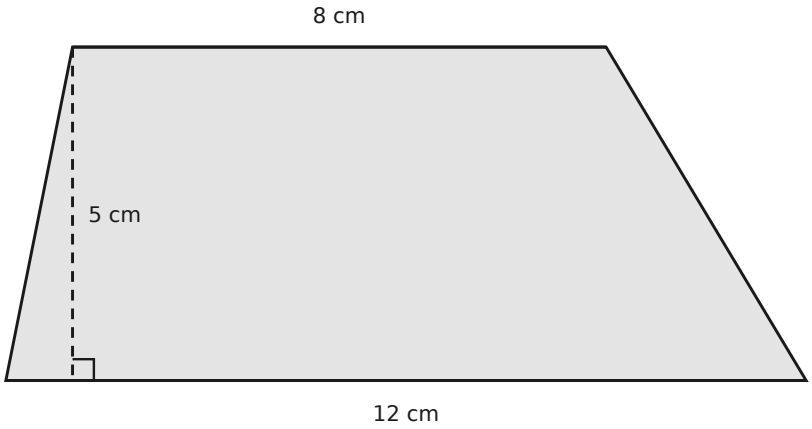
A. 15.7 cm

B. 31.4 cm

C. 62.8 cm

D. 78.5 cm

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



not to scale

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17. A ferry leaves at 22:40 and arrives at 03:15 the next morning.
How long is the journey?

A. 4 h 35 min

B. 19 h 25 min

C. 5 h 25 min

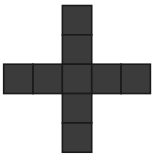
D. 4 h 25 min

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

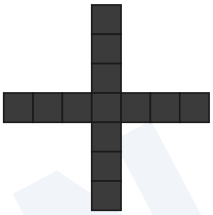
Design 1



Design 2



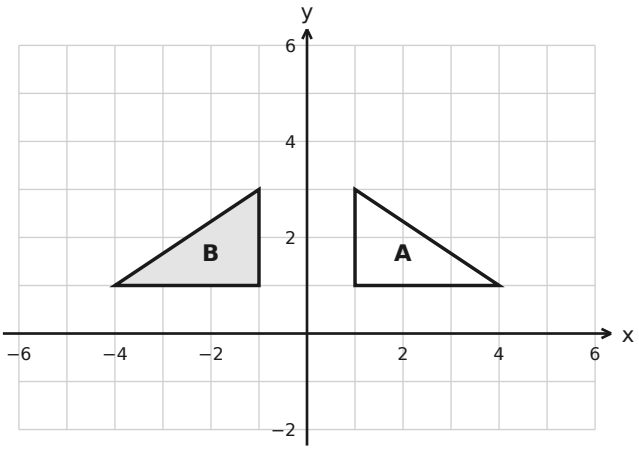
Design 3



19. A cube has edges 3 cm long.
What is its total surface area, in square centimetres?

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20. 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

21. Solve $3(x - 2) = 15$.

A. 3

B. 5.67

C. 7

D. 17

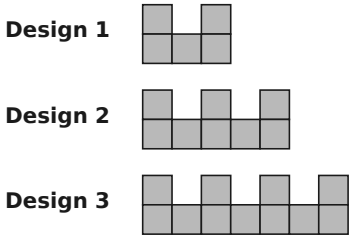
22. The stem-and-leaf plot shows the scores of a class in a quiz.
What is the range of the scores?

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

Key: 4 | 2 means 42

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



A. t = 3n + 2

B. t = n + 4

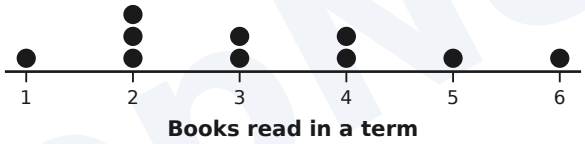
C. t = 2n + 3

D. t = 5n

24. A recipe for 6 muffins uses 150 g of butter.
How many grams of butter are needed for 15 muffins?

____ g

25. The dot plot shows how many books 10 students read in a term.
What is the median?



____

26. An item priced at $250 is reduced to $200.
What is the percentage discount?

A. 20%

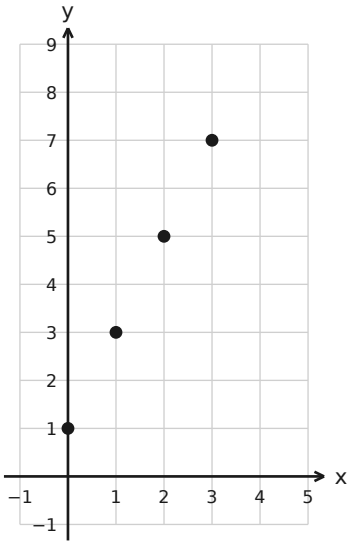
B. 25%

C. 50%

D. 80%

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27. 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

28. A semicircle has a diameter of 10 cm. Using π ≈ 3.14, what is its perimeter (the curved edge plus the straight edge)?

A. 15.7 cm

B. 25.7 cm

C. 31.4 cm

D. 41.4 cm

29. The table shows how some students travel to school.
One of these students is chosen at random.
What is the probability that the student is in Year 8 and walks to school?

	Walk	Bus	Car	Total
Year 7	12	18	10	40
Year 8	15	20	5	40
Total	27	38	15	80

A. 3/16

B. 3/8

C. 5/9

D. 1/2

30. What is the value of $5^0 + 5^1 + 5^2$?

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59.

60.

- ○
- ○
- ○
- ○

30 questions locked, up to question 60.

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PREVIEW

That’s the end of the preview

You’ve seen the first 30 of the 60 questions in Maths Year 8 — Practice Exam 4. 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

Get the full paper at

prepnest.com.au/practice/exams/math-year_8-4

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