EXAM PAPER

Maths Year 9 — Practice Exam 3

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)

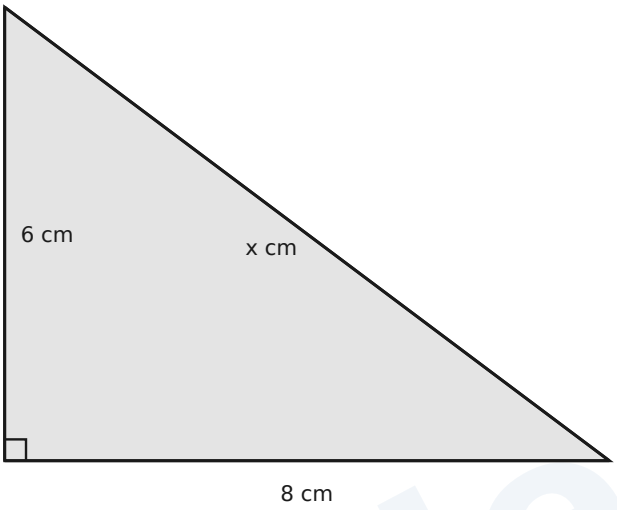
INSTRUCTIONS

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. What is the value of x?



2. Which line is parallel to y = 3x + 1?

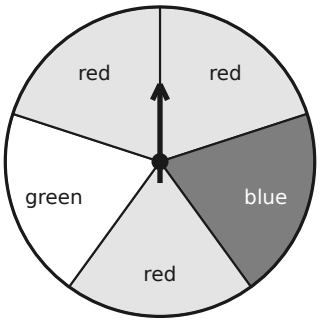
A. y = −3x + 1

B. y = x + 3

C. y = 3x − 5

D. y = (1/3)x + 1

3. Ari spins this spinner once.
What is the probability that it does NOT land on red?



A. 3/5

B. 2/5

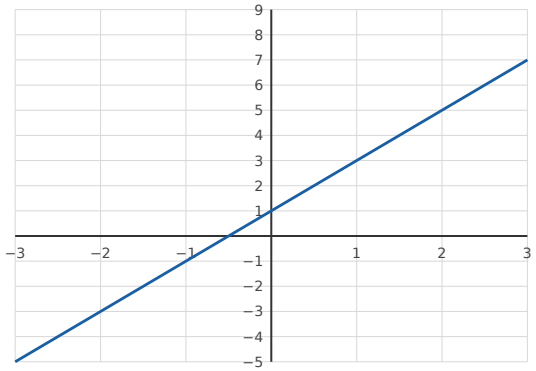
C. 1/3

D. 2/3

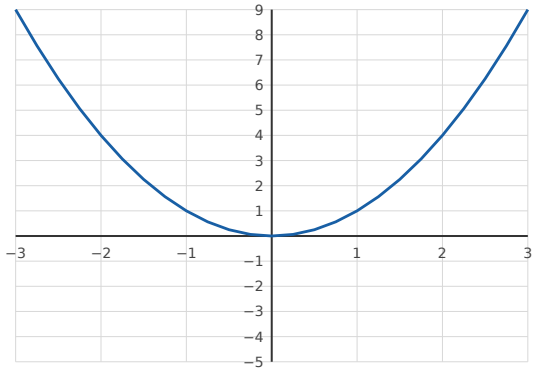
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4. Which graph could show $y = x^2$?

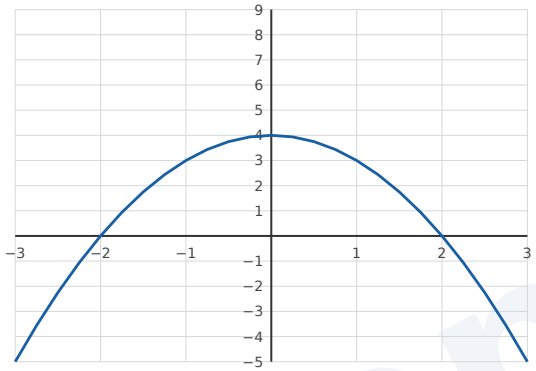
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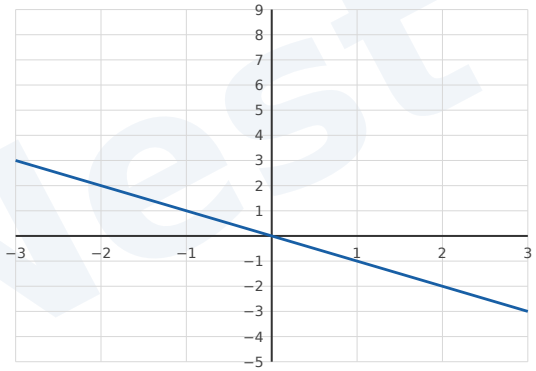
B



C



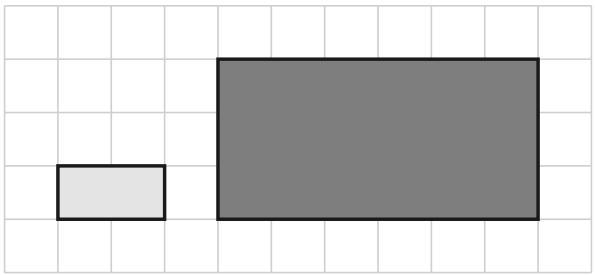
D



5. Nina earns $22 an hour.
How much does she earn for 3.5 hours of work?

$ ☐

6. The large rectangle is an enlargement of the small rectangle.
What is the scale factor?



A. 2

B. 3

C. 4

D. 6

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7. A drawing pin was dropped 200 times.
The table shows the results.
What is the best estimate of the probability that it lands point up?

Result	Point up	Point down
Number of times	74	126

A. 0.26

B. 0.37

C. 0.5

D. 0.74

8. Three consecutive whole numbers add up to 72.
What is the largest of the three numbers?

9. What is 4/7 of 35?

A. 5

B. 15

C. 20

D. 28

10. The distance from Earth to the Sun is about 1.5×10^8 km.
Which of these is the same distance?

A. 150 000 km

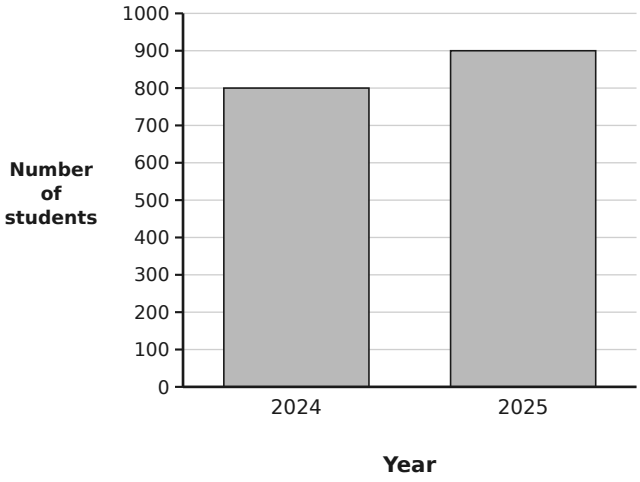
B. 15 000 000 km

C. 150 000 000 km

D. 1 500 000 000 km

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11. The graph shows the number of students at a school in two years.
What was the percentage increase from 2024 to 2025?



A. 10%

B. 11.1%

C. 12.5%

D. 100%

12. A mass is recorded as 350 g, correct to the nearest 10 g.
What is the least possible actual mass?

A. 340 g

B. 345 g

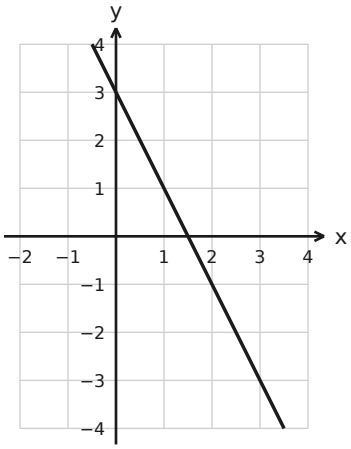
C. 349 g

D. 355 g

13. What is the value of $2x^2 - 3x$ when $x = -2$?

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14. Which equation matches the line?



A. $y = 2x + 3$

B. $y = -2x + 3$

C. $y = 3x - 2$

D. $y = -\frac{1}{2}x + 3$

15. A ramp rises 1 m over a horizontal distance of 4 m.
Which expression gives the angle the ramp makes with the ground?

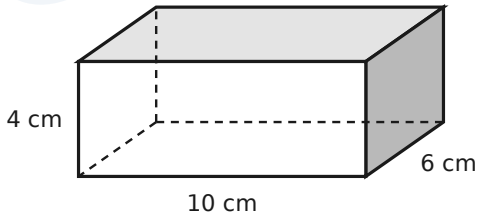
A. $\sin^{-1}(1/4)$

B. $\cos^{-1}(1/4)$

C. $\tan^{-1}(4)$

D. $\tan^{-1}(1/4)$

16. What is the total surface area of this closed box, in square centimetres?



17. A plane flies at 840 km/h.
How long does it take to fly 2100 km?

A. 2 h 30 min

B. 2 h 50 min

C. 2 h 15 min

D. 25 h

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18. Which set of side lengths makes a right-angled triangle?

A. 4, 5, 6

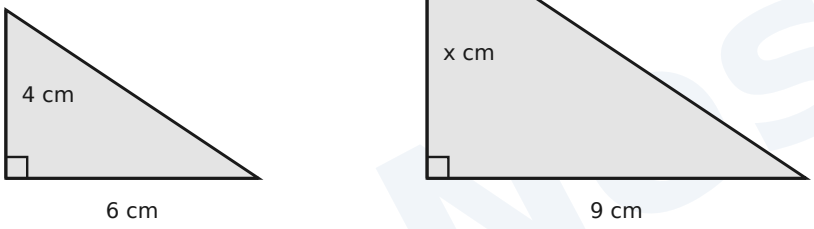
B. 5, 12, 13

C. 6, 7, 8

D. 7, 8, 12

19. A car travels at a steady 90 km/h.
How far does it travel in 40 minutes, in kilometres?

20. The two triangles are similar.
What is the value of x?



21. Which expression is equal to $(x - 4)^2$?

A. $x^2 - 16$

B. $x^2 - 8x + 16$

C. $x^2 + 16$

D. $x^2 - 8x - 16$

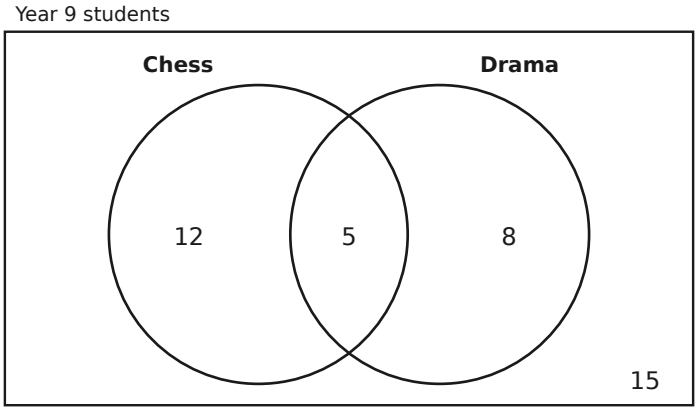
22. 5 pens cost $3.40.
At the same rate, how much do 8 pens cost?

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23. If $a = -3$, what is the value of $a^3 + 2a$?

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24. A student is chosen at random.
What is the probability that the student plays chess but does not do drama?



A. 1/8

B. 3/10

C. 12/25

D. 17/40

25. A bag has 3 red and 2 blue marbles. Two marbles are taken out together (without replacement).
What is the probability that both are red?

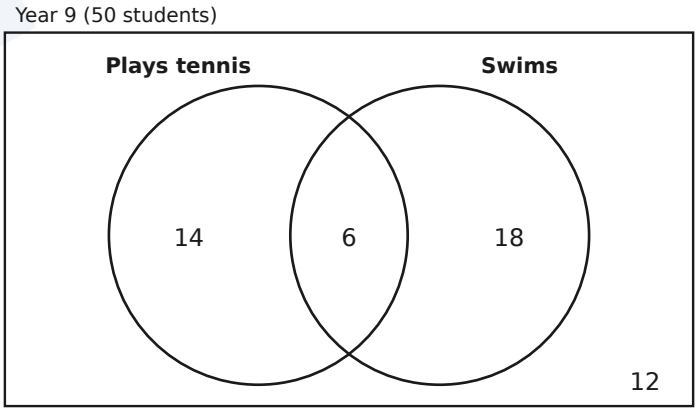
A. 1/2

B. 3/10

C. 6/25

D. 9/25

26. A student is chosen at random.
What is the probability that they play tennis or swim, but not both?



A. 16/25

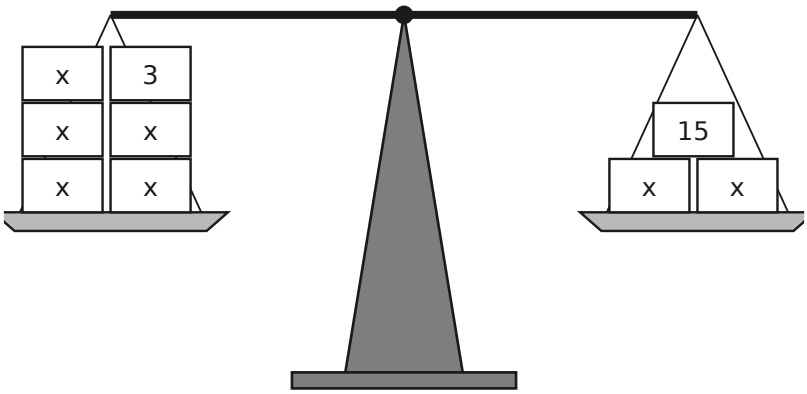
B. 19/25

C. 3/25

D. 16/19

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27. The scales are balanced.
Each block marked x has the same value.
What is the value of x?



A. 4

B. 6

C. 12

D. 18

28. A girl from this group is chosen at random.
What is the probability that she plays sport?

Sport played by Year 9 students

	Plays sport	No sport
Boys	18	12
Girls	14	16

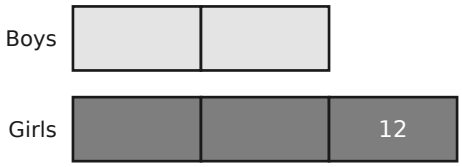
A. 7/30

B. 7/16

C. 7/15

D. 1/2

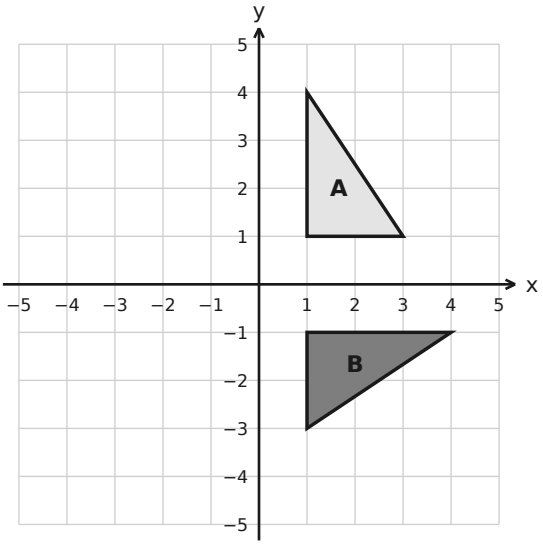
29. The ratio of boys to girls in a club is 2 : 3.
There are 12 more girls than boys.
How many students are in the club?



students

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30. Which transformation maps triangle A onto triangle B?



A. rotation 90° anticlockwise about the origin

B. reflection in the x-axis

C. translation 4 units down

D. rotation 90° clockwise about the origin

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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 9 — Practice Exam 3. 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_9-3

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