

PRACTICE EXAM 10: EQAO GRADE 3 MATH SIMULATION (40 QUESTIONS)

STAGE 1 — Questions 1–10

Corrected Q1:

1. A city bus had 67 passengers in the morning. Throughout the day, 89 more passengers boarded the bus. How many passengers rode the bus in total?

- A. 22
- B. 146
- C. 122
- D. 156

2. What is the value of the digit 3 in the number 832?

- A. 30
- B. 3
- C. 300
- D. 3,000

3. Round the number 581 to the nearest hundred.

- A. 500
- B. 600
- C. 580
- D. 590

4. A class has 28 students. They are divided into 4 equal groups for a reading activity. How many students are in each group?

- A. 4 students
- B. 24 students
- C. 7 students
- D. 32 students

5. A pizza is cut into 10 equal slices. Hannah eats 4 slices. What fraction of the pizza did Hannah eat?

- A. $\frac{4}{10}$
- B. $\frac{10}{4}$
- C. $\frac{6}{10}$
- D. $\frac{4}{6}$

6. Theo buys a yo-yo for \$4.55 and a sticker pack for \$1.95. He pays with a \$10 bill. How much change should Theo receive?

- A. \$6.50
- B. \$4.45
- C. \$5.55
- D. \$3.50

7. Skip count by 3s starting from 9. What is the sixth number you say?

- A. 24
- B. 27
- C. 30
- D. 21

8. Which expression has the same value as 7×2 ?

- A. $2 + 2 + 2 + 2 + 2 + 2 + 2$
- B. $7 + 2$

C. 72

D. 9

9. A classroom has 24 plants on the windowsill. The teacher wants to arrange them into equal rows of 4 plants each. How many rows will there be?

A. 4 rows

B. 24 rows

C. 6 rows

D. 28 rows

10. Which fraction is equivalent to $\frac{3}{6}$?

A. $\frac{6}{3}$

B. $\frac{3}{9}$

C. $\frac{3}{12}$

D. $\frac{1}{2}$

STAGE 2 — Questions 11–20

11. Compare the two expressions. Which symbol makes the statement true?

$$6 \times 9 \text{ ___ } 8 \times 7$$

A. $>$

B. $=$

C.

D. \neq and $>$

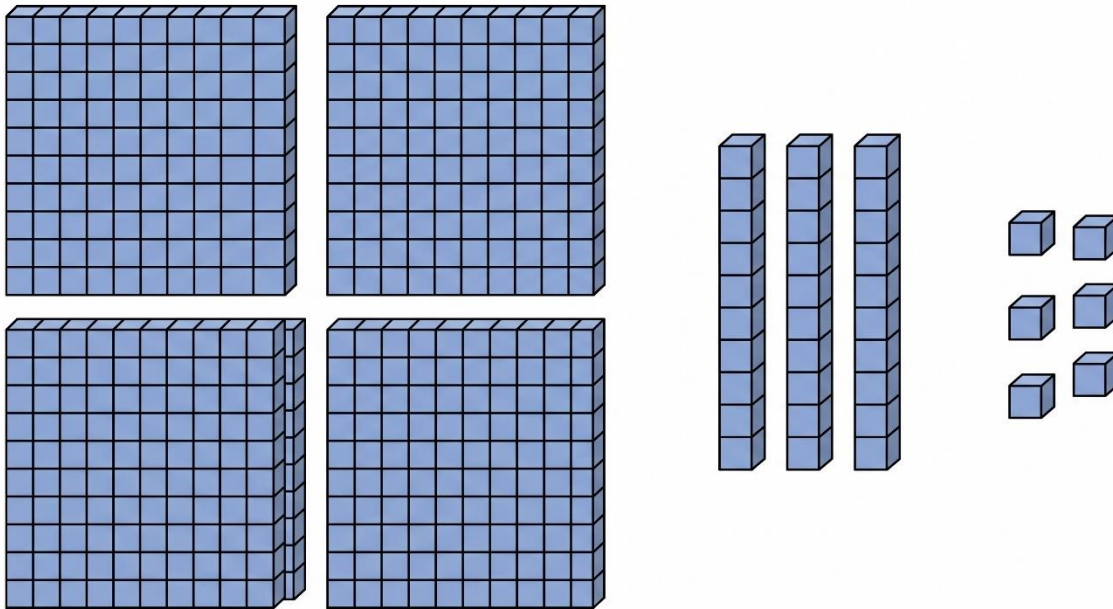
12. Priya has 4 toonies, 3 loonies, 2 dimes, and 5 pennies (in old currency from before 2013). How much money does Priya have if we ignore the pennies (since they are no longer in circulation)?

A. \$10.20

B. \$11.20

- C. \$11.25
- D. \$12.20

13. What number is shown by the base-ten blocks below?



- A. 836
- B. 863
- C. 386
- D. 638

14. What is $60 \div 6$?

- A. 60
- B. 12
- C. 6
- D. 10

15. Find the missing number in this pattern: 16, 24, ____, 40, 48, 56.

- A. 28

- B. 32
- C. 30
- D. 36

16. What is the rule for this pattern: 250, 200, 150, 100, 50, 0 ?

- A. Start at 250 and add 50 each time
- B. Start at 250 and multiply by 2 each time
- C. Start at 250 and subtract 50 each time
- D. Start at 250 and divide by 2 each time

17. Solve for n in the equation: $n + 47 = 90$.

- A. 43
- B. 137
- C. 53
- D. 47

18. A robot starts at 25. It follows this code:

Step 1: Add 30.

Step 2: Subtract 10.

Step 3: Add 20.

What is the final value?

- A. 35
- B. 55
- C. 75
- D. 65

19. Which equation is TRUE?

- A. $8 \times 4 = 8 + 4$

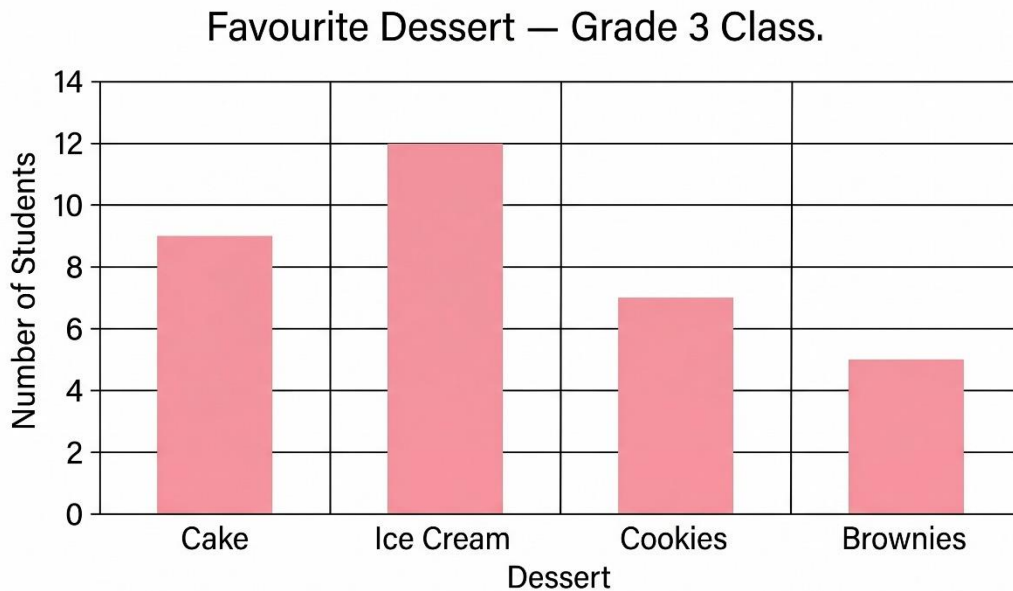
- B. $100 - 25 = 25 + 50$
- C. $9 \times 3 = 9 + 9 + 9 + 9$
- D. $60 \div 6 = 10 \div 2$

20. A class is raising money for a charity. They need to collect \$80 in total. So far they have collected \$35. How much more money do they need to collect?

- A. \$115
- B. \$55
- C. \$45
- D. \$35

STAGE 3 — Questions 21–30

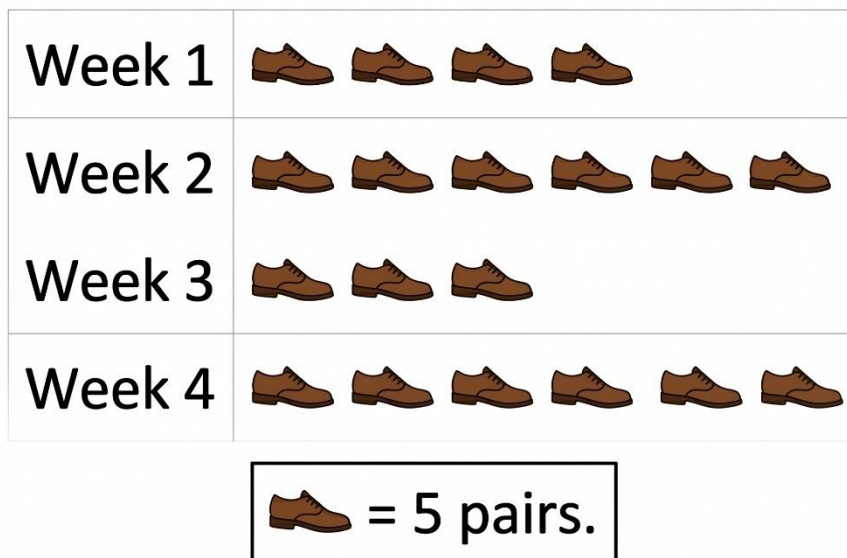
21. Look at the bar graph below. Which dessert received the most votes?



- A. Ice Cream
- B. Cake
- C. Cookies
- D. Brownies

22. Look at the pictograph below. Each shoe icon stands for 5 pairs of shoes donated. How many pairs of shoes were donated in Week 2?

Shoes Donated to Charity



- A. 11 pairs
- B. 25 pairs
- C. 15 pairs
- D. 30 pairs

23. Find the mean of this data set: 11, 7, 9, 14, 4.

- A. 11
- B. 9
- C. 14
- D. 4

24. Find the mode of this data set: 5, 8, 12, 8, 6, 8, 15, 8, 6.

- A. 6
- B. 8

- C. 12
- D. 15

25. A bag contains 9 black socks and 1 white sock. If you reach in without looking and pull out one sock, drawing a white sock is:

- A. Likely
- B. Certain
- C. Unlikely
- D. Impossible

26. Look at the frequency table below. How many more students chose pizza than salad?

Favourite Italian Dish	
Dish	Number of Students
Pizza	15
Pasta	9
Salad	4
Lasagna	7

- A. 4 students
- B. 11 students
- C. 15 students
- D. 19 students

27. A six-sided die is rolled once. What is the probability of rolling a 3?

- A. Certain
- B. Impossible
- C. Unlikely
- D. Likely

28. Look at the bar graph in Figure PQ-2 again. How many fewer students chose brownies than cake?

- A. 14 students
- B. 5 students
- C. 4 students
- D. 9 students

29. The table below shows the kilometres run by each member of a relay team. What is the total distance run by all 4 runners?

Relay Team Distances	
Runner	Kilometres
Runner A	8
Runner B	12
Runner C	7
Runner D	11

Figure PQ-5

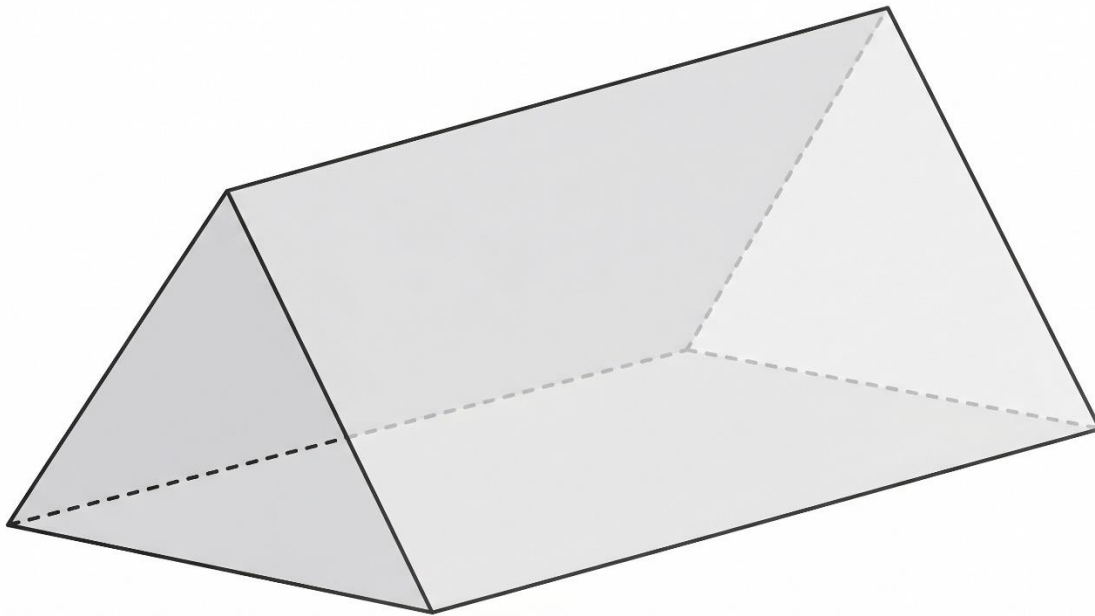
- A. 38 kilometres
- B. 40 kilometres
- C. 30 kilometres
- D. 36 kilometres

30. A weather forecast says the sun will rise tomorrow morning. The sun rising is:

- A. Impossible
- B. Unlikely
- C. Equally likely
- D. Certain

STAGE 4 — Questions 31–40

31. Look at the 3D shape below. How many faces does it have?



- A. 6 faces
- B. 9 faces
- C. 5 faces
- D. 4 faces

32. Which 3D shape has only 1 vertex and 1 curved surface?

- A. Cone
- B. Cylinder
- C. Sphere
- D. Cube

33. A rectangle has a length of 12 cm and a width of 5 cm. What is its perimeter?

- A. 17 cm
- B. 34 cm
- C. 60 cm
- D. 24 cm

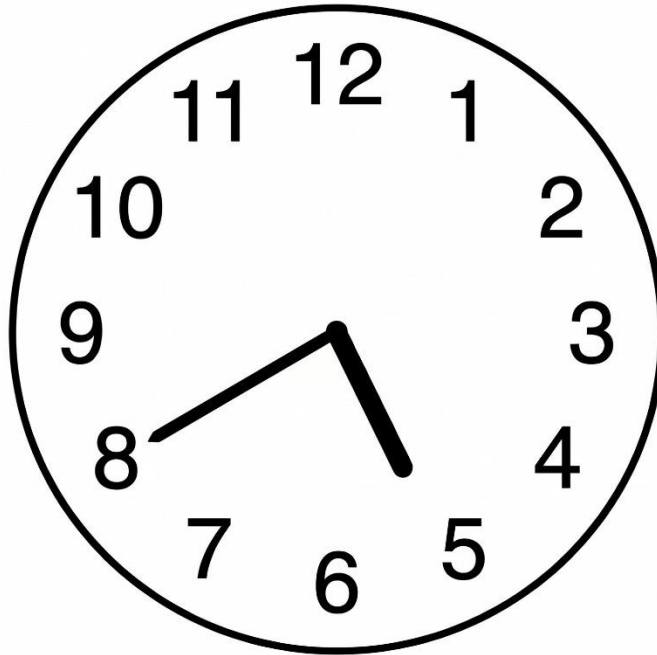
34. A character is facing north. The character makes three quarter-turns to the right. Which direction is the character facing now?

- A. North
- B. East
- C. South
- D. West

35. Which unit is best for measuring the length of an ant?

- A. Millimetres
- B. Centimetres
- C. Metres
- D. Kilometres

36. Look at the analog clock below. What time is shown?



- A. 5:08
- B. 8:25
- C. 5:40
- D. 6:40

37. A football game starts at 1:20 PM and ends at 3:05 PM. How long is the football game?

- A. 1 hour 25 minutes
- B. 2 hours
- C. 45 minutes
- D. 1 hour 45 minutes

38. Look at the rectangle drawn on the grid below. What is its area?



- A. 13 square centimetres
- B. 36 square centimetres
- C. 26 square centimetres
- D. 40 square centimetres

39. A juice container holds 2.5 litres of juice. How many millilitres is that?

- A. 25 mL
- B. 250 mL
- C. 25,000 mL
- D. 2,500 mL

40. A regular nonagon (9-sided polygon) has 9 sides of equal length. If each side is 6 cm, what is the perimeter?

- A. 54 cm
- B. 15 cm
- C. 36 cm

D. 90 cm

Practice Exam 10: Answer Key and Explanations

- 1. D — 156.** Add using the standard algorithm: $67 + 89 = 156$. Ones: $7 + 9 = 16$ (write 6, carry 1). Tens: $1 + 6 + 8 = 15$ (write 5, carry 1). Hundreds: 1. Estimation check: $70 + 90 = 160$, close to 156. Note: the original draft had duplicate options A and C ("22") — the corrected option C is "122." Pre-assigned answer D (156) is correct.
- 2. A — 30.** The digit 3 sits in the tens place of the number 832. Its value is $3 \times 10 = 30$. Always distinguish between the digit (3) and the digit's value (30) — same digit, different amount depending on position. This is a core place-value concept from Chapter 1.2.
- 3. B — 600.** To round 581 to the nearest hundred, look at the digit in the tens place: 8. Since 8 is greater than 5, round up. The number 581 rounds up to 600. The midpoint between 500 and 600 is 550, and 581 is past that midpoint — confirming the rounding decision (Chapter 1.5).
- 4. C — 7 students.** Divide the total students by the number of groups: $28 \div 4 = 7$ students per group. This is sharing division — distributing 28 students equally into 4 groups. The related multiplication: $7 \times 4 = 28$ confirms the answer (Chapter 4.4).
- 5. A — 4/10.** The pizza has 10 equal slices (denominator = 10) and Hannah ate 4 of them (numerator = 4). The fraction representing what she ate is 4/10, read "four tenths." Always identify the total parts (denominator) and the counted parts (numerator) carefully (Chapter 2.1).
- 6. D — \$3.50.** First find the total cost: $\$4.55 + \$1.95 = \$6.50$. Then find the change: $\$10.00 - \$6.50 = \$3.50$. Multi-item transactions always require adding the prices first, then subtracting from the payment (Chapter 5.4). Estimation check: $\$10 - \$7 = \$3$, close to \$3.50.
- 7. B — 27.** Skip count by 3s starting from 9: 9 is the start, then 12 (1st), 15 (2nd), 18 (3rd), 21 (4th), 24 (5th), 27 (6th). The sixth number said after 9 is 27. The starting number is not counted; only the numbers that follow (Chapter 1.6).
- 8. A — $2 + 2 + 2 + 2 + 2 + 2 + 2$.** Multiplication 7×2 means "seven groups of two," which equals $2 + 2 + 2 + 2 + 2 + 2 + 2 = 14$. The repeated-addition form is the exact equivalent of multiplication. The other options ($7 + 2 = 9$; 72 as a number; 9 as a sum) all produce different values (Chapter 4.1).
- 9. C — 6 rows.** Divide the total plants by the number per row: $24 \div 4 = 6$ rows. This is grouping division — separating 24 plants into rows of 4 produces 6 rows. The related multiplication: $6 \times 4 = 24$ confirms the answer (Chapter 4.4).
- 10. D — 1/2.** The halves family of equivalent fractions: $3/6 = 1/2$. Three sixths is exactly half of a whole, since 3 is half of 6. Verify: $3 \div 3 = 1$ and $6 \div 3 = 2$, giving 1/2. The other options (6/3, 3/9, 3/12) all represent different amounts (Chapter 2.3).
- 11. C — $<$.** Compute both sides: $6 \times 9 = 54$ and $8 \times 7 = 56$. Since $54 < 56$, the left side is less than the right side. The "less than" symbol ($<$) opens toward the larger number on the right. Always compute both sides of a comparison before selecting the symbol (Chapter 7.3).

- 12. B — \$11.20.** Add Priya's money (ignoring pennies): 4 toonies = \$8.00; 3 loonies = \$3.00; 2 dimes = \$0.20. Total: $\$8.00 + \$3.00 + \$0.20 = \11.20 . Sort coins from largest to smallest denomination before adding to reduce counting errors. The question explicitly says to ignore the 5 pennies since they are no longer in circulation (Chapter 5.2).
- 13. A — 836.** Count the base-ten blocks: 8 hundred-flats = 800; 3 ten-rods = 30; 6 unit-cubes = 6. Total: $800 + 30 + 6 = 836$. Always count hundreds first, then tens, then ones. The place-value composition: 8 hundreds + 3 tens + 6 ones = 836 (Chapter 1.3).
- 14. D — 10.** Division $60 \div 6$ asks "6 times what equals 60?" From the 6 times table: $6 \times 10 = 60$, so $60 \div 6 = 10$. The related multiplication confirms: $10 \times 6 = 60 \checkmark$ (Chapter 4.4).
- 15. B — 32.** The pattern increases by 8 each step (the 8 times table): 16, 24, 32, 40, 48, 56. To verify: $24 - 16 = 8$, $40 - 32 = 8$, all consistent. The missing term between 24 and 40 is $24 + 8 = 32$. Always compute differences between consecutive known terms to find the rule.
- 16. C — Start at 250 and subtract 50 each time.** The pattern values are 250, 200, 150, 100, 50, 0 — each term is 50 less than the previous. Differences: $200 - 250 = -50$, $150 - 200 = -50$, all consistent. A complete pattern rule names both the starting value and the operation (Chapter 6.3).
- 17. A — 43.** Solve $n + 47 = 90$ using the inverse operation: $n = 90 - 47 = 43$. Check by substituting: $43 + 47 = 90 \checkmark$. The inverse of addition is subtraction. Always verify the answer by plugging it back into the original equation (Chapter 7.4).
- 18. D — 65.** Trace the code step by step: Start at 25. Step 1: $25 + 30 = 55$. Step 2: $55 - 10 = 45$. Step 3: $45 + 20 = 65$. Always write down the running value after each instruction rather than tracking mentally. This is a sequential code from Chapter 8.2.
- 19. B — $100 - 25 = 25 + 50$.** Compute both sides: $100 - 25 = 75$ and $25 + 50 = 75$. Both sides equal 75, so the equation is TRUE. The other options are false: $8 \times 4 = 32 \neq 12$; $9 \times 3 = 27 \neq 36$; $60 \div 6 = 10 \neq 5$. The equals sign requires both sides to have the same value (Chapter 7.2).
- 20. C — \$45.** Subtract the amount already collected from the goal: $\$80 - \$35 = \$45$. Ones: $0 < 5$, regroup. $10 - 5 = 5$. Tens: $7 - 3 = 4$. The class needs \$45 more to reach the goal. Estimation check: $\$80 - \$35 \approx \$45 \checkmark$ (Chapter 3.3).
- 21. A — Ice Cream.** Read the bar graph values: Cake = 9, Ice Cream = 12, Cookies = 7, Brownies = 5. The tallest bar represents the most votes, which is Ice Cream with 12. Always trace from the top of each bar horizontally to the y-axis to read precise values (Chapter 9.5).
- 22. D — 30 pairs.** Read the pictograph: Week 2 has 6 shoe icons. The key states each icon = 5 pairs, so multiply: $6 \times 5 = 30$ pairs. Many-to-one correspondence means each picture represents more than one item — always check the key (Chapter 9.4).

- 23. B — 9.** Add all values: $11 + 7 + 9 + 14 + 4 = 45$. Divide by the number of values: $45 \div 5 = 9$. The mean is 9, representing the typical value in the data set. Always count the number of values carefully before dividing the sum (Chapter 10.1).
- 24. B — 8.** Count how many times each value appears: 8 appears 4 times; 6 appears 2 times; 5, 12, and 15 each appear once. The value that appears most often is 8. The mode is the most frequent value, not the largest — careful counting determines the mode (Chapter 10.2).
- 25. C — Unlikely.** The bag has only 1 white sock out of 10 total (9 black + 1 white). Just 1 of 10 socks is white — far less than half. So drawing white is unlikely (possible but improbable). The other options don't fit: "certain" would require all white; "impossible" would require zero white; "likely" would require more than half (Chapter 10.4).
- 26. B — 11 students.** Read the frequency table: Pizza = 15, Salad = 4. Subtract: $15 - 4 = 11$ students. The phrase "how many more" signals subtraction — finding the difference between two known values. Reading frequency tables and applying basic operations is a core data skill (Chapter 10.3).
- 27. C — Unlikely.** A six-sided die has 6 equally likely outcomes (1 through 6). Rolling exactly a 3 has only a 1-in-6 chance — less than half the time. On the Grade 3 probability spectrum, a 1-in-6 chance is described as unlikely (possible but improbable) (Chapter 10.4).
- 28. C — 4 students.** From Figure PQ-2: Cake = 9 students, Brownies = 5 students. Subtract: $9 - 5 = 4$ students. The phrase "how many fewer" signals subtraction — finding the difference between two known values. This is a Level-2 graph-reading task from Chapter 10.3.
- 29. A — 38 kilometres.** Add the kilometres run by all 4 runners: $8 + 12 + 7 + 11 = 38$ km. Verify sequentially: $8 + 12 = 20$; $20 + 7 = 27$; $27 + 11 = 38$. Multi-row table summations require careful sequential addition (Chapter 9.3).
- 30. D — Certain.** The sun rises every day without exception — it is one of the most reliable events in nature. So the sun rising tomorrow is guaranteed to happen. "Certain" describes events with 100% probability of occurring (Chapter 10.4).
- 31. C — 5 faces.** A triangular prism has 5 faces total: 2 triangular bases (top and bottom) + 3 rectangular side faces. From the Chapter 11.2 reference table: triangular prism = 5 faces, 9 edges, 6 vertices. Count faces systematically — both bases plus each of the rectangular sides.
- 32. A — Cone.** A cone has exactly 1 vertex (at the apex where the curved surface narrows to a point) and 1 curved surface that forms its lateral side. A cylinder has 0 vertices and 1 curved surface. A sphere has 0 vertices and 1 curved surface. A cube has 8 vertices and no curved surfaces (Chapter 11.1).
- 33. B — 34 cm.** Perimeter of a rectangle = $2 \times (\text{length} + \text{width}) = 2 \times (12 + 5) = 2 \times 17 = 34$ cm. Or add all four sides: $12 + 5 + 12 + 5 = 34$ cm. The shortcut formula is faster than adding all sides individually (Chapter 13.2).

34. D — West. A quarter-turn rotates 90 degrees. Three quarter-turns to the right equal 270 degrees clockwise — the same as one quarter-turn to the left (90 degrees counter-clockwise). Starting facing north and rotating 270° clockwise: North → East → South → West. Final direction: west (Chapter 12.3).

35. A — Millimetres. An ant is roughly 5 to 10 millimetres long — firmly in the millimetre range. Centimetres are too large (a 1 cm ant would be unusually big); metres are far too large; kilometres measure long distances. Only millimetres is appropriate for very small lengths like an ant (Chapter 13.1).

36. C — 5:40. The hour hand sits between the 5 and the 6, closer to the 5 — so the hour is 5 (the smaller of the two numbers it sits between). The minute hand points to the 8, which equals 40 minutes past the hour ($8 \times 5 = 40$). The time is 5:40 (Chapter 14.1).

37. D — 1 hour 45 minutes. From 1:20 PM to 2:20 PM is 1 hour. From 2:20 PM to 3:05 PM is 45 minutes (2:20 to 3:00 is 40 minutes, then 3:00 to 3:05 is 5 minutes; $40 + 5 = 45$). Total elapsed time: 1 hour + 45 minutes = 1 hour 45 minutes (Chapter 14.3).

38. B — 36 square centimetres. The rectangle is 9 cm wide and 4 cm tall. Area = length \times width = $9 \times 4 = 36$ square centimetres. Or count the unit squares: 9 columns \times 4 rows = 36 squares. Area is measured in square units (cm^2) — the small "2" must be included (Chapter 14.5).

39. D — 2,500 mL. The relationship: 1 litre = 1,000 millilitres. So 2.5 litres = $2.5 \times 1,000 = 2,500$ mL. The other options (25, 250, 25,000) represent different amounts. Always apply the conversion factor 1,000 when moving between litres and millilitres (Chapter 13.4).

40. A — 54 cm. A regular nonagon has 9 equal sides. Perimeter = $9 \times$ side length = $9 \times 6 = 54$ cm. Or add all nine sides: $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = 54$ cm. The multiplication shortcut works for any regular polygon — multiply the number of sides by the side length (Chapter 13.2).

