

# PRACTICE EXAM 5: EQAO GRADE 3 MATH SIMULATION (40 QUESTIONS)

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## STAGE 1 — Questions 1–10

1. A toy store had 715 stuffed animals in its warehouse. They sold 348 stuffed animals during a big sale. How many stuffed animals are left?

- A. 1,063
- B. 437
- C. 367
- D. 473

2. What is the value of the digit 8 in the number 580?

- A. 80
- B. 8
- C. 800
- D. 8,000

3. Round the number 274 to the nearest ten.

- A. 200
- B. 280
- C. 300
- D. 270

4. Mei buys a bag of carrots for \$2.85. She pays with a \$5 bill. How much change does Mei receive?

- A. \$3.15
- B. \$2.15
- C. \$2.85

D. \$7.85

5. A pizza is cut into 10 equal slices. Carlos ate 3 slices. What fraction of the pizza did Carlos eat?

A.  $\frac{10}{3}$

B.  $\frac{3}{7}$

C.  $\frac{3}{10}$

D.  $\frac{7}{10}$

6. A class has 24 students. They are divided into groups of 6 for a science project. How many groups are there?

A. 4 groups

B. 6 groups

C. 18 groups

D. 24 groups

7. A box of crayons contains 8 crayons. The teacher buys 5 boxes for the class. How many crayons does the teacher have in total?

A. 13 crayons

B. 35 crayons

C. 48 crayons

D. 40 crayons

8. Which fraction is the largest?

A.  $\frac{1}{8}$

B.  $\frac{1}{3}$

C.  $\frac{1}{5}$

D.  $\frac{1}{4}$

9. Skip count backward by 100 starting from 800. What is the fourth number you say?

- A. 700
- B. 400
- C. 500
- D. 600

10. Which fraction is equivalent to  $\frac{1}{3}$ ?

- A.  $\frac{2}{6}$
- B.  $\frac{3}{3}$
- C.  $\frac{1}{6}$
- D.  $\frac{1}{9}$

**STAGE 2 — Questions 11–20**

11. Aiden has 4 toonies and 5 quarters in his wallet. How much money does Aiden have in total?

- A. \$9.25
- B. \$4.50
- C. \$8.75
- D. \$9.50

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

$$6 \times 5 \text{ \_\_\_ } 4 \times 7$$

- A. =
- B. >
- C.
- D.  $\neq$  and

13. A bookstore had 1,000 books. They sold 425 books in one week. How many books are left in the bookstore?

- A. 685
- B. 1,425
- C. 425
- D. 575

14. Solve the problem:  $200 + 350 + 100$ .

- A. 450
- B. 550
- C. 650
- D. 750

15. Find the missing number in this pattern: 18, 27, \_\_\_\_\_, 45, 54, 63.

- A. 36
- B. 30
- C. 35
- D. 38

16. What is the rule for this pattern: 90, 80, 70, 60, 50, 40 ?

- A. Start at 90 and add 10 each time
- B. Start at 90 and multiply by 10 each time
- C. Start at 90 and divide by 2 each time
- D. Start at 90 and subtract 10 each time

17. Solve for  $n$  in the equation:  $n + 17 = 50$ .

- A. 67
- B. 33
- C. 27
- D. 13

18. A robot starts at 80. It follows this code:

Step 1: Subtract 20.

Step 2: Add 15.

Step 3: Subtract 10.

What is the final value?

A. 75

B. 80

C. 65

D. 55

19. Which equation is TRUE?

A.  $7 + 7 = 7 \times 7$

B.  $8 - 3 = 3 + 5 + 1$

C.  $9 \times 2 = 9 + 2$

D.  $30 - 15 = 5 + 10$

20. A family is going on a road trip. The total distance is 250 km. They have already driven 175 km. How many more kilometres do they need to drive?

A. 100 km

B. 75 km

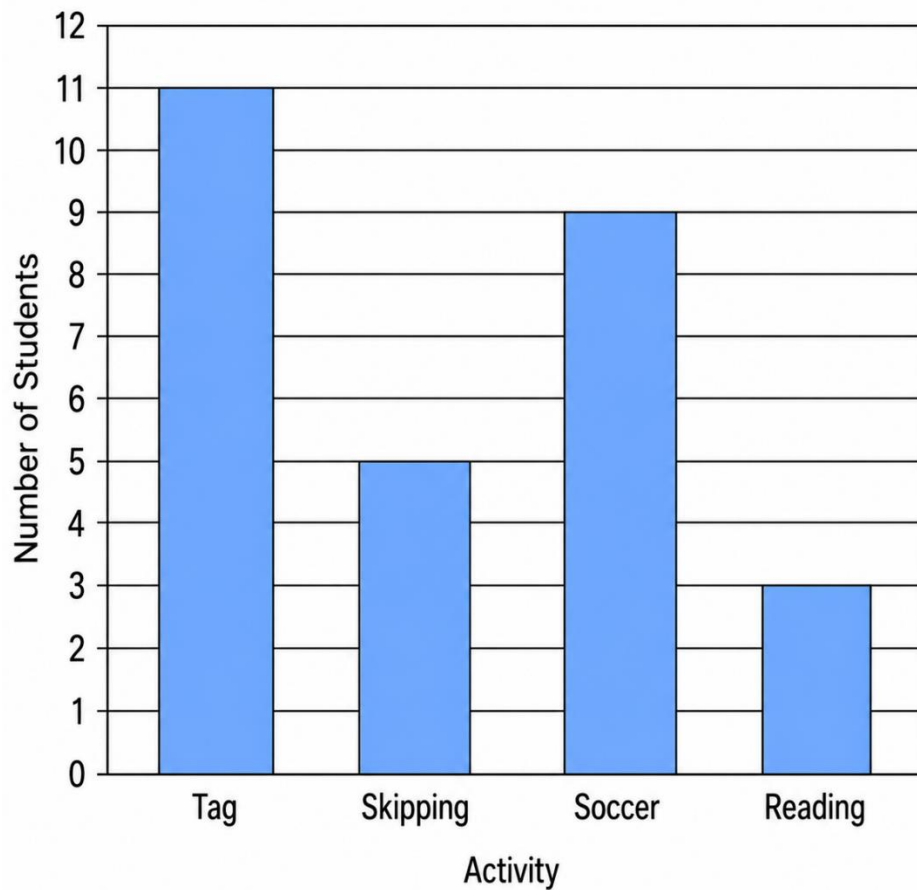
C. 125 km

D. 425 km

**STAGE 3 — Questions 21–30**

21. Look at the bar graph below. Which activity received exactly 9 votes?

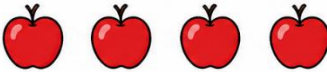




**Favourite Recess Activity – Grade 3 Class**



- A. Tag
- B. Skipping
- C. Reading
- D. Soccer

22. Look at the pictograph below. Each apple icon stands for 2 apples sold. How many apples were sold on Tuesday?

## Apples Sold at the Fruit Stand.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

 = 2 apples

- A. 14 apples
- B. 7 apples
- C. 12 apples
- D. 16 apples

23. Find the mean of this data set: 6, 4, 8, 5, 7.

- A. 4
- B. 6
- C. 7
- D. 30

24. Find the mode of this data set: 11, 8, 11, 14, 9, 11, 8.

- A. 8
- B. 14
- C. 11
- D. 9

25. A bag contains 10 marbles, and all 10 are red. Drawing a red marble is:

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

26. Look at the frequency table below. Which colour received the fewest votes?

### Favourite T-Shirt Colour.

Colour	Number of Students
Blue	11
Red	8
Green	6
Yellow	3
Purple	7

- A. Green
- B. Red
- C. Purple
- D. Yellow

27. Look at the bar graph in Figure PQ-1 again. How many more students chose tag than reading?

- A. 14 students
- B. 8 students

- C. 11 students
- D. 3 students

28. A spinner has 6 equal sections numbered 1 through 6. What word best describes the probability of spinning an even number?

- A. Certain
- B. Equally likely to spinning an odd number
- C. Impossible
- D. Unlikely

29. The frequency table shows snacks eaten at recess. How many students were surveyed in total?

### Recess Snack Choices

Snack	Number of Students
Apple	5
Granola Bar	9
Crackers	4
Carrots	7
<b>Total</b>	

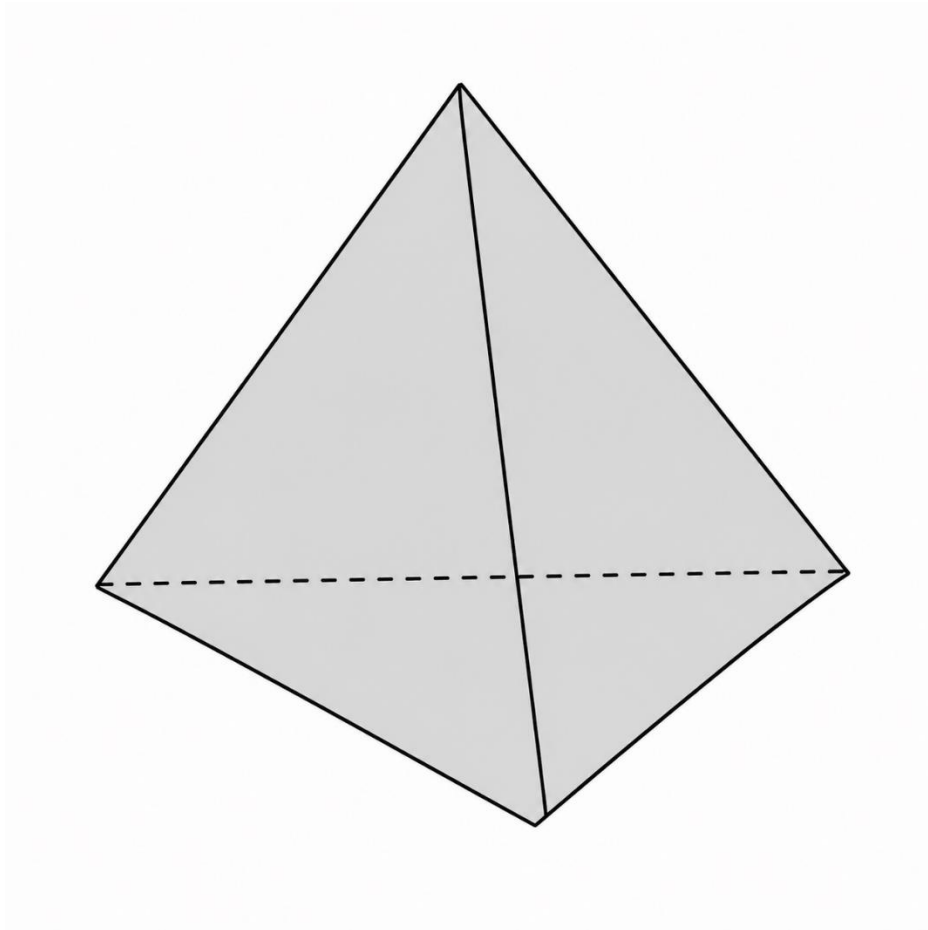
- A. 9 students
- B. 16 students
- C. 25 students
- D. 30 students

30. A six-sided die is rolled once. What is the probability of rolling a number between 1 and 6 (inclusive)?

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

STAGE 4 — Questions 31–40

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



- A. 4 vertices
- B. 5 vertices
- C. 6 vertices
- D. 3 vertices

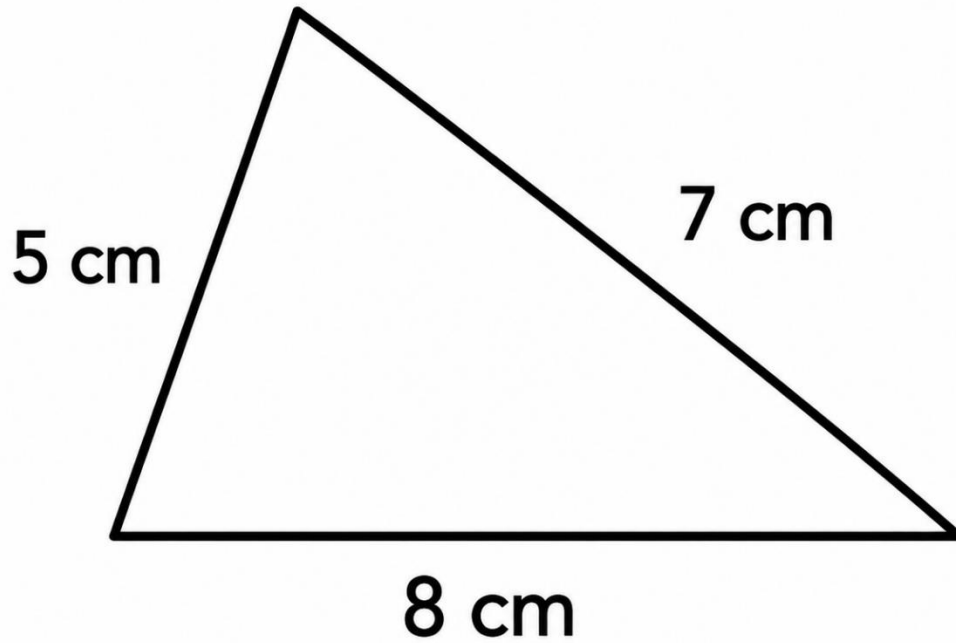
32. Which 3D shape has 6 identical square faces and 12 equal edges?

- A. Rectangular prism
- B. Triangular prism
- C. Cube
- D. Square pyramid

33. A character is facing north. The character makes one quarter-turn to the right, then another quarter-turn to the right. Which direction is the character facing now?

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

34. Look at the triangle below. What is its perimeter?

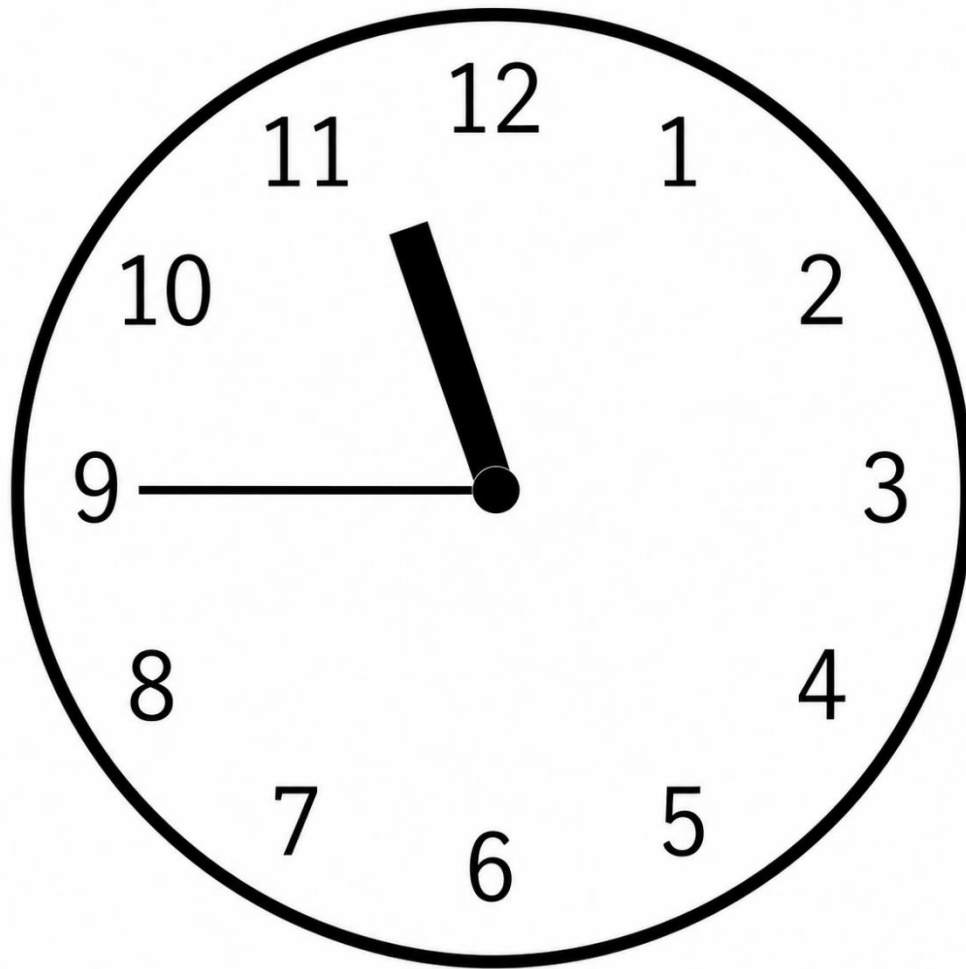


- A. 8 cm
- B. 15 cm
- C. 12 cm
- D. 20 cm

35. Which unit is best for measuring the mass of a single grape?

- A. Kilograms
- B. Metres
- C. Grams
- D. Litres

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



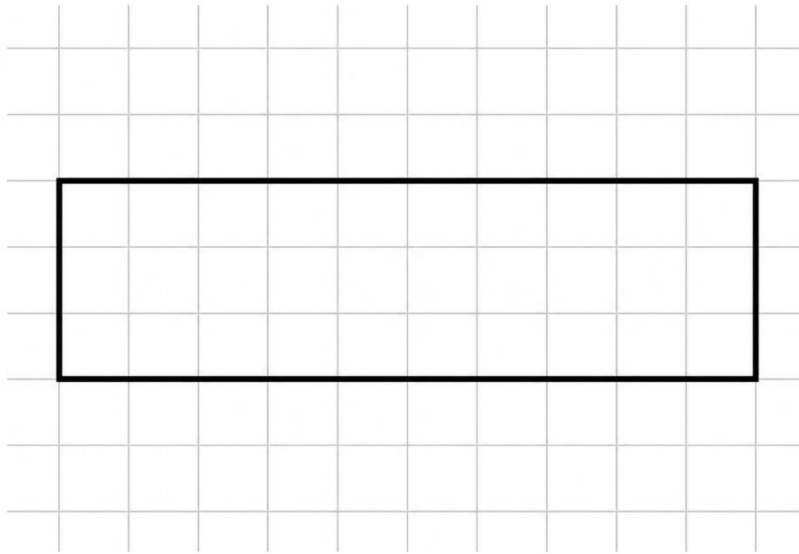
- A. 11:45
- B. 9:55
- C. 11:09
- D. 9:11

37. A school art class starts at 1:20 PM and ends at 2:55 PM. How long is the art class?

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

D. 1 hour 35 minutes

38. Look at the shape drawn on the grid below. What is the area of the shape?



A. 12 square centimetres

B. 27 square centimetres

C. 24 square centimetres

D. 30 square centimetres

39. A bottle holds 2,500 mL of juice. How many litres of juice does the bottle hold?

A. 2.5 litres

B. 25 litres

C. 250 litres

D. 0.25 litres

40. A regular octagon has 8 sides of equal length. If each side measures 5 cm, what is the perimeter?

A. 13 cm

B. 32 cm

C. 40 cm

D. 50 cm

## Practice Exam 5: Answer Key and Explanations

**1. C — 367.** Subtract using the standard algorithm:  $715 - 348 = 367$ . Ones:  $5 < 8$ , regroup.  $15 - 8 = 7$ . Tens:  $0 < 4$ , regroup again from hundreds.  $10 - 4 = 6$ . Hundreds:  $6 - 3 = 3$ . Estimation check:  $700 - 350 = 350$ , close to 367. This tests subtraction across multiple regroupings (curriculum expectation B2.5).

**2. A — 80.** The digit 8 sits in the tens place of the number 580. Its value is  $8 \times 10 = 80$ . Always distinguish between the digit (8) and the digit's value (80) — same digit, different amounts depending on position. This is a core place-value concept from Chapter 1.2.

**3. D — 270.** To round 274 to the nearest ten, look at the ones digit: 4. Since 4 is less than 5, round down. The number 274 rounds down to 270. The midpoint between 270 and 280 is 275, and 274 is before that midpoint — confirming the rounding decision (Chapter 1.5).

**4. B — \$2.15.** Change = amount paid – price =  $\$5.00 - \$2.85$ . Using the counting-up strategy: from \$2.85, add 15¢ to reach \$3.00, then add \$2.00 to reach \$5.00. Total change: \$2.15. Estimation check:  $\$5 - \$3 = \$2$ , close to \$2.15 (Chapter 5.3).

**5. C — 3/10.** The pizza has 10 equal slices (denominator = 10), and Carlos ate 3 of them (numerator = 3). The fraction representing what he ate is  $3/10$ , read "three tenths." Always identify the total parts (denominator) and the counted parts (numerator) carefully (Chapter 2.1).

**6. A — 4 groups.** Divide the total students by the group size:  $24 \div 6 = 4$  groups. This is grouping division — separating 24 students into groups of 6 produces 4 groups. The related multiplication:  $4 \times 6 = 24$  confirms the answer (Chapter 4.4).

**7. D — 40 crayons.** Use the ratio 1 box to 8 crayons. Scaling up to 5 boxes:  $5 \times 8 = 40$  crayons. This is a 1-to-8 scaling problem applying the multiplication concept from Chapter 4. The 8 times table is beyond the Grade 3 fluency requirement, but Grade 3 students still solve such problems using skip counting (Chapter 4.6).

**8. B — 1/3.** The correct answer is B. When comparing unit fractions (fractions with numerator 1), the fraction with the smallest denominator is the largest — because dividing a whole into fewer parts produces larger pieces. Among the options:  $1/3 \approx 0.33$ ,  $1/4 = 0.25$ ,  $1/5 = 0.2$ ,  $1/8 = 0.125$ . Since  $1/3$  has the smallest denominator (3), it represents the largest portion. Option D ( $1/4$ ) is smaller because the whole is divided into more parts. Option C ( $1/5$ ) is smaller still, and option A ( $1/8$ ) is the smallest because dividing into 8 parts creates very small pieces.

**9. C — 500. QUESTION 8:** The correct answer is C. Skip counting backward by 100 from 800, with 800 as the first number: 800 (first), 700 (second), 600 (third), 500 (fourth). The fourth number in the sequence is 500. Option A (700) is the second number in the sequence. Option B (400) would be the

fifth number in the sequence. Option D (600) is the third number in the sequence. When "starting from" a number in skip counting, that starting number counts as the first in the sequence.

**10. A — 2/6.** The thirds-and-sixths family of equivalent fractions:  $1/3 = 2/6$ . Splitting each third into two smaller equal pieces produces sixths, and 2 of those sixths equal  $1/3$ . The other options ( $3/3$ ,  $1/6$ ,  $1/9$ ) all represent different amounts (Chapter 2.4).

**11. A — \$9.25.** Add Aiden's money: 4 toonies = \$8.00; 5 quarters = \$1.25. Total:  $\$8.00 + \$1.25 = \$9.25$ . Sort coins from largest to smallest denomination before adding to reduce counting errors (Chapter 5.2).

**12. B — >.** Compute both sides:  $6 \times 5 = 30$  and  $4 \times 7 = 28$ . Since  $30 > 28$ , the left side is greater. The "greater than" symbol ( $>$ ) opens toward the larger number on the right. Always compute both sides of a comparison before selecting the symbol (Chapter 7.3).

**13. D — 575.** Subtract using the standard algorithm:  $1,000 - 425 = 575$ . Regroup across multiple zeros: 1,000 becomes 9 hundreds + 9 tens + 10 ones. Then:  $10 - 5 = 5$ ,  $9 - 2 = 7$ ,  $9 - 4 = 5$ . Estimation check:  $1,000 - 425 \approx 1,000 - 400 = 600$ , close to 575 (Chapter 3.3).

**14. C — 650.** Add the three numbers:  $200 + 350 + 100$ . First add  $200 + 350 = 550$ . Then add  $550 + 100 = 650$ . The associative property allows grouping in any order:  $(200 + 350) + 100 = 550 + 100 = 650$  (Chapter 3.1).

**15. A — 36.** The pattern increases by 9 each step (the 9 times table): 18, 27, 36, 45, 54, 63. To verify:  $27 - 18 = 9$ ,  $45 - 36 = 9$ , all consistent. The missing term between 27 and 45 is  $27 + 9 = 36$ . Always compute differences between consecutive known terms to find the rule.

**16. D — Start at 90 and subtract 10 each time.** The pattern values are 90, 80, 70, 60, 50, 40 — each term is 10 less than the previous. The starting value is 90 and the operation is "subtract 10." A complete pattern rule names both the starting value and the operation (Chapter 6.3).

**17. B — 33.** Solve  $n + 17 = 50$  using the inverse operation:  $n = 50 - 17 = 33$ . Check by substituting:  $33 + 17 = 50 \checkmark$ . The inverse of addition is subtraction. Always verify the answer by plugging it back into the original equation (Chapter 7.4).

**18. C — 65.** Trace the code step by step: Start at 80. Step 1:  $80 - 20 = 60$ . Step 2:  $60 + 15 = 75$ . Step 3:  $75 - 10 = 65$ . Always write down the running value after each instruction rather than tracking mentally. This is a sequential code from Chapter 8.2.

**19. D —  $30 - 15 = 5 + 10$ .** Compute both sides:  $30 - 15 = 15$  and  $5 + 10 = 15$ . Both sides equal 15, so the equation is true. The other options are false:  $7 + 7 = 14 \neq 49$ ;  $8 - 3 = 5 \neq 9$ ;  $9 \times 2 = 18 \neq 11$ . The equals sign means "has the same value as" (Chapter 7.2).

**20. B — 75 km.** Subtract the distance already driven from the total:  $250 - 175 = 75$  km. Ones:  $0 < 5$ , regroup.  $10 - 5 = 5$ . Tens:  $4 < 7$ , regroup.  $14 - 7 = 7$ . Hundreds:  $1 - 1 = 0$ . The family needs to drive 75 more kilometres. Estimation check:  $250 - 175 \approx 75 \checkmark$  (Chapter 3.3).

- 21. D — Soccer.** Read the bar graph: the bar above "Soccer" reaches the value 9 on the y-axis scale. Always trace from the top of the bar horizontally to the y-axis to confirm precise values. Tag = 11, Skipping = 5, Reading = 3, so Soccer with 9 is the only match (Chapter 9.5).
- 22. A — 14 apples.** Read the pictograph: Tuesday's row has 7 apple icons. The key states each icon = 2 apples, so multiply:  $7 \times 2 = 14$  apples. Many-to-one correspondence means each picture represents more than one item — always check the key before counting (Chapter 9.4).
- 23. B — 6.** Add all values:  $6 + 4 + 8 + 5 + 7 = 30$ . Divide by the number of values:  $30 \div 5 = 6$ . The mean represents the typical or average value in the data set. Always count the number of values carefully before dividing the sum (Chapter 10.1).
- 24. C — 11.** Count how many times each value appears: 11 appears 3 times; 8 appears 2 times; 14 and 9 each appear once. The value that appears most often is 11. The mode is the most frequent value, not the largest — careful counting determines the mode (Chapter 10.2).
- 25. A — Certain.** Every marble in the bag is red — there are no other colours. So drawing a red marble is guaranteed to happen. "Certain" describes an event with 100% probability of occurring (Chapter 10.4). The other options describe different probability levels that don't fit this situation.
- 26. D — Yellow.** Read the frequency table values: Blue = 11, Red = 8, Green = 6, Yellow = 3, Purple = 7. The smallest value is 3, which is Yellow. The colour with the fewest votes is the one with the smallest frequency (Chapter 9.3).
- 27. B — 8 students.** From Figure PQ-1: Tag = 11 students, Reading = 3 students. Subtract:  $11 - 3 = 8$  students. The phrase "how many more" signals subtraction — finding the difference between two known values. This is a Level-2 graph-reading task from Chapter 10.3.
- 28. B — Equally likely to spinning an odd number.** The spinner has six sections numbered 1, 2, 3, 4, 5, 6. Three are even (2, 4, 6) and three are odd (1, 3, 5). With 3 of each, spinning an even and spinning an odd have the same chance — they are equally likely (Chapter 10.4).
- 29. C — 25 students.** Add the frequencies for all four snack categories:  $5 + 9 + 4 + 7 = 25$  students. The total represents every student surveyed. Always verify by adding all rows in the frequency column carefully (Chapter 9.3).
- 30. D — Certain.** A standard six-sided die has faces numbered 1 through 6, so every possible roll is between 1 and 6. The event covers every possible outcome, so it must happen. "Certain" describes events with 100% probability (Chapter 10.4).
- 31. A — 4 vertices.** A triangular pyramid (tetrahedron) has 3 vertices at the corners of the triangular base plus 1 vertex at the apex where the three triangular faces meet. Total:  $3 + 1 = 4$  vertices. From the Chapter 11.2 reference table: triangular pyramid = 4 faces, 6 edges, 4 vertices.
- 32. C — Cube.** A cube has 6 identical square faces, 12 equal edges, and 8 vertices. The other shapes don't match: a rectangular prism has 6 rectangular faces (not all square unless it's a cube); a triangular prism

has triangular and rectangular faces; a square pyramid has only 1 square face plus 4 triangles (Chapter 11.1).

**33. B — South.** A quarter-turn rotates 90 degrees. Two quarter-turns in the same direction equal a half-turn (180°). Starting facing north and making two right quarter-turns: North → East (after first turn) → South (after second turn). Two right quarter-turns equal one half-turn, reversing direction (Chapter 12.3).

**34. D — 20 cm.** Add all three side lengths of the triangle:  $8 + 5 + 7 = 20$  cm. Perimeter is the total distance around the outside of a shape. For a triangle, simply add the three sides (Chapter 13.2). No shortcut formula applies to non-regular triangles.

**35. C — Grams.** A single grape weighs only a few grams — firmly in the gram range. Kilograms are too large (1 kg = roughly 200 grapes); metres and litres don't measure mass. Grams are the appropriate unit for very small masses (Chapter 13.3).

**36. A — 11:45.** The hour hand sits between the 11 and the 12, closer to the 11 — so the hour is 11 (the smaller of the two numbers it sits between). The minute hand points to the 9, which equals 45 minutes past the hour ( $9 \times 5 = 45$ ). The time is 11:45, or "quarter to twelve" (Chapter 14.1).

**37. D — 1 hour 35 minutes.** From 1:20 PM to 2:20 PM is 1 hour. From 2:20 PM to 2:55 PM is 35 minutes. Total elapsed time: 1 hour + 35 minutes = 1 hour 35 minutes. Break elapsed-time calculations into whole-hour portions plus the remaining minutes (Chapter 14.3).

**38. B — 27 square centimetres.** The rectangle is 9 cm wide and 3 cm tall. Area = length  $\times$  width =  $9 \times 3 = 27$  square centimetres. Or count the unit squares: 9 columns  $\times$  3 rows = 27 squares. Area is measured in square units (cm<sup>2</sup>) — the small "2" must be included in the unit (Chapter 14.5).

**39. A — 2.5 litres.** The relationship: 1 litre = 1,000 millilitres. So 2,500 mL =  $2,500 \div 1,000 = 2.5$  litres. The other options (25, 250, 0.25) represent different amounts. Always apply the conversion factor 1,000 when moving between litres and millilitres (Chapter 13.4).

**40. C — 40 cm.** A regular octagon has 8 equal sides. Perimeter =  $8 \times$  side length =  $8 \times 5 = 40$  cm. Or add all eight sides:  $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40$  cm. The multiplication shortcut works for any regular polygon — multiply the number of sides by the side length (Chapter 13.2).