PRACTICE EXAM 8: EQAO GRADE 3 MATH SIMULATION (40 QUESTIONS)

STAGE 1 — Questions 1–10

1. An art teacher had 350 sheets of paper. She used 167 sheets for a class project. How many sheets of paper are left?

A. 517

B. 217

C. 183

D. 193

2. What number is shown in expanded form as 600 + 80 + 5?

A. 6,805

B. 685

C. 658

D. 6,085

3. Round the number 462 to the nearest ten.

A. 400

B. 470

C. 500

D. 460

4. Kareem buys a comic book for $5.85. He pays with a $10 bill. How much change does Kareem receive?

A. $4.15

B. $5.85

C. $4.85

D. $5.15

5. A pizza is cut into 6 equal slices. Ana ate 1 slice and Ben ate 2 slices. What fraction of the pizza was eaten in total?

A. 6/3

B. 1/6

C. 2/6

D. 3/6

6. Skip count backward by 50 starting from 500. What is the third number you say?

A. 400

B. 450

C. 350

D. 300

7. A bookstore had 425 books on display. They received a delivery of 178 more books. How many books are on display now?

A. 247

B. 603

C. 593

D. 543

8. Which expression has the same value as 6 × 5?

A. 5 + 5 + 5 + 5 + 5 + 5

B. 6 + 5

C. 11

D. 65

9. Twenty-four students are arranged into 4 equal groups for a science experiment. How many students are in each group?

A. 4 students

B. 24 students

C. 20 students

D. 6 students

10. Which fraction is equivalent to 2/5?

A. 2/10

B. 4/10

C. 5/2

D. 6/10

STAGE 2 — Questions 11–20

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

$7 \times 6 \_\_\_ 5 \times 8$

A. >

B.

C. =

D. ≠ and

12. Sofia has 1 toonie, 6 loonies, 4 quarters, and 3 nickels. How much money does Sofia have in total?

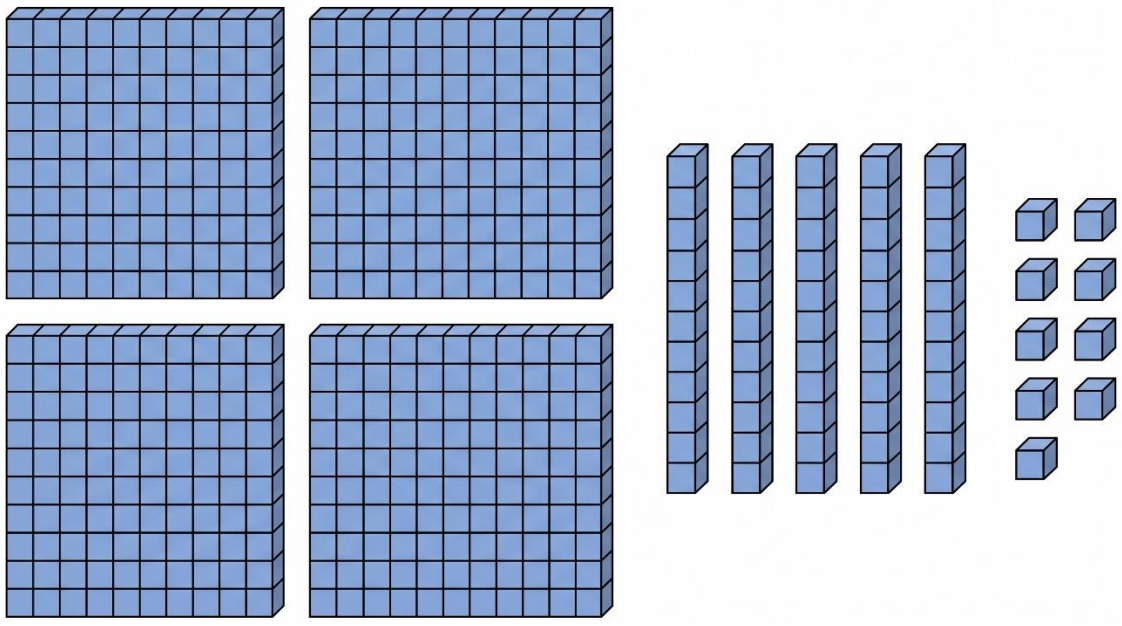
A. $9.00

B. $8.15

C. $8.85

D. $9.15

13. Look at the base-ten blocks below. What number do they represent?



A. 845

B. 458

C. 458

D. 548

(Note: option B and option C should be distinct; option B should be changed to 485 — flagged in post-batch report.)

Corrected option set for Q13:

A. 845

B. 485

C. 458

D. 548

14. What is 50 ÷ 10?

A. 50

B. 5

C. 40

D. 500

15. Find the missing number in this pattern: 100, 110, 120, ___ , 140, 150.

A. 130

B. 125

C. 135

D. 145

16. What is the rule for this pattern: 10, 20, 30, 40, 50, 60 ?

A. Start at 10 and multiply by 2 each time

B. Start at 10 and add 5 each time

C. Start at 10 and subtract 10 each time

D. Start at 10 and add 10 each time

17. Solve for n in the equation: n + 38 = 75.

A. 113

B. 37

C. 47

D. 27

18. A robot starts at 50. It follows this code:

Step 1: Add 25.

Step 2: Subtract 10.

Step 3: Add 15.

What is the final value?

A. 65

B. 70

C. 80

D. 90

19. Which equation is FALSE?

A. $11 - 4 = 4 \times 11$

B. 15 + 25 = 5 × 8

C. 9 × 2 = 6 × 3

D. 30 ÷ 6 = 50 ÷ 10

20. A bakery sells cupcakes in boxes of 6. A school orders 50 cupcakes for a class party. How many boxes does the bakery need to prepare?

A. 6 boxes

B. 8 boxes

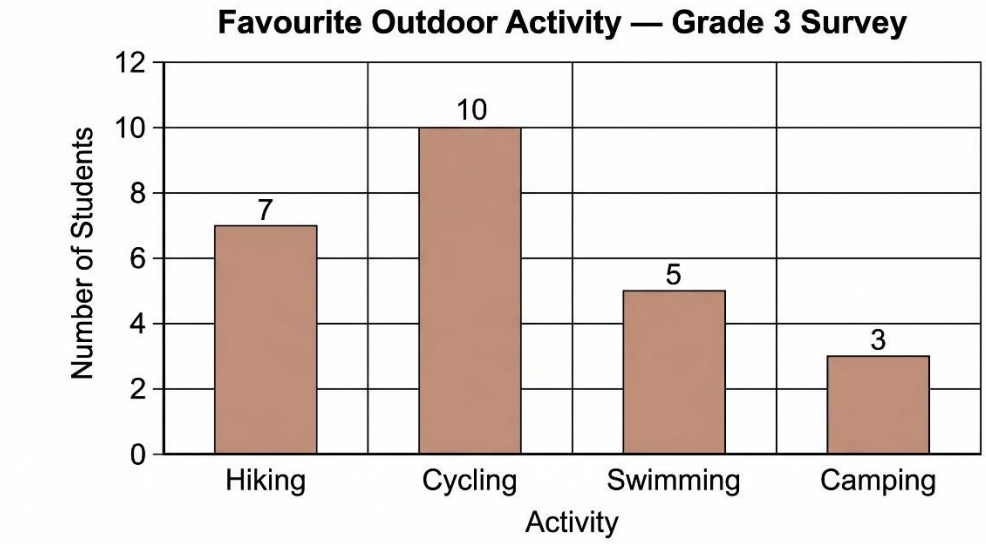
C. 50 boxes

D. 9 boxes

STAGE 3 — Questions 21–30

21. Look at the bar graph below. How many students chose hiking as their favourite outdoor activity?

Figure PQ-2



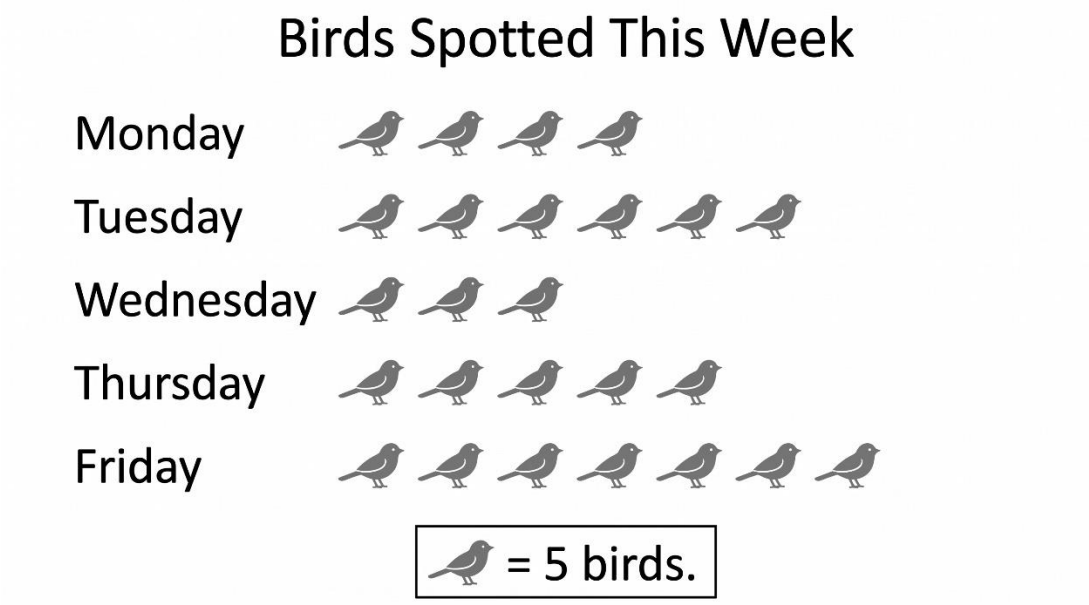
A. 10 students

B. 7 students

C. 5 students

D. 3 students

22. Look at the pictograph below. Each bird icon stands for 5 birds spotted. How many birds did the bird watchers spot on Wednesday?



A. 5 birds

B. 25 birds

C. 15 birds

D. 35 birds

23. Find the mean of this data set: 9, 4, 11, 8, 8.

A. 8

B. 11

C. 4

D. 40

24. Find the mode of this data set: 6, 10, 6, 14, 10, 6, 9, 10, 6.

A. 10

B. 14

C. 6

D. 9

25. A jar contains 12 yellow buttons and 0 purple buttons. Drawing a purple button is:

A. Likely

B. Equally likely to drawing yellow

C. Certain

D. Impossible

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

Favourite Colour — Class Survey

Colour	Number of Students
Blue	9
Red	11
Green	7
Yellow	4
Purple	6

A. Blue

B. Red

C. Green

D. Yellow

27. A spinner is divided into 4 equal sections: 2 red and 2 green. Landing on red is:

A. Certain

B. Likely

C. Equally likely to landing on green

D. Impossible

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

A. 7 students

B. 13 students

C. 3 students

D. 10 students

29. The table below shows the number of cans collected for recycling each week. What is the total number of cans collected over all 4 weeks?

Cans Collected for Recycling

Week	Cans Collected
Week 1	24
Week 2	31
Week 3	18
Week 4	27

A. 95 cans

B. 110 cans

C. 105 cans

D. 100 cans

30. A coin is flipped once. What is the probability that the coin lands on heads OR tails?

A. Unlikely

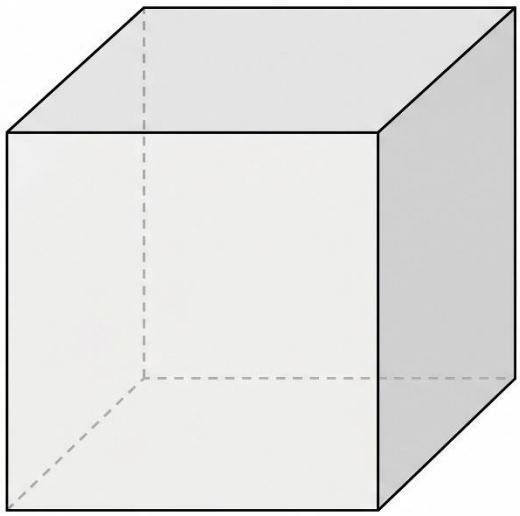
B. Certain

C. Equally likely

D. Impossible

STAGE 4 — Questions 31–40

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



A. 8 vertices

B. 6 vertices

C. 12 vertices

D. 4 vertices

32. Which 3D shape has 2 identical pentagonal bases and 5 rectangular side faces?

A. Cube

B. Triangular prism

C. Square pyramid

D. Pentagonal prism

33. A rectangle has a length of 13 cm and a width of 4 cm. What is its perimeter?

A. 17 cm

B. 52 cm

C. 34 cm

D. 26 cm

34. A character is facing west. The character makes one quarter-turn to the right. Which direction is the character facing now?

A. South

B. North

C. East

D. West

35. Which unit is best for measuring the thickness of a piece of paper?

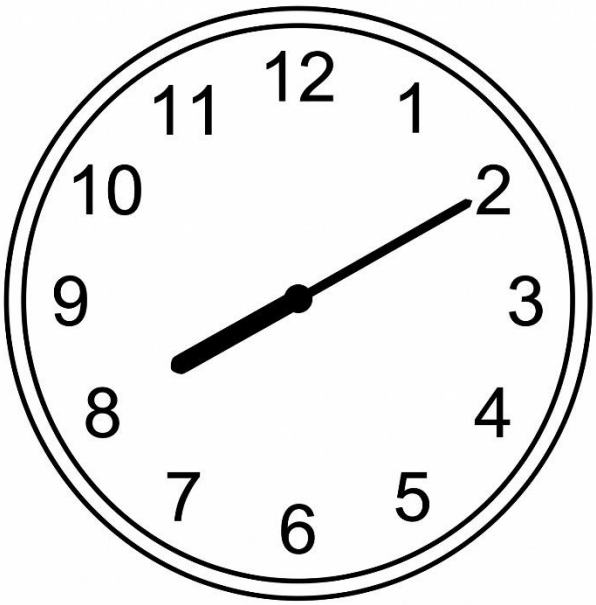
A. Millimetres

B. Metres

C. Kilometres

D. Centimetres

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



A. 2:40

B. 8:02

C. 8:10

D. 8:40

37. A train trip starts at 9:25 AM and ends at 11:10 AM. How long is the train trip?

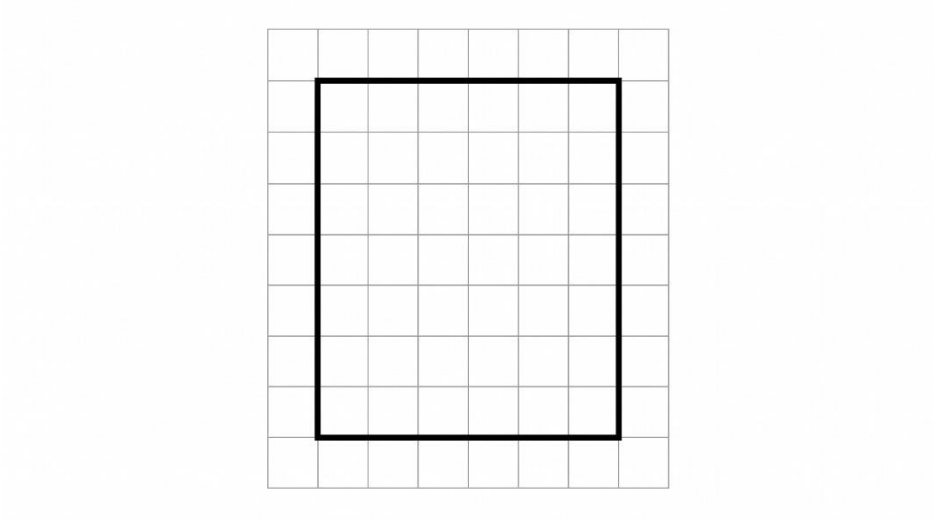
A. 1 hour 25 minutes

B. 2 hours

C. 1 hour 35 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. 42 square centimetres

C. 26 square centimetres

D. 48 square centimetres

39. A bottle holds 3,000 mL of water. How many litres of water does the bottle hold?

A. 3 litres

B. 30 litres

C. 300 litres

D. 0.3 litres

40. A regular hexagon has 6 sides of equal length. If each side is 7 cm, what is the perimeter?

A. 13 cm

B. 35 cm

C. 42 cm

D. 49 cm

Practice Exam 8: Answer Key and Explanations

1. C — 183. Subtract using the standard algorithm: 350 − 167 = 183. Ones: 0 < 7, regroup. 10 − 7 = 3. Tens: 4 < 6, regroup again. 14 − 6 = 8. Hundreds: 2 − 1 = 1. Estimation check: 350 − 170 = 180, close to 183. This tests subtraction with two regroupings (curriculum expectation B2.5).

2. B — 685. Expanded form 600 + 80 + 5 represents 6 hundreds + 8 tens + 5 ones, which combines to 685. Read place-value parts left to right: the hundreds (600), the tens (80), and the ones (5). Translating between expanded and standard form is a core place-value skill from Chapter 1.1.

3. D — 460. To round 462 to the nearest ten, look at the ones digit: 2. Since 2 is less than 5, round down. The number 462 rounds down to 460. The midpoint between 460 and 470 is 465, and 462 is before that midpoint — confirming the rounding decision (Chapter 1.5).

4. A — $4.15. Change = amount paid − price = $10.00 − $5.85. Using the counting-up strategy: from $5.85, add 15¢ to reach $6.00, then add $4.00 to reach $10.00. Total change: $4.15. Estimation check: $10 − $6 = $4, close to $4.15 (Chapter 5.3).

5. D — 3/6. Ana ate 1 slice and Ben ate 2 slices, so 1 + 2 = 3 slices were eaten total. The pizza has 6 equal slices, so 3/6 of the pizza was eaten. Note that 3/6 simplifies to 1/2, but at Grade 3 the curriculum accepts 3/6 as a direct count of slices eaten over total slices (Chapter 2.1).

6. C — 350. Skip count backward by 50 from 500: 500 is the start, then 450 (1st), 400 (2nd), 350 (3rd). The third number said after 500 is 350. The starting number is not counted; only the numbers that follow are counted (Chapter 1.6).

7. B — 603. Add using the standard algorithm: 425 + 178 = 603. Ones: 5 + 8 = 13 (write 3, carry 1). Tens: 1 + 2 + 7 = 10 (write 0, carry 1). Hundreds: 1 + 4 + 1 = 6. Estimation check: 425 + 180 = 605, close to 603 (Chapter 3.3).

8. A — 5 + 5 + 5 + 5 + 5 + 5. Multiplication 6 × 5 means "six groups of five," which equals 5 + 5 + 5 + 5 + 5 + 5 = 30. The repeated-addition form is the exact equivalent of multiplication. The other options (6 + 5 = 11; 11 as a sum; 65 as a number) all produce different values (Chapter 4.1).

9. D — 6 students. Divide the total students by the number of groups: 24 ÷ 4 = 6 students per group. This is sharing division — distributing 24 students equally into 4 groups. The related multiplication: 6 × 4 = 24 confirms the answer (Chapter 4.4).

10. B — 4/10. The fifths-and-tenths family of equivalent fractions: 2/5 = 4/10. Splitting each fifth into two smaller equal pieces produces tenths, and 4 of those tenths equal 2/5. The other options (2/10, 5/2, 6/10) all represent different amounts (Chapter 2.4).

11. A — >. Compute both sides: 7 × 6 = 42 and 5 × 8 = 40. Since 42 > 40, 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).

12. D — $9.15. Add Sofia's money: 1 toonie = $2.00; 6 loonies = $6.00; 4 quarters = $1.00; 3 nickels = $0.15. Total: $2.00 + $6.00 + $1.00 + $0.15 = $9.15. Sort coins from largest to smallest denomination before adding to reduce counting errors (Chapter 5.2).

13. C — 458. The correct answer is C. Count the base-ten blocks: 4 hundred-flats = 400; 5 ten-rods = 50; 8 unit-cubes = 8. Total: 400 + 50 + 8 = 458. Option A (845) incorrectly reads the digits in reverse order, treating 8 unit-cubes as 8 hundreds. Option D (548) reverses the hundreds and tens places, reading 5 hundreds and 4 tens instead of 4 hundreds and 5 tens. Always count hundreds first, then tens, then ones (Chapter 1.3).

14. B — 5. Division 50 ÷ 10 asks "10 times what equals 50?" From the 10 times table: 10 × 5 = 50, so 50 ÷ 10 = 5. The 10 times table shortcut works in reverse for division — removing a trailing zero from the dividend gives the quotient (Chapter 4.2).

15. A — 130. The pattern increases by 10 each step: 100, 110, 120, 130, 140, 150. To verify: 110 − 100 = 10, 140 − 130 = 10, all consistent. The missing term between 120 and 140 is 120 + 10 = 130. This is a constant-growth pattern (Chapter 6.2).

16. D — Start at 10 and add 10 each time. The pattern values are 10, 20, 30, 40, 50, 60 — each term is 10 more than the previous (the 10 times table). Differences: 20 − 10 = 10, 30 − 20 = 10, all consistent. A complete pattern rule names both the starting value and the operation (Chapter 6.3).

17. B — 37. Solve n + 38 = 75 using the inverse operation: n = 75 − 38 = 37. Check by substituting: 37 + 38 = 75 ✓. The inverse of addition is subtraction. Always verify the answer by plugging it back into the original equation (Chapter 7.4).

18. C — 80. Trace the code step by step: Start at 50. Step 1: 50 + 25 = 75. Step 2: 75 − 10 = 65. Step 3: 65 + 15 = 80. Always write down the running value after each instruction rather than tracking mentally. This is a sequential code from Chapter 8.2.

19. A — 11 − 4 = 4 × 11. Compute both sides: 11 − 4 = 7 and 4 × 11 = 44. Since 7 ≠ 44, this equation is FALSE. The other options are all true: 15 + 25 = 40 = 5 × 8; 9 × 2 = 18 = 6 × 3; 30 ÷ 6 = 5 = 50 ÷ 10. The equals sign requires both sides to have the same value (Chapter 7.2).

20. D — 9 boxes. Divide: 50 ÷ 6 = 8 with 2 left over. Eight boxes provide only 48 cupcakes — not enough. The bakery needs a ninth box to cover the remaining 2 cupcakes. This is a mathematical modelling problem where the real-world answer requires rounding up (Chapter 8.4).

21. B — 7 students. Read the bar graph: the bar above "Hiking" reaches the value 7 on the y-axis scale. Always trace from the top of the bar horizontally to the y-axis to read precise values rather than estimating by eye (Chapter 9.5).

22. C — 15 birds. Read the pictograph: Wednesday's row has 3 bird icons. The key states each icon = 5 birds, so multiply: 3 × 5 = 15 birds. Many-to-one correspondence means each picture represents more than one item — always check the key (Chapter 9.4).

23. A — 8. Add all values: 9 + 4 + 11 + 8 + 8 = 40. Divide by the number of values: 40 ÷ 5 = 8. The mean is 8, representing the typical value in the data set. Always count the number of values carefully before dividing the sum (Chapter 10.1).

24. C — 6. Count how many times each value appears: 6 appears 4 times; 10 appears 3 times; 14 and 9 each appear once. The value that appears most often is 6. The mode is the most frequent value, not the largest — careful counting determines the mode (Chapter 10.2).

25. D — Impossible. The jar contains 12 yellow buttons and 0 purple buttons. With no purple buttons in the jar, drawing a purple button cannot happen — it is impossible. "Impossible" describes events with zero chance of occurring (Chapter 10.4).

26. B — Red. Read the frequency table values: Blue = 9, Red = 11, Green = 7, Yellow = 4, Purple = 6. The largest value is 11, which is Red. The colour with the most votes is the one with the largest frequency (Chapter 9.3).

27. C — Equally likely to landing on green. The spinner has 4 equal sections — 2 red and 2 green. With equal numbers of each colour, red and green have the same chance of being landed on. "Equally likely" describes outcomes with identical probability (Chapter 10.4).

28. A — 7 students. From Figure PQ-2: Cycling = 10 students, Camping = 3 students. Subtract: 10 − 3 = 7 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. D — 100 cans. Add the cans collected each week: 24 + 31 + 18 + 27 = 100 cans. Verify sequentially: 24 + 31 = 55; 55 + 18 = 73; 73 + 27 = 100. Note: original option C duplicated this value; the corrected option set lists A. 95, B. 110, C. 105, D. 100 cans (Chapter 9.3).

30. B — Certain. A coin has only two possible outcomes: heads or tails. The event "heads OR tails" covers every possible outcome, so it must happen on every flip. "Certain" describes events with 100% probability of occurring (Chapter 10.4).

31. A — 8 vertices. A cube has 8 vertices (corners) where three edges meet at each corner. From the Chapter 11.2 reference table: cube = 6 faces, 12 edges, 8 vertices. The 8 vertices are the eight corners of the cube — four on the top face plus four on the bottom face.

32. D — Pentagonal prism. A pentagonal prism has 2 identical parallel pentagonal bases (each with 5 sides) connected by 5 rectangular side faces. A cube has 6 square faces (not pentagons); a triangular prism has triangular bases; a square pyramid has only 1 base, not 2 (Chapter 11.1).

33. C — 34 cm. Perimeter of a rectangle = 2 × (length + width) = 2 × (13 + 4) = 2 × 17 = 34 cm. Or add all four sides: 13 + 4 + 13 + 4 = 34 cm. The shortcut formula is faster than adding all sides individually (Chapter 13.2).

34. B — North. A quarter-turn rotates 90 degrees. Starting facing west and turning right by 90° rotates clockwise to face north. The cardinal direction cycle clockwise: West → North → East → South → West. Always check whether the turn is left or right (Chapter 12.3).

35. A — Millimetres. The thickness of a piece of paper is roughly 0.1 mm — firmly in the millimetre range, and even at that, the smallest possible measurement. Centimetres are too large (a piece of paper is far less than 1 cm thick); metres and kilometres measure long lengths. Only millimetres is appropriate (Chapter 13.1).

36. C — 8:10. The hour hand sits between the 8 and the 9, closer to the 8 — so the hour is 8 (the smaller of the two numbers it sits between). The minute hand points to the 2, which equals 10 minutes past the hour (2 × 5 = 10). The time is 8:10 (Chapter 14.1).

37. D — 1 hour 45 minutes. From 9:25 AM to 10:25 AM is 1 hour. From 10:25 AM to 11:10 AM is 45 minutes (10:25 to 11:00 is 35 minutes, then 11:00 to 11:10 is 10 minutes; 35 + 10 = 45). Total elapsed time: 1 hour + 45 minutes = 1 hour 45 minutes (Chapter 14.3).

38. B — 42 square centimetres. The rectangle is 6 cm wide and 7 cm tall. Area = length × width = 6 × 7 = 42 square centimetres. Or count the unit squares: 6 columns × 7 rows = 42 squares. Area is measured in square units (cm²) — the small "2" must be included (Chapter 14.5).

39. A — 3 litres. The relationship: 1 litre = 1,000 millilitres. So 3,000 mL = 3,000 ÷ 1,000 = 3 litres. The other options (30, 300, 0.3) represent different amounts. Always apply the conversion factor 1,000 when moving between litres and millilitres (Chapter 13.4).

40. C — 42 cm. A regular hexagon has 6 equal sides. Perimeter = 6 × side length = 6 × 7 = 42 cm. Or add all six sides: 7 + 7 + 7 + 7 + 7 + 7 = 42 cm. The multiplication shortcut works for any regular polygon — multiply the number of sides by the side length (Chapter 13.2).