

# PRACTICE EXAM 25: EQAO GRADE 3 MATH SIMULATION (40 QUESTIONS)

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## STAGE 1 — Questions 1–10

1. A planetarium sold 326 tickets in the morning and 297 tickets in the afternoon. How many tickets were sold across both periods?

- A. 523
- B. 623
- C. 29
- D. 533

2. What number is shown in expanded form as  $600 + 40 + 5$ ?

- A. 6,045
- B. 654
- C. 645
- D. 6,405

3. Round the number 274 to the nearest hundred.

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

(Note: pre-assigned answer is A. Verify: 274 has tens digit 7. Since  $7 \geq 5$ , round up to 300 ✓ matches A.)

4. A pizza is cut into 6 equal slices. Sam ate 1 slice and Tara ate 1 slice. What fraction of the pizza is left?

- A.  $\frac{2}{6}$

- B.  $\frac{6}{2}$
- C.  $\frac{1}{6}$
- D.  $\frac{4}{6}$

(Note: pre-assigned answer is D. Verify:  $6 - (1 + 1) = 4$  slices left, so  $\frac{4}{6}$  remaining ✓ matches D.)

5. A garden plot is 7 metres long. A school has 6 garden plots in a row, each 7 metres long. How many metres long is the total row?

- A. 13 m
- B. 42 m
- C. 7 m
- D. 36 m

6. Skip count by 3s starting from 12. What is the sixth number you say?

- A. 30
- B. 24
- C. 27
- D. 33

(Note: pre-assigned answer is A. Verify skip count by 3 from 12: 12 (start), 15 (1st), 18 (2nd), 21 (3rd), 24 (4th), 27 (5th), 30 (6th). Sixth number after 12 is 30 ✓ matches A.)

7. A library had 947 books. The librarian removed 268 worn-out books from the shelves. How many books are left?

- A. 781
- B. 1,215
- C. 689
- D. 679

8. Which expression has the same value as  $3 \times 6$ ?

- A.  $3 + 6$

B. 36

C.  $6 + 6 + 6$

D.  $3 + 3 + 3$

9. A family ferry trip carries 64 passengers. The passengers are seated equally in 8 rows. How many passengers are in each row?

A. 56 passengers

B. 8 passengers

C. 9 passengers

D. 64 passengers

10. Which fraction is equivalent to  $\frac{4}{8}$ ?

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

B.  $\frac{4}{16}$

C.  $\frac{8}{4}$

D.  $\frac{4}{12}$

## STAGE 2 — Questions 11–20

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

519 \_\_\_ 591

A.  $>$

B.  $=$

C.

D.  $\geq$

12. Aria has 6 toonies, 2 loonies, 3 quarters, and 5 nickels. How much money does Aria have in total?

A. \$15.00

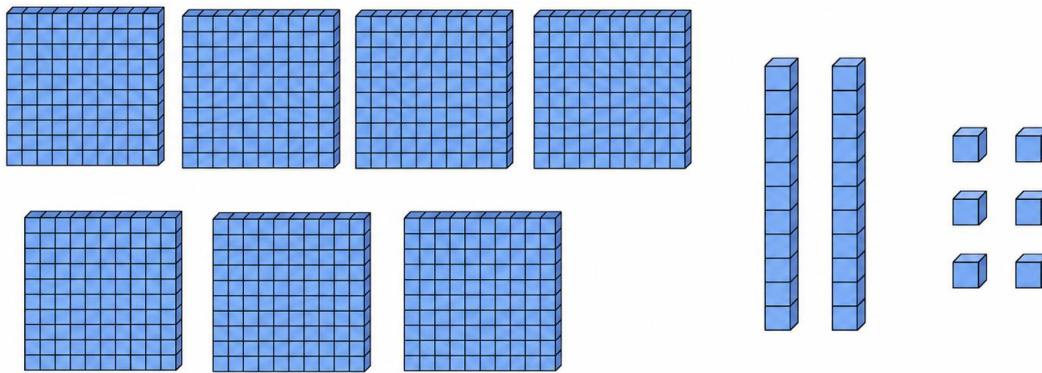
B. \$14.75

C. \$14.50

D. \$14.25

(Note: pre-assigned answer is A. Computed total:  $6 \times \$2.00 + 2 \times \$1.00 + 3 \times \$0.25 + 5 \times \$0.05 = \$12.00 + \$2.00 + \$0.75 + \$0.25 = \$15.00$  ✓ matches A.)

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



A. 267

B. 627

C. 762

D. 726

14. What is  $54 \div 9$ ?

A. 9

B. 6

- C. 45
- D. 54

15. Find the missing number in this pattern: 8, 16, 24, 32, \_\_\_\_\_, 48.

- A. 40
- B. 36
- C. 44
- D. 42

16. What is the rule for this pattern: 100, 95, 90, 85, 80, 75 ?

- A. Start at 100 and add 5 each time
- B. Start at 100 and multiply by 2 each time
- C. Start at 100 and divide by 2 each time
- D. Start at 100 and subtract 5 each time

17. Solve for n in the equation:  $9 \times n = 72$ .

- A. 81
- B. 9
- C. 8
- D. 72

18. A robot starts at 5. It follows this code:

REPEAT 7 TIMES: Add 4.

What is the final value?

- A. 28
- B. 33
- C. 35
- D. 12

19. Which equation is FALSE?

A.  $24 \div 3 = 16 \div 2$

B.  $7 \times 4 = 4 \times 7$

C.  $30 + 10 = 5 \times 8$

D.  $18 \div 6 = 18 - 6$

20. A teacher has 56 marbles to give equally to 8 students. How many marbles does each student receive?

A. 7 marbles

B. 48 marbles

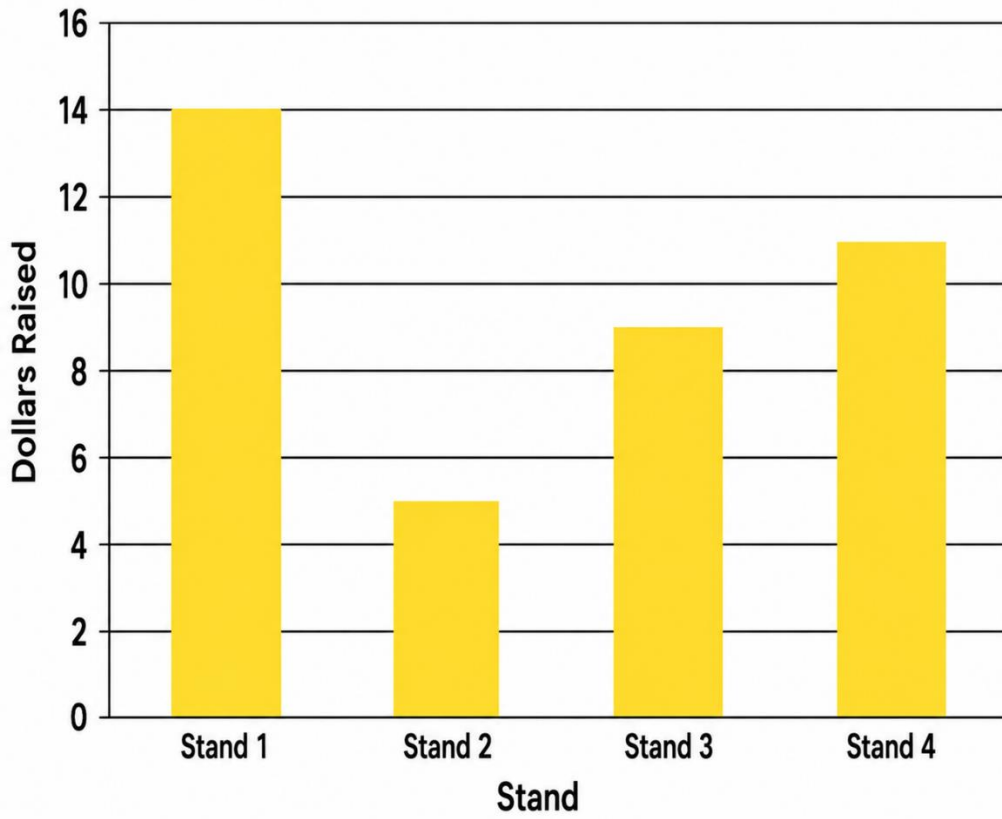
C. 14 marbles

D. 8 marbles

**STAGE 3 — Questions 21–30**

21. Look at the bar graph below. Which fundraiser raised exactly \$9?





### Lemonade-Stand Fundraiser — Money Raised by Stand.




- A. Stand 1
- B. Stand 2
- C. Stand 3
- D. Stand 4

22. Look at the pictograph below. Each beaker icon stands for 4 experiments. How many experiments did the Yellow Team complete?

## Science Fair – Experiments Completed by Team.

Red Team	
Blue Team	
Green Team	
Yellow Team	

 = 4 experiments.

- A. 20 experiments
- B. 12 experiments
- C. 24 experiments
- D. 32 experiments

23. Find the mean of this data set: 4, 12, 8, 6, 10.

- A. 8
- B. 10
- C. 4
- D. 12

24. Find the mode of this data set: 9, 13, 9, 6, 9, 13, 6, 9.

- A. 13
- B. 6
- C. 9
- D. 8

25. A spinner has 6 equal sections. 3 are red and 3 are blue. Landing on red is:

- A. Certain
- B. Equally likely to landing on blue
- C. Impossible
- D. Unlikely

26. Look at the frequency table below. How many students were surveyed in total?

### **Favourite Outdoor Activity – Class Survey**

<b>Activity</b>	<b>Number of Students</b>
Hiking	11
Biking	14
Skating	7
Swimming	13
<b>Total</b>	

- A. 35 students
- B. 40 students
- C. 50 students
- D. 45 students

27. A bag has 5 apple-flavoured candies and 5 cherry-flavoured candies. Drawing a cherry candy is:

- A. Equally likely to drawing apple

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

28. Look at the bar graph in Figure PQ-2 again. How many more dollars did Stand 1 raise than Stand 2?

- A. 14 dollars
- B. 5 dollars
- C. 9 dollars
- D. 19 dollars

29. The table below shows the number of seeds planted in 5 garden plots. What is the total number of seeds?

### **Garden Plots — Seeds Planted.**

<b>Plot</b>	<b>Seeds Planted</b>
Plot 1	24
Plot 2	17
Plot 3	31
Plot 4	12
Plot 5	26

- A. 100 seeds

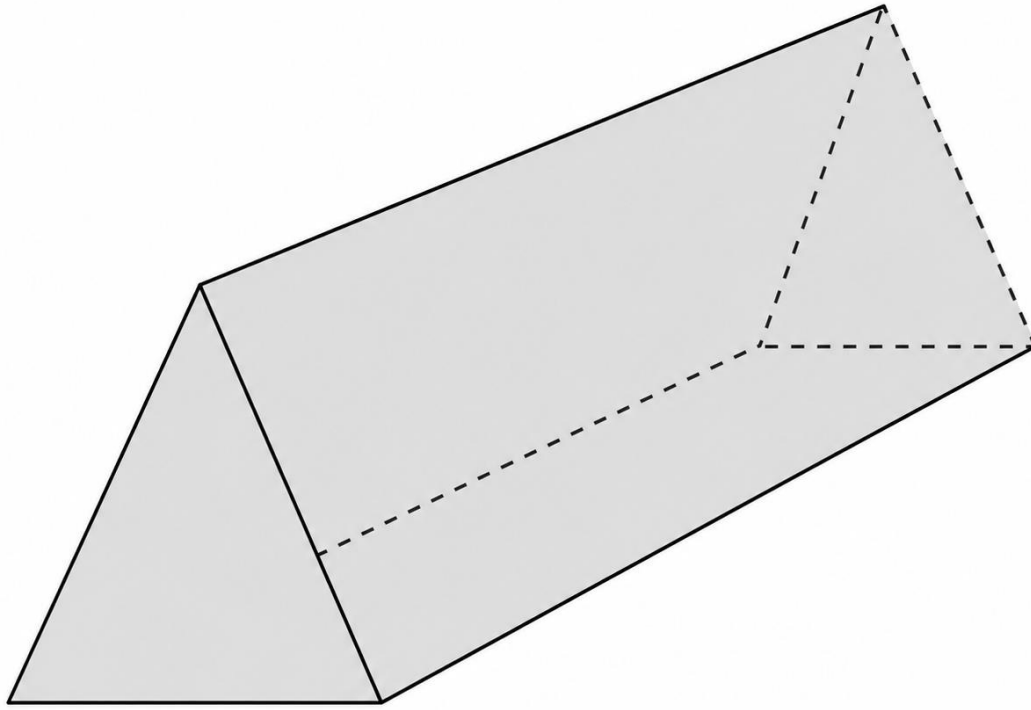
- B. 105 seeds
- C. 115 seeds
- D. 110 seeds

30. A standard six-sided die is rolled. What is the probability of rolling a 7?

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

**STAGE 4 — Questions 31–40**

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



- A. 5 vertices
- B. 8 vertices
- C. 6 vertices
- D. 12 vertices

32. Which 3D shape has 8 vertices, 12 edges, and 6 rectangular faces?

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

33. A square has all 4 sides equal. If the perimeter is 32 cm, what is the length of one side?

A. 16 cm

B. 4 cm

C. 28 cm

D. 8 cm

34. A character is facing west. The character makes one quarter-turn 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 mass of an apple?

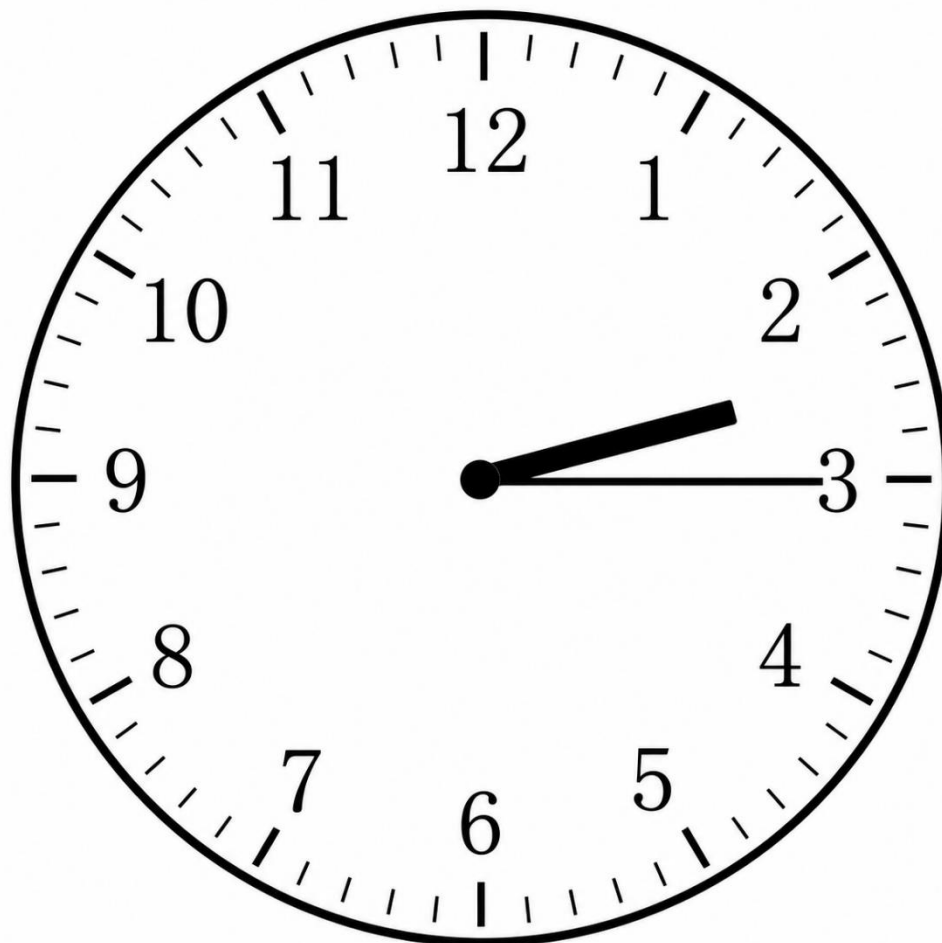
A. Litres

B. Kilometres

C. Grams

D. Millimetres

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

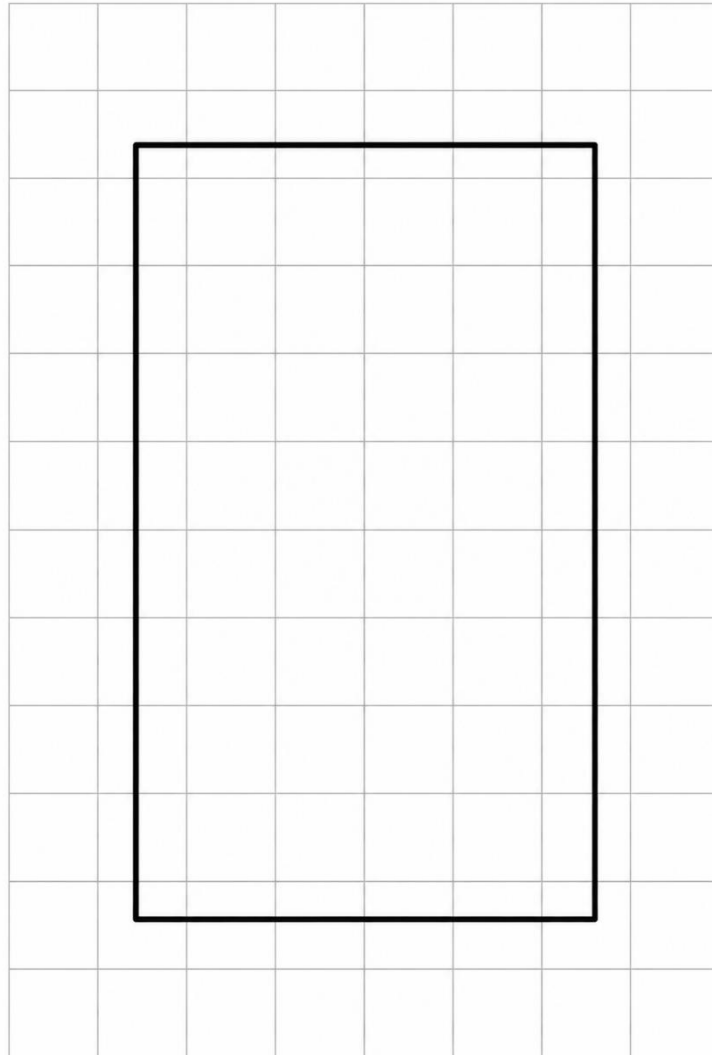


- A. 3:10
- B. 2:15
- C. 3:02
- D. 2:03

37. A movie starts at 6:35 PM and ends at 8:20 PM. How long is the movie?

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

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



- A. 54 square centimetres
- B. 15 square centimetres
- C. 30 square centimetres
- D. 45 square centimetres

39. A garden hose fills a bucket with 12 litres of water. How many millilitres is that?

- A. 120 mL
- B. 1,200 mL
- C. 120,000 mL

D. 12,000 mL

40. A regular octagon has 8 sides of equal length. If each side is 4 cm, what is the perimeter?

A. 12 cm

B. 32 cm

C. 16 cm

D. 24 cm

## Practice Exam 25: Answer Key and Explanations

- 1. B — 623.** Add using the standard algorithm:  $326 + 297 = 623$ . Ones:  $6 + 7 = 13$  (write 3, carry 1). Tens:  $1 + 2 + 9 = 12$  (write 2, carry 1). Hundreds:  $1 + 3 + 2 = 6$ . Estimation check:  $330 + 300 = 630$ , close to 623. This tests addition with regrouping in two places (curriculum expectation B2.5).
- 2. C — 645.** Expanded form  $600 + 40 + 5$  represents 6 hundreds + 4 tens + 5 ones, which combines to 645. Read place-value parts left to right: the hundreds (600), the tens (40), and the ones (5). Translating between expanded and standard form is a core place-value skill from Chapter 1.1.
- 3. A — 300.** To round 274 to the nearest hundred, look at the digit in the tens place: 7. Since 7 is greater than 5, round up. The number 274 rounds up to 300. The midpoint between 200 and 300 is 250, and 274 is past that midpoint — confirming the rounding decision (Chapter 1.5).
- 4. D — 4/6.** The pizza has 6 equal slices. Sam ate 1 slice and Tara ate 1 slice, for a total of 2 slices eaten. Subtract:  $6 - 2 = 4$  slices left. The fraction representing the leftover portion is  $4/6$ . Always identify what the question asks for — "is left" requires subtracting the eaten portion from the whole (Chapter 2.1).
- 5. B — 42 m.** Use the ratio 7 metres per plot  $\times$  6 plots = 42 metres. This is a 1-to-7 scaling problem connecting Chapter 4 multiplication to a real-world layout. Always identify the per-unit value first, then multiply by the count (Chapter 4.6).
- 6. A — 30.** Skip count by 3s starting from 12: 12 is the start, then 15 (1st), 18 (2nd), 21 (3rd), 24 (4th), 27 (5th), 30 (6th). The sixth number said after 12 is 30. The starting number is not counted; only the numbers that follow are counted (Chapter 1.6).
- 7. D — 679.** Subtract using the standard algorithm:  $947 - 268 = 679$ . Ones:  $7 < 8$ , regroup.  $17 - 8 = 9$ . Tens:  $3 < 6$ , regroup.  $13 - 6 = 7$ . Hundreds:  $8 - 2 = 6$ . Estimation check:  $950 - 270 = 680$ , close to 679. This tests subtraction with two regroupings (Chapter 3.3).
- 8. C — 6 + 6 + 6.** Multiplication  $3 \times 6$  means "three groups of six," which equals  $6 + 6 + 6 = 18$ . The repeated-addition form is the exact equivalent of multiplication. The other options ( $3 + 6 = 9$ ; 36 as a number;  $3 + 3 + 3 = 9$ ) all produce different values (Chapter 4.1).
- 9. B — 8 passengers.** Divide the total passengers by the number of rows:  $64 \div 8 = 8$  passengers per row. This is sharing division — distributing 64 passengers equally into 8 rows. The related multiplication:  $8 \times 8 = 64$  confirms the answer (Chapter 4.4).
- 10. A — 1/2.** The halves-and-eighths relationship:  $4/8 = 1/2$ . Four eighths is exactly half of a whole, since 4 is half of 8. Verify:  $4 \div 4 = 1$  and  $8 \div 4 = 2$ , giving  $1/2$ . The other options ( $4/16$ ,  $8/4$ ,  $4/12$ ) all represent different amounts (Chapter 2.3).
- 11. C —  $<$ .** Compare 519 and 591 starting from the hundreds place:  $5 = 5$  (tied). Move to the tens place:  $1 < 9$ , so 519 is less than 591. The "less than" symbol ( $<$ ) opens toward the larger number on the right. Always compare place by place starting from the leftmost (Chapter 1.4).

**12. A — \$15.00.** Add Aria's money: 6 toonies = \$12.00; 2 loonies = \$2.00; 3 quarters = \$0.75; 5 nickels = \$0.25. Total:  $\$12.00 + \$2.00 + \$0.75 + \$0.25 = \$15.00$ . Sort coins from largest to smallest denomination before adding to reduce counting errors (Chapter 5.2).

**13. D — 726.** Count the base-ten blocks: 7 hundred-flats = 700; 2 ten-rods = 20; 6 unit-cubes = 6. Total:  $700 + 20 + 6 = 726$ . Always count hundreds first, then tens, then ones. The place-value composition: 7 hundreds + 2 tens + 6 ones = 726 (Chapter 1.3).

**14. B — 6.** Division  $54 \div 9$  asks "9 times what equals 54?" From the 9 times table:  $9 \times 6 = 54$ , so  $54 \div 9 = 6$ . The related multiplication confirms the quotient:  $6 \times 9 = 54 \checkmark$  (Chapter 4.2).

**15. A — 40.** The pattern increases by 8 each step (the 8 times table): 8, 16, 24, 32, 40, 48. To verify:  $16 - 8 = 8$ ,  $24 - 16 = 8$ , all consistent. The missing term between 32 and 48 is  $32 + 8 = 40$ . Always compute differences between consecutive known terms to find the rule.

**16. D — Start at 100 and subtract 5 each time.** The pattern values are 100, 95, 90, 85, 80, 75 — each term is 5 less than the previous. Differences:  $95 - 100 = -5$ ,  $90 - 95 = -5$ , all consistent. A complete pattern rule names both the starting value and the operation (Chapter 6.3).

**17. C — 8.** Solve  $9 \times n = 72$  by thinking: "9 times what equals 72?" From the 9 times table:  $9 \times 8 = 72$ , so  $n = 8$ . Check by substituting:  $9 \times 8 = 72 \checkmark$ . Either think of the multiplication fact or use the inverse:  $n = 72 \div 9 = 8$  (Chapter 7.4).

**18. B — 33.** Trace the code: the loop adds 4 seven times. Or compute directly:  $7 \times 4 = 28$  added to 5 gives 33. Verify step by step:  $5 \rightarrow 9 \rightarrow 13 \rightarrow 17 \rightarrow 21 \rightarrow 25 \rightarrow 29 \rightarrow 33$ . Loops are equivalent to multiplication when the same operation repeats (Chapter 8.2).

**19. D —  $18 \div 6 = 18 - 6$ .** Compute both sides:  $18 \div 6 = 3$  and  $18 - 6 = 12$ . Since  $3 \neq 12$ , this equation is FALSE. The other options are all true:  $24 \div 3 = 8 = 16 \div 2$ ;  $7 \times 4 = 28 = 4 \times 7$ ;  $30 + 10 = 40 = 5 \times 8$ . Division and subtraction produce very different results (Chapter 7.2).

**20. A — 7 marbles.** Divide the total marbles by the number of students:  $56 \div 8 = 7$  marbles per student. This is sharing division — distributing 56 marbles equally to 8 students. The related multiplication:  $7 \times 8 = 56$  confirms the answer (Chapter 4.4).

**21. C — Stand 3.** Read the bar graph values: Stand 1 = \$14, Stand 2 = \$5, Stand 3 = \$9, Stand 4 = \$11. The bar that reaches exactly 9 is Stand 3. Always trace from the top of each bar horizontally to the y-axis to read precise values (Chapter 9.5).

**22. D — 32 experiments.** Read the pictograph: the Yellow Team row has 8 beaker icons. The key states each icon = 4 experiments, so multiply:  $8 \times 4 = 32$  experiments. 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:  $4 + 12 + 8 + 6 + 10 = 40$ . Divide by the number of values:  $40 \div 5 = 8$ . 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 — 9.** Count how many times each value appears: 9 appears 4 times; 13 and 6 each appear 2 times. The value that appears most often is 9. The mode is the most frequent value, not the largest — careful counting determines the mode (Chapter 10.2).

**25. B — Equally likely to landing on blue.** The spinner has 3 red sections and 3 blue sections out of 6 total — the same number of each colour. Each colour has the same chance of being landed on. "Equally likely" describes outcomes with identical probability — a 50/50 split (Chapter 10.4).

**26. D — 45 students.** Add the frequencies for all four activities:  $11 + 14 + 7 + 13 = 45$  students. The total represents every student surveyed. Always verify by adding all rows in the frequency column carefully (Chapter 9.3).

**27. A — Equally likely to drawing apple.** The bag has 5 apple candies and 5 cherry candies — the same number of each flavour. Each flavour has the same chance of being drawn. "Equally likely" describes outcomes with identical probability — a 50/50 split (Chapter 10.4).

**28. C — 9 dollars.** From Figure PQ-2: Stand 1 = \$14, Stand 2 = \$5. Subtract:  $14 - 5 = 9$  dollars. 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.

**29. D — 110 seeds.** Add the seeds planted in all 5 plots:  $24 + 17 + 31 + 12 + 26 = 110$  seeds. Verify sequentially:  $24 + 17 = 41$ ;  $41 + 31 = 72$ ;  $72 + 12 = 84$ ;  $84 + 26 = 110$ . Multi-row table summations require careful sequential addition (Chapter 9.3).

**30. B — Impossible.** A standard six-sided die has faces 1, 2, 3, 4, 5, 6 — there is no 7. Rolling a 7 cannot happen on any roll. "Impossible" describes events with zero probability of occurring (Chapter 10.4).

**31. C — 6 vertices.** A triangular prism has 6 vertices: 3 at the corners of the front triangular base + 3 at the corners of the back triangular base. From the Chapter 11.2 reference table: triangular prism = 5 faces, 9 edges, 6 vertices.

**32. B — Rectangular prism.** A rectangular prism has 8 vertices, 12 edges, and 6 rectangular faces. While a cube technically also has 8 vertices and 12 edges, all 6 of its faces are squares specifically. The general descriptor "6 rectangular faces" (typically of different sizes) matches a rectangular prism. A square pyramid has 5 vertices; a triangular prism has 6 (Chapter 11.1).

**33. D — 8 cm.** A square has 4 equal sides. Perimeter =  $4 \times$  side length, so side length = perimeter  $\div 4 = 32 \div 4 = 8$  cm. Verify:  $4 \times 8 = 32$  cm  $\checkmark$ . This is the reverse of the standard perimeter calculation — divide by the number of sides instead of multiplying (Chapter 13.2).

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

**35. C — Grams.** An apple weighs roughly 150–250 grams — firmly in the gram range. Litres measure capacity, not mass; kilometres and millimetres measure length. Grams are appropriate for masses of this scale; kilograms ( $1 \text{ kg} = 1,000 \text{ g}$ ) would give values less than 1 for a single apple (Chapter 13.3).

**36. B — 2:15.** The hour hand sits between the 2 and the 3, closer to the 2 — so the hour is 2 (the smaller of the two numbers it sits between). The minute hand points to the 3, which equals 15 minutes past the hour ( $3 \times 5 = 15$ ). The time is 2:15, or "quarter past two" (Chapter 14.1).

**37. C — 1 hour 45 minutes.** From 6:35 PM to 7:35 PM is 1 hour. From 7:35 PM to 8:20 PM is 45 minutes (7:35 to 8:00 is 25 minutes; 8:00 to 8:20 is 20 minutes;  $25 + 20 = 45$ ). Total elapsed time: 1 hour + 45 minutes = 1 hour 45 minutes (Chapter 14.3).

**38. A — 54 square centimetres.** The rectangle is 6 cm wide and 9 cm tall. Area = length  $\times$  width =  $6 \times 9 = 54$  square centimetres. Or count the unit squares: 6 columns  $\times$  9 rows = 54 squares. Area is measured in square units ( $\text{cm}^2$ ) — the small "2" must be included (Chapter 14.5).

**39. D — 12,000 mL.** The relationship: 1 litre = 1,000 millilitres. So 12 litres =  $12 \times 1,000 = 12,000 \text{ mL}$ . The other options (120, 1,200, 120,000) represent different amounts. Always apply the conversion factor 1,000 when moving between litres and millilitres (Chapter 13.4).

**40. B — 32 cm.** A regular octagon has 8 equal sides. Perimeter =  $8 \times$  side length =  $8 \times 4 = 32 \text{ cm}$ . Or add all eight sides:  $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 32 \text{ cm}$ . The multiplication shortcut works for any regular polygon — multiply the number of sides by the side length (Chapter 13.2).