

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

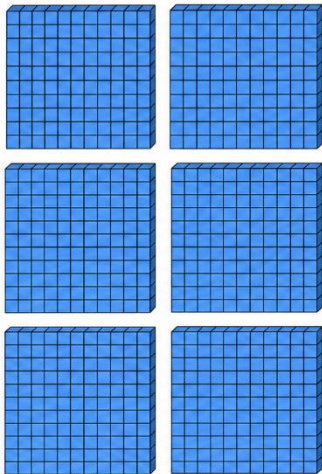
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## STAGE 1 — Questions 1–10

1. A farm has 528 chickens. The farmer buys 167 more chickens at the market. How many chickens does the farm have in total now?

- A. 361 chickens
- B. 685 chickens
- C. 605 chickens
- D. 695 chickens

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



- A. 640
- B. 604
- C. 460
- D. 64

3. Round the number 853 to the nearest hundred.

- A. 800
- B. 850
- C. 900
- D. 860

4. Eva has 12 marbles. She wants to share them equally with her 2 best friends, so that all 3 children get the same amount. How many marbles does each child receive?

- A. 4 marbles
- B. 6 marbles
- C. 12 marbles
- D. 3 marbles

5. Marcus buys a granola bar for \$1.65 and a juice box for \$1.30. He pays with a \$5 bill. How much change should Marcus receive?

- A. \$3.05
- B. \$2.95
- C. \$2.05
- D. \$3.35

6. Skip count forward by 200s. What is the missing number?

0, 200, 400, \_\_\_\_, 800, 1,000

- A. 500
- B. 700
- C. 650
- D. 600

7. A soccer team scored 78 goals last season and 145 goals this season. How many goals did the team score across both seasons combined?

- A. 67 goals
- B. 223 goals
- C. 213 goals
- D. 1,135 goals

8. Which expression has the same value as  $5 \times 6$ ?

- A.  $5 + 5 + 5 + 5 + 5 + 5$
- B.  $5 + 6$
- C.  $5 - 6$
- D. 56

9. A pizza is cut into 6 equal slices. Liam eats 2 slices and Aisha eats 1 slice. What fraction of the pizza has been eaten in total?

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

10. Which fraction is equivalent to  $\frac{3}{5}$ ?

- A.  $\frac{3}{10}$
- B.  $\frac{6}{10}$
- C.  $\frac{5}{3}$
- D.  $\frac{9}{10}$

**STAGE 2 — Questions 11–20**

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

$$400 + 250 \text{ \_\_\_\_ } 300 + 350$$

- A. >

B. =

C.

D.  $\neq$

12. Sara saved \$25 every month for 8 months. How much money has Sara saved in total?

A. \$33

B. \$250

C. \$200

D. \$325

13. Tomas has 3 toonies, 2 loonies, and 5 quarters. How much money does Tomas have in total?

A. \$9.25

B. \$8.75

C. \$7.25

D. \$10.25

14. What is  $60 \div 10$ ?

A. 70

B. 50

C. 600

D. 6

15. Find the missing number in this pattern: 14, 21, 28, \_\_\_\_, 42, 49.

A. 35

B. 32

C. 34

D. 36

16. What is the rule for the pattern: 12, 24, 36, 48, 60 ?

- A. Start at 12 and add 10 each time
- B. Start at 12 and add 12 each time
- C. Start at 12 and multiply by 2 each time
- D. Start at 12 and subtract 12 each time

17. Solve for  $n$  in the equation:  $n - 18 = 25$ .

- A. 7
- B. 33
- C. 17
- D. 43

18. A character starts at 100. The character follows this code:

Step 1: Subtract 30.

Step 2: Add 15.

Step 3: Subtract 25.

What is the final value?

- A. 30
- B. 70
- C. 60
- D. 110

19. Which equation is FALSE?

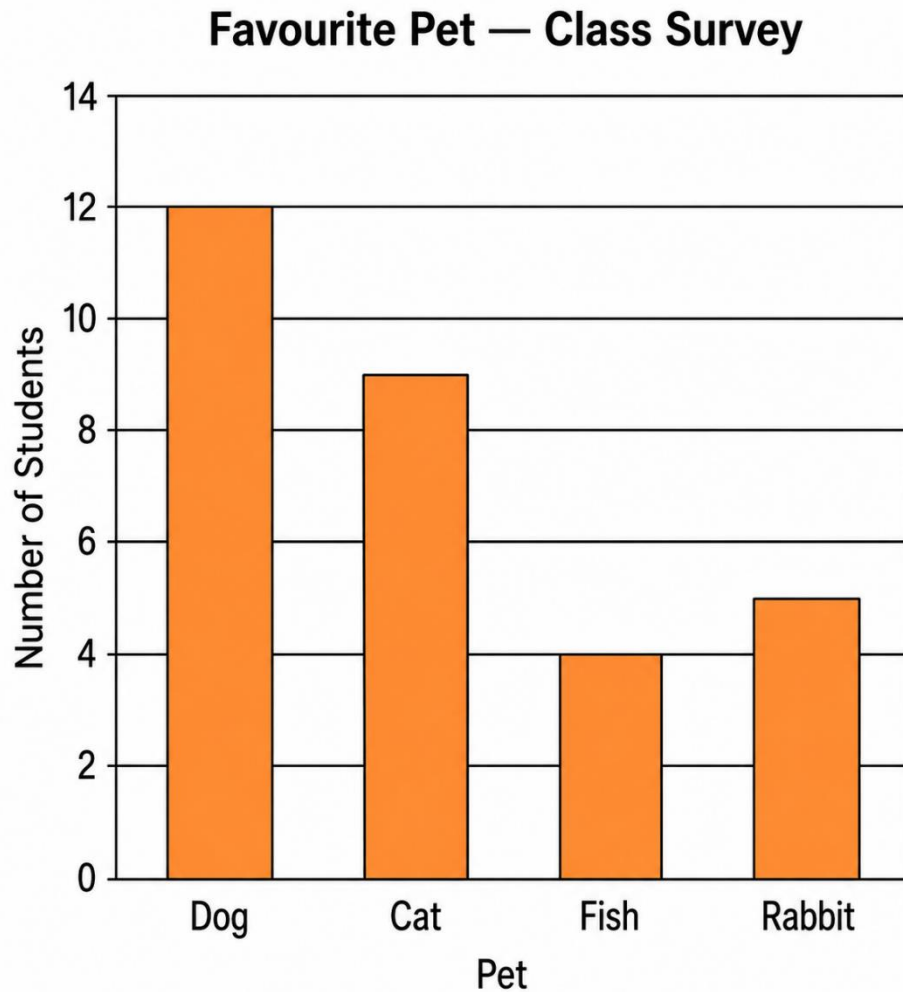
- A.  $4 \times 5 = 5 + 4$
- B.  $8 + 7 = 7 + 8$
- C.  $6 \times 2 = 12$
- D.  $10 - 4 = 4 + 2$

20. A school is planning a field trip. There are 84 students going. Each bus holds 30 students. How many buses does the school need?

- A. 2 buses
- B. 84 buses
- C. 30 buses
- D. 3 buses

**STAGE 3 — Questions 21–30**

21. Look at the bar graph below. How many students chose dogs as their favourite pet?




- A. 12 students

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

22. Look at the pictograph below. Each star icon stands for 3 stickers earned. How many stickers did Lila earn in total?

### Stickers Earned This Week

<b>Diego</b>	
<b>Maya</b>	
<b>Noah</b>	
<b>Lila</b>	

 = 3 stickers

- A. 4 stickers
- B. 7 stickers
- C. 8 stickers
- D. 12 stickers

23. Find the mean of this data set: 9, 12, 6, 15, 13.

- A. 12
- B. 11
- C. 9
- D. 55

24. Find the mode of this data set: 7, 4, 9, 7, 2, 4, 7, 6.

- A. 4
- B. 9
- C. 7
- D. 2

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

### Favourite Lunch Item

Lunch Item	Number of Students
Sandwich	9
Pasta	7
Salad	4
Pizza	10
<b>Total</b>	

- A. 30 students
- B. 23 students
- C. 26 students
- D. 35 students

26. A jar contains 4 red candies and 16 green candies. If a candy is drawn without looking, drawing a red candy is:

- A. Likely
- B. Unlikely

- C. Equally likely
- D. Certain

27. A spinner is divided into 5 equal sections numbered 1 through 5. Spinning a number greater than 5 is:

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

28. Look at the bar graph in Figure PQ-2 again. How many more students chose dog than rabbit as their favourite pet?

- A. 17 students
- B. 12 students
- C. 5 students
- D. 7 students

29. The table below shows the number of points scored by each player on a basketball team in one game. What is the total number of points scored by the team?

## Points Scored — Saturday Game

Player	Points
Alex	8
Brooke	12
Carlos	6
Dani	14
Emma	10

- A. 40 points
- B. 45 points
- C. 50 points
- D. 55 points

30. A meteorologist predicts a 100% chance of snow this weekend. Snow this weekend is:

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

### STAGE 4 — Questions 31–40

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



- A. 6 edges
- B. 8 edges
- C. 9 edges
- D. 12 edges

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

- A. Square pyramid
- B. Triangular prism
- C. Cylinder
- D. Cone

33. A square has all 4 sides equal in length. If each side is 9 cm, what is its perimeter?

- A. 13 cm
- B. 18 cm
- C. 36 cm
- D. 81 cm

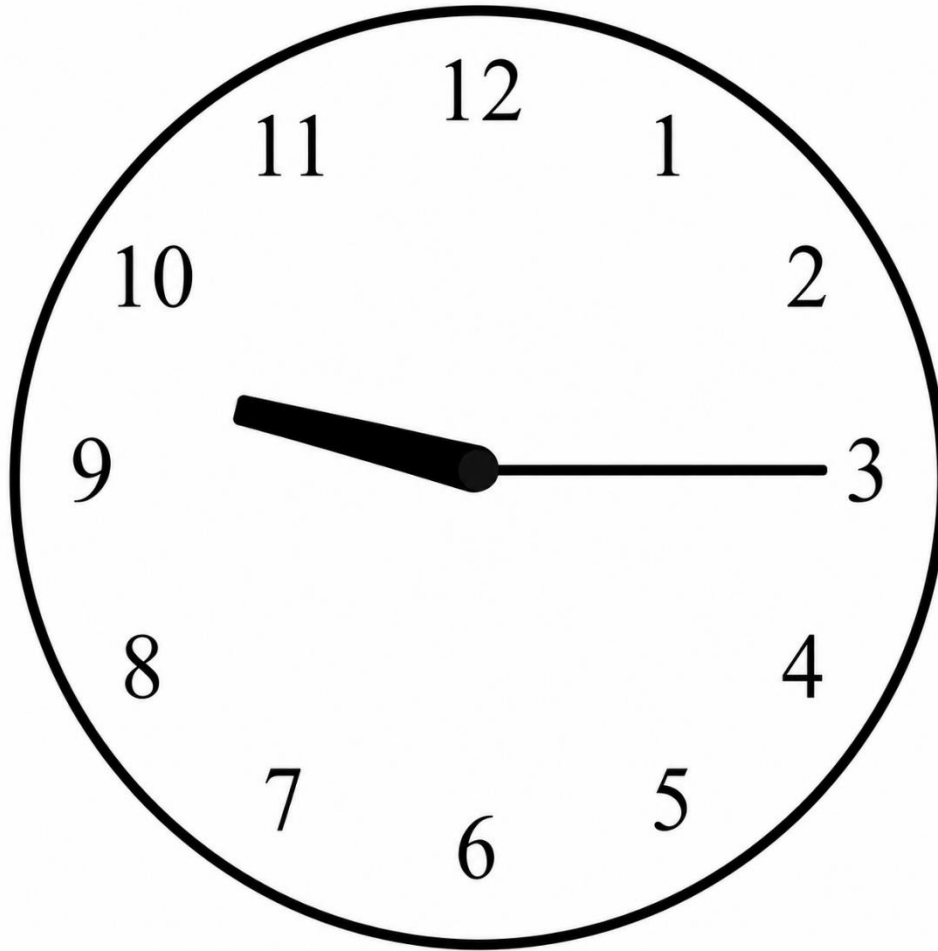
34. A character is facing west. The character makes a half-turn. Which direction is the character facing now?

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

35. Which unit is best for measuring the amount of water in a small drinking glass?

- A. Litres
- B. Kilometres
- C. Kilograms
- D. Millilitres

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



- A. 3:45
- B. 9:30
- C. 9:15
- D. 9:45

37. A baseball practice starts at 5:50 PM and ends at 7:20 PM. How long is the practice?

- A. 1 hour 30 minutes
- B. 1 hour 20 minutes
- C. 2 hours
- D. 1 hour 10 minutes

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

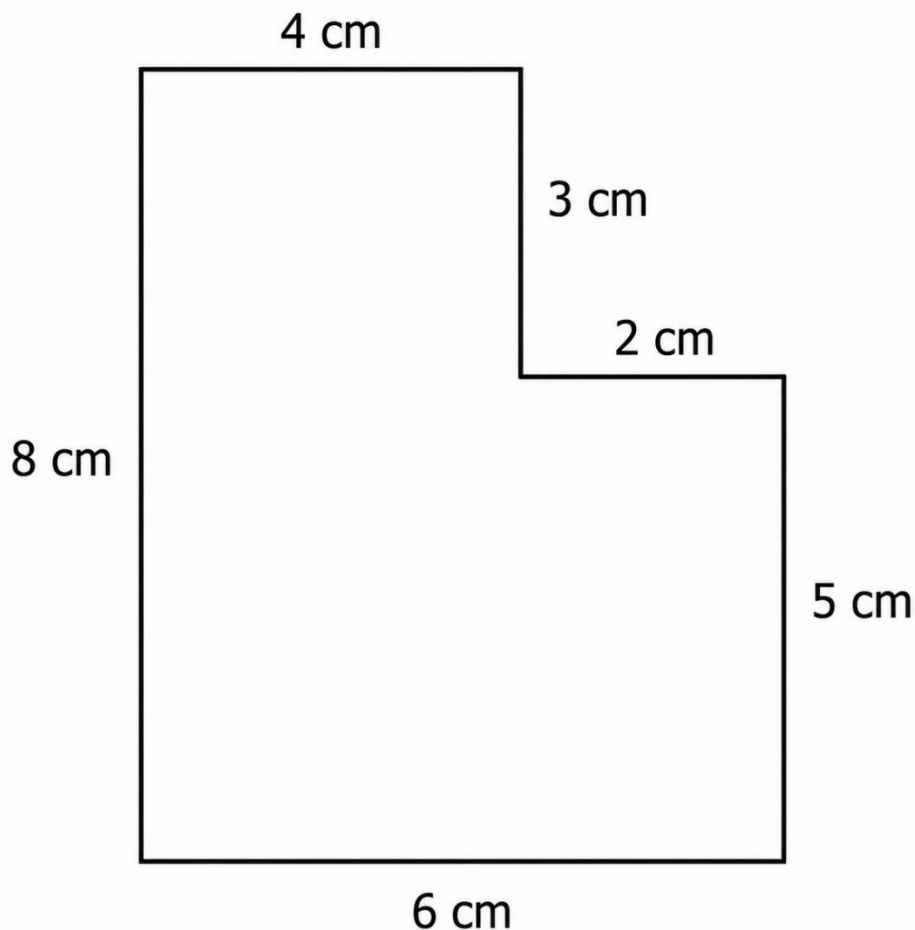


- A. 22 square centimetres
- B. 28 square centimetres
- C. 24 square centimetres
- D. 11 square centimetres

39. A car drives 3 kilometres from the school to a park. How many metres did the car drive?

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

40. Look at the irregular shape below. What is its perimeter?



- A. 22 cm
- B. 24 cm
- C. 28 cm
- D. 30 cm

### Practice Exam 3: Answer Key and Explanations

**1. D — 695 chickens.** Add the two amounts using the standard algorithm:  $528 + 167 = 695$ . Ones:  $8 + 7 = 15$  (write 5, carry 1). Tens:  $1 + 2 + 6 = 9$ . Hundreds:  $5 + 1 = 6$ . Estimation check:  $530 + 170 = 700$ , very close to 695. This tests addition with regrouping in the ones place only (curriculum expectation B2.5).

**2. B — 604.** Count the base-ten blocks: 6 hundred-flats = 600; 0 ten-rods = 0; 4 unit-cubes = 4. Total:  $600 + 0 + 4 = 604$ . The zero in the tens place is essential — it acts as a placeholder showing there are no tens. Without it, the number would incorrectly read as 64 (Chapter 1.2).

**3. C — 900.** To round 853 to the nearest hundred, look at the digit in the tens place: 5. Since 5 or higher rounds up, 853 rounds up to 900. The midpoint between 800 and 900 is 850, and 853 is past that midpoint — confirming the rounding decision (Chapter 1.5).

**4. A — 4 marbles.** Eva and her 2 friends together make 3 children sharing 12 marbles equally. Division:  $12 \div 3 = 4$  marbles each. Read the problem carefully — "shares with her 2 best friends, so that all 3 children get the same amount" confirms 3 sharers, not 2. This is a fair-share problem from Chapter 2.2.

**5. C — \$2.05.** First find the total cost:  $\$1.65 + \$1.30 = \$2.95$ . Then find the change:  $\$5.00 - \$2.95 = \$2.05$ . Always handle multi-item transactions in two steps — add the prices first, then subtract from the payment (Chapter 5.4). Estimation check:  $\$5 - \$3 = \$2$ , close to  $\$2.05$ .

**6. D — 600.** The pattern skip counts forward by 200: 0, 200, 400, 600, 800, 1,000. Each term is 200 more than the previous. The missing number between 400 and 800 is  $400 + 200 = 600$ . Skip counting by 200s reaches 1,000 in just five steps from zero (Chapter 1.6).

**7. B — 223 goals.** Add the goals from both seasons using the standard algorithm:  $78 + 145 = 223$ . Ones:  $8 + 5 = 13$  (write 3, carry 1). Tens:  $1 + 7 + 4 = 12$  (write 2, carry 1). Hundreds:  $1 + 0 + 1 = 2$ . Estimation check:  $80 + 150 = 230$ , close to 223.

**8. A —  $5 + 5 + 5 + 5 + 5 + 5$ .** Multiplication  $5 \times 6$  means "five groups of six" or equivalently "six groups of five." Six fives added together ( $5 + 5 + 5 + 5 + 5 + 5$ ) is the repeated-addition form of  $5 \times 6 = 30$ . The other options ( $5 + 6$ ,  $5 - 6$ ,  $56$ ) all produce different values (Chapter 4.1).

**9. C —  $3/6$ .** Liam ate 2 slices and Aisha ate 1 slice, so  $2 + 1 = 3$  slices were eaten in total. The pizza has 6 equal slices, so  $3/6$  of the pizza has been 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).

**10. B —  $6/10$ .** The fifths-and-tenths family of equivalent fractions:  $3/5 = 6/10$ . Splitting each fifth into two smaller equal pieces produces tenths, and 6 of those tenths equal  $3/5$ . The other options ( $3/10$ ,  $5/3$ ,  $9/10$ ) all represent different amounts. Equivalent fractions name the same amount in different forms (Chapter 2.4).

**11. B —  $=$ .** The correct answer is B. Compute both sides:  $400 + 250 = 650$  and  $300 + 350 = 650$ . Both sides equal 650, so the equals sign makes the statement true. Option A ( $>$ ) is incorrect because 650 is not greater than 650. Option C ( $<$ ) is incorrect because 650 is not less than 650. Option D ( $\neq$ ) is incorrect because the symbol  $\neq$  means "not equal to," but these expressions have the same value. The equals sign means "has the same value as" — two different-looking expressions can be equivalent (Chapter 7.2).

**12. C — \$200.** Multiply the monthly savings by the number of months:  $\$25 \times 8 = \$200$ . Skip counting by 25s eight times: 25, 50, 75, 100, 125, 150, 175, 200. This is a 1-to-25 scaling problem that draws on multiplication beyond the basic 2, 5, 10 tables but uses skip counting that Grade 3 students develop.

**13. A — \$9.25.** Add Tomas's money: 3 toonies =  $\$6.00$ ; 2 loonies =  $\$2.00$ ; 5 quarters =  $\$1.25$ . Total:  $\$6.00 + \$2.00 + \$1.25 = \$9.25$ . Sort coins from largest to smallest denomination before adding to reduce counting errors (Chapter 5.2).

**14. D — 6.** Division  $60 \div 10$  asks "10 times what equals 60?" From the 10 times table:  $10 \times 6 = 60$ , so  $60 \div 10 = 6$ . The 10 times table shortcut works in reverse for division — removing a trailing zero from the dividend gives the quotient. This is the inverse of multiplication (Chapter 4.2).

**15. A — 35.** The pattern increases by 7 each step (the 7 times table): 14, 21, 28, 35, 42, 49. To verify:  $21 - 14 = 7$ ,  $28 - 21 = 7$ , all consistent. The missing term between 28 and 42 is  $28 + 7 = 35$ . Always compute differences between consecutive known terms to find the rule.

**16. B — Start at 12 and add 12 each time.** The pattern values are 12, 24, 36, 48, 60. The differences between consecutive terms are all 12 ( $24 - 12 = 12$ ,  $36 - 24 = 12$ ). The starting value is 12 and the operation is "add 12." A complete pattern rule names both the starting value and the operation (Chapter 6.3).

**17. D — 43.** Solve  $n - 18 = 25$  using the inverse operation:  $n = 25 + 18 = 43$ . Check by substituting:  $43 - 18 = 25 \checkmark$ . The inverse of subtraction is addition. Always verify the answer by plugging it back into the original equation (Chapter 7.4).

**18. C — 60.** Trace the code step by step: Start at 100. Step 1:  $100 - 30 = 70$ . Step 2:  $70 + 15 = 85$ . Step 3:  $85 - 25 = 60$ . Always write down the running value after each instruction rather than tracking mentally. This is a sequential code from Chapter 8.2.

**19. A —  $4 \times 5 = 5 + 4$ .** Compute both sides:  $4 \times 5 = 20$  and  $5 + 4 = 9$ . Since  $20 \neq 9$ , this equation is false. The other equations are all true:  $8 + 7 = 15 = 7 + 8$ ;  $6 \times 2 = 12$ ;  $10 - 4 = 6 = 4 + 2$ . Multiplication and addition produce very different results — never substitute one operation for the other (Chapter 7.2).

**20. D — 3 buses.** The correct answer is D. Divide:  $84 \div 30 = 2$  with 24 left over. Two buses hold only 60 students — not enough. The school needs a third bus to carry the remaining 24 students. Option A (2 buses) leaves 24 students without transportation. Option B (84 buses) confuses the number of students with the number of buses needed. Option C (30 buses) confuses the capacity of one bus with the number of buses required. This is a mathematical modelling problem where the real-world answer requires rounding up (Chapter 8.4). A bus can't be a fraction.

**21. A — 12 students.** Read the bar graph: the bar above "Dog" reaches the value 12 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. D — 12 stickers.** Read the pictograph: Lila's row has 4 star icons. The key states each icon = 3 stickers, so multiply:  $4 \times 3 = 12$  stickers. Always check the key before counting — many-to-one correspondence means each picture represents more than one item (Chapter 9.4).

**23. B — 11.** Add all values:  $9 + 12 + 6 + 15 + 13 = 55$ . Divide by the number of values:  $55 \div 5 = 11$ . The mean is 11, representing the typical value in the data set. Always count the number of values carefully before dividing the sum (Chapter 10.1).

**24. C — 7.** Count how many times each value appears: 7 appears 3 times; 4 appears 2 times; 9, 2, and 6 each appear once. The value that appears most often is 7. The mode is the most frequent value, not the largest — careful counting determines the mode (Chapter 10.2).

**25. A — 30 students.** Add the frequencies for all four categories:  $9 + 7 + 4 + 10 = 30$  students. The total represents every student surveyed. Always verify the total by adding all rows in the frequency column (Chapter 9.3).

**26. B — Unlikely.** The jar has 4 red candies out of 20 total (4 red + 16 green). Only 4 of 20 candies are red — much less than half. So drawing a red candy is unlikely (possible but improbable). The other options don't fit: "certain" would require all candies to be red, "impossible" would require zero red, "equally likely" would require 10 red and 10 green (Chapter 10.4).

**27. B — Impossible.** The spinner has 5 sections numbered only 1 through 5. There is no section numbered greater than 5, so spinning a number greater than 5 cannot happen — it is impossible. "Impossible" describes events with zero chance of occurring (Chapter 10.4).

**28. D — 7 students.** From Figure PQ-2: Dog = 12 students, Rabbit = 5 students. Subtract:  $12 - 5 = 7$  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.

**29. C — 50 points.** Add the points scored by all 5 players:  $8 + 12 + 6 + 14 + 10 = 50$  points. Verify by checking:  $8 + 12 = 20$ ;  $20 + 6 = 26$ ;  $26 + 14 = 40$ ;  $40 + 10 = 50$ . Multi-row table summations require careful sequential addition (Chapter 9.3).

**30. A — Certain.** A 100% chance means the event will definitely happen — there is no possibility of it not occurring. On the Grade 3 probability spectrum, "certain" describes 100% probability. Compare: 50% is equally likely; 0% is impossible (Chapter 10.4).

**31. D — 12 edges.** A rectangular prism has 12 edges total: 4 along the top, 4 along the bottom, and 4 vertical edges connecting top to bottom. From the Chapter 11.2 reference table: rectangular prism = 6 faces, 12 edges, 8 vertices. The same counts apply to a cube, which is a special rectangular prism.

**32. B — Triangular prism.** A triangular prism has 2 identical parallel triangular bases connected by 3 rectangular side faces. A square pyramid has 1 square base and 4 triangular faces; a cylinder has circular bases and a curved surface; a cone has 1 base and a curved surface. Only the triangular prism matches all the described features (Chapter 11.1).

**33. C — 36 cm.** A square has 4 equal sides. Perimeter =  $4 \times \text{side length} = 4 \times 9 = 36$  cm. Or add all four sides:  $9 + 9 + 9 + 9 = 36$  cm. Squares are a special case of rectangles where length = width, so the perimeter shortcut  $4 \times \text{side}$  works perfectly (Chapter 13.2).

**34. A — East.** A half-turn rotates 180 degrees, which reverses the direction completely. Starting facing west and making a half-turn produces facing east. West and east are opposite cardinal directions (Chapter 12.3). Half-turn =  $180^\circ =$  two quarter-turns combined.

**35. D — Millilitres.** A small drinking glass holds roughly 200 to 300 millilitres — firmly in the millilitre range. Litres are too large (1 L = 4–5 glasses); kilograms measure mass, not capacity; kilometres measure distance. Only millilitres is appropriate for the small capacity of a drinking glass (Chapter 13.4).

**36. C — 9:15.** The hour hand sits between the 9 and the 10, closer to the 9 — so the hour is 9 (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 9:15, or "quarter past nine" (Chapter 14.1).

**37. A — 1 hour 30 minutes.** From 5:50 PM to 6:50 PM is 1 hour. From 6:50 PM to 7:20 PM is 30 minutes. Total elapsed time: 1 hour + 30 minutes = 1 hour 30 minutes. Break elapsed-time calculations into whole-hour portions plus the remaining minutes when crossing an hour boundary (Chapter 14.3).

**38. B — 28 square centimetres.** The rectangle is 7 cm wide and 4 cm tall. Area = length  $\times$  width =  $7 \times 4 = 28$  square centimetres. Or count the unit squares: 7 columns  $\times$  4 rows = 28 squares. Area is measured in square units ( $\text{cm}^2$ ) — the small "2" must be included in the unit (Chapter 14.5).

**39. D — 3,000 metres.** The relationship: 1 kilometre = 1,000 metres. So 3 kilometres =  $3 \times 1,000 = 3,000$  metres. The other options (30, 300, 30,000) represent different amounts. Always apply the conversion factor 1,000 when moving between kilometres and metres (Chapter 13.1).

**40. C — 28 cm.** Add all six side lengths of the L-shape:  $4 + 3 + 2 + 5 + 6 + 8 = 28$  cm. Perimeter is the total distance around the outside of a shape, found by adding every side. For irregular shapes, the formula isn't available — always add side by side (Chapter 13.2).