

Geometry, Patterns and Data Handling

Mathematics · Class 3 · Topic-wise Practice Worksheet

TIME 40 minutes	QUESTIONS 15	TOTAL MARKS 21	MAX. SCORE ___ / 21
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Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **15 questions** in this worksheet. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–12 carry **1 mark** each. Questions 13–15 (Achievers Section) carry **3 marks** each.
- There is no negative marking. Use of a calculator is **not** allowed.
- Read every graph and figure carefully. Figures are not drawn to scale.

Section A — Mathematical Reasoning

Q1–Q8 · 1 mark each

- How many edges does a cube have?
(A) 6 (B) 8
(C) 12 (D) 16
- A shape with 6 sides is called a _____.
(A) Hexagon (B) Quadrilateral
(C) Octagon (D) Pentagon
- The distance all the way around a shape is called its _____.
(A) Diameter (B) Area
(C) Volume (D) Perimeter
- The perimeter of a square of side 7 cm is _____.
(A) 28 cm (B) 14 cm
(C) 21 cm (D) 49 cm
- A line that divides a shape into two matching halves is called a line of _____.
(A) Division (B) Perimeter
(C) Length (D) Symmetry
- How many lines of symmetry does a square have?
(A) 1 (B) 2
(C) 4 (D) 6
- What comes next in the pattern? 3, 6, 12, 24, ____
(A) 30 (B) 36
(C) 48 (D) 72
- Which solid shape has no corners at all?
(A) Sphere (B) Cuboid
(C) Cube (D) Cone

9. The bar graph shows how many students in a class chose each sport. How many **more** students chose cricket than tennis?

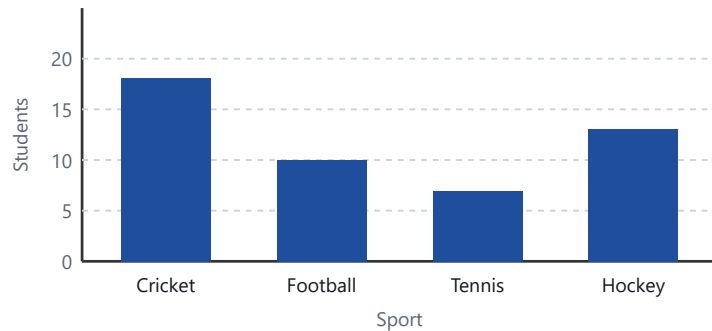


Fig. 9.1 — Favourite sports

- (A) 7 (B) 11
(C) 18 (D) 25
10. Using the same bar graph, how many students are there in the class altogether?
(A) 38 (B) 45
(C) 48 (D) 50
11. A rectangular garden is 12 m long and 8 m wide. What is its perimeter?
(A) 20 m (B) 40 m
(C) 48 m (D) 96 m
12. Which of these capital letters has **no** line of symmetry?
(A) A (B) H
(C) O (D) R

Achievers Section

Q13–Q15 · 3 marks each

13. The perimeter of a square is 36 cm. What is the length of each side?
(A) 9 cm (B) 6 cm
(C) 12 cm (D) 18 cm
14. Look at this pattern of matchsticks: 1 square needs 4 sticks, 2 squares in a row need 7 sticks, 3 squares need 10 sticks. How many sticks are needed for **6** squares in a row?
(A) 16 (B) 19
(C) 22 (D) 24
15. A rectangle is 15 cm long and 5 cm wide. A square has the **same perimeter** as this rectangle. What is the side of the square?
(A) 5 cm (B) 10 cm
(C) 8 cm (D) 20 cm

Answer Key

1	C	2	A	3	D	4	A	5	D
6	C	7	C	8	A	9	B	10	C
11	B	12	D	13	A	14	B	15	B

Solutions

1. Answer: (C) 12

A cube has 6 faces, 8 corners and **12** edges.

2. Answer: (A) Hexagon

A **hexagon** has 6 sides. A pentagon has 5 and an octagon has 8.

3. Answer: (D) Perimeter

The **perimeter** is the total length of the boundary. Area is the amount of surface a shape covers.

4. Answer: (A) 28 cm

A square has 4 equal sides.

Perimeter = $4 \times 7 = \mathbf{28 \text{ cm}}$.

5. Answer: (D) Symmetry

A line of **symmetry** folds a shape so that the two halves fit exactly on top of each other.

6. Answer: (C) 4

A square can be folded in **4** ways — down the middle vertically, across the middle horizontally, and along each of its two diagonals.

7. Answer: (C) 48

Each number is **doubled** to get the next: 3, 6, 12, 24, and $24 \times 2 = \mathbf{48}$.

8. Answer: (A) Sphere

A **sphere** is curved all over, with no flat faces, no edges and no corners. A cone has one corner at its tip.

9. Answer: (B) 11

Reading the bars against the scale: cricket 18, football 10, tennis 7, hockey 13.

Difference = $18 - 7 = \mathbf{11}$ more students chose cricket.

10. Answer: (C) 48

Add all four bars: $18 + 10 + 7 + 13 = \mathbf{48}$ students.

11. Answer: (B) 40 m

Perimeter of a rectangle = $2 \times (\text{length} + \text{breadth})$

= $2 \times (12 + 8) = 2 \times 20 = \mathbf{40 \text{ m}}$.

12. Answer: (D) R

A can be folded down the middle, H can be folded in two ways and O in many ways. **R** cannot be folded so that the two halves match, so it has no line of symmetry.

13. Answer: (A) 9 cm

A square has 4 equal sides, so we divide the perimeter by 4.

$36 \div 4 = \mathbf{9 \text{ cm}}$.

Check: $4 \times 9 = 36 \text{ cm}$. ✓

14. Answer: (B) 19

After the first square, each extra square adds only 3 sticks, because one side is shared.

Sticks = $4 + 3 \times (\text{number of extra squares})$

For 6 squares: $4 + 3 \times 5 = 4 + 15 = \mathbf{19}$ sticks.

Check the pattern: 4, 7, 10, 13, 16, 19. ✓

15. Answer: (B) 10 cm

Perimeter of the rectangle = $2 \times (15 + 5) = 2 \times 20 = 40 \text{ cm}$.

The square has the same perimeter, so each side = $40 \div 4 = \mathbf{10 \text{ cm}}$.