

Geometry, Patterns and Data Handling

Mathematics · Class 4 · 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. Read every graph and figure carefully.

Section A — Mathematical Reasoning

Q1–Q8 · 1 mark each

- An angle that measures exactly 90° is called a _____ angle.

(A) Right
(B) Acute

(C) Obtuse
(D) Straight
- An angle of 130° is a/an _____ angle.

(A) Acute
(B) Right

(C) Straight
(D) Obtuse
- A straight angle measures _____.

(A) 180°
(B) 90°

(C) 270°
(D) 360°
- How many lines of symmetry does an equilateral triangle have?

(A) 1
(B) 2

(C) 3
(D) 6
- How many vertices does a cuboid have?

(A) 4
(B) 6

(C) 8
(D) 12
- The line that divides a circle into two equal halves and passes through its centre is called the _____.

(A) Radius
(B) Diameter

(C) Chord
(D) Arc
- What comes next in the pattern? 1, 4, 9, 16, 25, ____

(A) 30
(B) 34

(C) 36
(D) 49
- A shape with 8 sides is called a/an _____.

(A) Hexagon
(B) Heptagon

(C) Pentagon
(D) Octagon

9. The bar graph shows the number of trees planted by four classes. How many **more** trees did Class D plant than Class B?

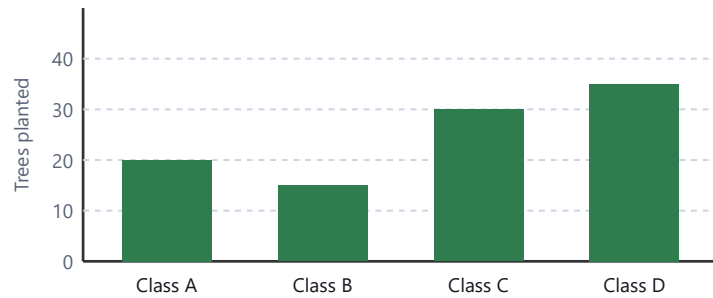


Fig. 9.1 — Trees planted by four classes

- (A) 10
(B) 15
(C) 20
(D) 35
10. Using the same bar graph, how many trees were planted altogether?
- (A) 90
(B) 95
(C) 100
(D) 105
11. Which of these capital letters has **two** lines of symmetry?
- (A) H
(B) B
(C) A
(D) P
12. The hands of a clock at 3 o'clock form which kind of angle?
- (A) Acute
(B) Right
(C) Obtuse
(D) Straight

Achievers Section

Q13–Q15 · 3 marks each

13. Look at the matchstick pattern: 1 triangle needs 3 sticks, 2 triangles in a row need 5 sticks, 3 triangles need 7 sticks. How many sticks are needed for **10** triangles in a row?
- (A) 19
(B) 21
(C) 23
(D) 30
14. A circle has a radius of 7 cm. What is its diameter?
- (A) 3.5 cm
(B) 7 cm
(C) 49 cm
(D) 14 cm
15. The pictograph shows the ice creams sold in a week. If each symbol stands for 8 ice creams, and Friday has $4\frac{1}{2}$ symbols, how many ice creams were sold on Friday?
- (A) 12
(B) 32
(C) 36
(D) 40

Answer Key

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

Solutions

1. Answer: (A) Right

A **right** angle is exactly 90° — the corner of a book or a square. An acute angle is less than 90° and an obtuse angle is more.

2. Answer: (D) Obtuse

An **obtuse** angle is more than 90° but less than 180° . Since 130° lies between them, it is obtuse.

3. Answer: (A) 180°

A **straight** angle is a half turn, which is 180° . A full turn is 360° .

4. Answer: (C) 3

An equilateral triangle can be folded in **3** ways — one fold through each corner to the middle of the opposite side.

5. Answer: (C) 8

A cuboid has 6 faces, 12 edges and **8** vertices (corners), just like a cube.

6. Answer: (B) Diameter

The **diameter** passes through the centre and touches the circle at both ends. It is twice as long as the radius.

7. Answer: (C) 36

These are square numbers: 1×1 , 2×2 , 3×3 , 4×4 , 5×5 .

The next is $6 \times 6 = \mathbf{36}$.

8. Answer: (D) Octagon

An **octagon** has 8 sides. A hexagon has 6, a heptagon 7 and a pentagon 5.

9. Answer: (C) 20

Reading the bars against the scale: Class A 20, Class B 15, Class C 30, Class D 35.

Difference = $35 - 15 = \mathbf{20}$ trees.

10. Answer: (C) 100

Add all four bars: $20 + 15 + 30 + 35 = \mathbf{100}$ trees.

11. Answer: (A) H

H can be folded down the middle vertically and also across the middle horizontally, giving 2 lines of symmetry. A and B have only one each, and P has none.

12. Answer: (B) Right

At 3 o'clock the minute hand points to 12 and the hour hand to 3, which is a quarter turn — exactly 90° . That is a **right** angle.

13. Answer: (B) 21

After the first triangle, each extra triangle adds only 2 sticks because one side is shared.

Sticks = $3 + 2 \times (\text{number of extra triangles})$

For 10 triangles: $3 + 2 \times 9 = 3 + 18 = \mathbf{21}$ sticks.

14. Answer: (D) 14 cm

The diameter is always twice the radius.

Diameter = $2 \times 7 = \mathbf{14 \text{ cm}}$.

15. Answer: (C) 36

4 whole symbols stand for $4 \times 8 = 32$ ice creams.

The half symbol stands for half of $8 = 4$ ice creams.

Total = $32 + 4 = \mathbf{36}$ ice creams.