Area

Understanding the Topic

- Area is the space covered inside a shape or surface.
- It tells us how much surface is occupied by the figure.
- We measure area in square units like square centimetres (cm²), square meters (m²), etc.

Why Area is Important

- To find how much space is needed to cover something.
- Useful in tiling, painting, flooring, farming, etc.

Standard Units of Area

- 1 cm² means a square of side 1 cm.
- 1 m² means a square of side 1 m.

Formulas of Area

- Square = side × side
- Rectangle = length × breadth



Examples with Solutions

1. Example – Area of Square (Easy)

Question: Find the area of a square with side 5 cm.

Solution: $5 \times 5 = 25 \text{ cm}^2$

2. Example – Area of Rectangle (Moderate)

Question: Find the area of a rectangle with length 8 cm and breadth 3 cm.

Solution: $8 \times 3 = 24 \text{ cm}^2$

3. Example – Word Problem (Easy)

Question: A square mat is 4 m long on each side What is its area.

Solution: $4 \times 4 = 16 \text{ m}^2$

4. Example – Real-life Use (Moderate)

Question: A wall is 6 m high and 5 m wide How much area needs to be painted.

Solution: $6 \times 5 = 30 \text{ m}^2$

5. Example – Comparing Area (Moderate)

Question: Which has more area – a square of side 6 cm or a rectangle of length 7 cm and breadth 4 cm.

Solution: Square = $6 \times 6 = 36 \text{ cm}^2$

Rectangle = $7 \times 4 = 28 \text{ cm}^2$

So the square has more area

Summary Points

- Area is the surface covered by a shape.
- Measured in square units like cm² m².
- Formula for square = side × side.
- Formula for rectangle = length × breadth.
- Useful in painting flooring farming and construction.
- Always write the unit as square (cm² or m²).
- Area tells how much space is inside a boundary.
- Helps in comparing space of different objects.
- Use correct formula based on the shape.
- Practice improves speed in solving area questions.