Introduction to 2D and 3D Figures

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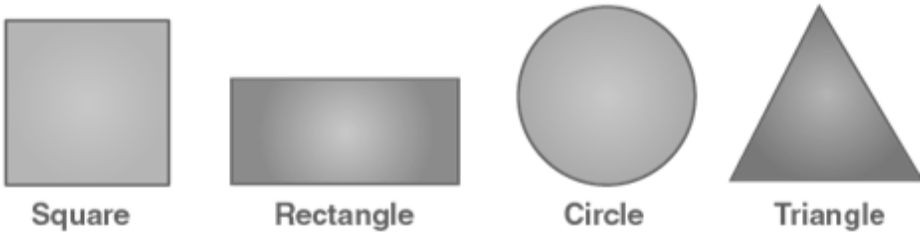
- 2D (Two-Dimensional) figures are flat shapes that have length and breadth but no height or thickness.
- 3D (Three-Dimensional) figures are solid shapes that have length, breadth, and height.
- 2D shapes can be drawn on paper, but 3D shapes are real-world solids.

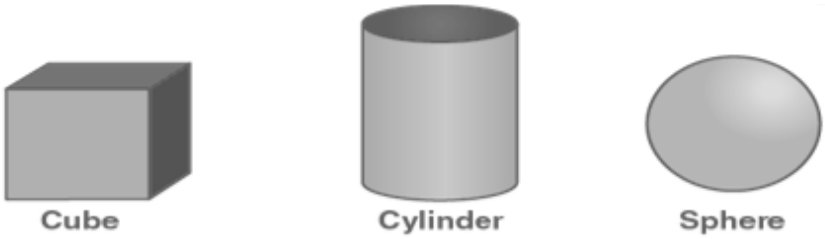
Examples of 2D figures

- Square, Rectangle, Circle, Triangle



Examples of 3D figures

- Cube, Cylinder, Sphere,



Important Points

- 2D figures have area and perimeter
- 3D figures have volume and surface area
- 2D shapes are the faces of 3D solids

Examples with Solutions

Example: Identify whether a square is 2D or 3D

A square has only length and breadth

- It is a 2D figure

Example: Is a ball a 2D or 3D figure?

A ball has length, breadth, and height (round shape)

- It is a 3D figure (sphere)

Example: Find the 2D shape that forms each face of a cube

Each face of a cube is a square

- 2D shape = square

Example: Is a cylinder 2D or 3D? How many faces does it have?

A cylinder has curved surface and two circular flat faces

- It is 3D with 3 faces (2 circular + 1 curved)

Example: A rectangle has length 6 cm and breadth 4 cm. Is it 2D or 3D?

It lies flat on paper and has no height

- It is a 2D shape

Summary Points

- 2D figures are flat and have only length and breadth.
- 3D figures are solid and have length, breadth, and height.
- 2D shapes have area and perimeter.
- 3D shapes have volume and surface area.
- Real-life objects like books, boxes, balls are examples of 3D figures.