Circle

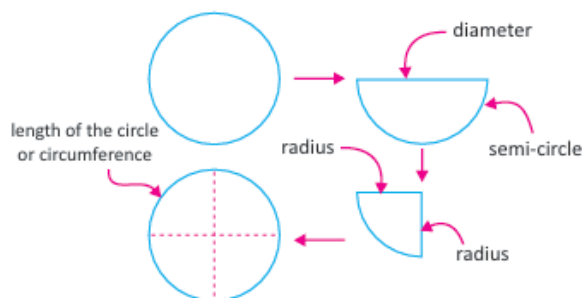### Understanding Circle

- A circle is a simple closed curved figure.
- All points on the circle are at the same distance from a fixed point called the center.
- The distance from the center to any point on the circle is called the radius.
- A line passing through the center and touching both sides of the circle is called the diameter.
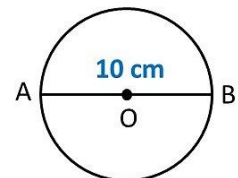- The diameter is twice the radius.

Important Terms

- **Center:** The middle point of the circle
- **Radius:** Distance from the center to any point on the circle
- **Diameter:** A straight line passing through the center and touching the circle at two ends
- **Circumference:** The boundary line of the circle
- A circle has no sides and no corners
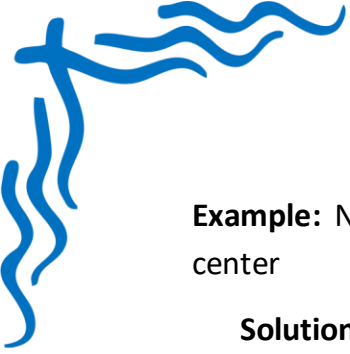

Mixed Examples with Solutions

Example: What is the radius if the diameter of a circle is 10 cm?

Solution: Radius = $\frac{10}{2}$ = 5 cm

Example: Can a circle have corners?

Solution: No, a circle has no corners or sides

Example: Name the part of a circle that connects two points and passes through the center

    Solution: It is called the diameter

Example: If the radius of a circle is 4 cm, what is the diameter?

    Solution: Diameter = 2 × 4 = 8 cm

Example: Is a circle a simple closed figure?

    Solution: Yes, a circle is made of a curved line that is closed and does not cross itself

Summary Points

- A circle is a simple closed curved shape.

- All points on a circle are equally far from the center.

- Radius is half of the diameter.

- Circle has no sides, no corners, and only one continuous boundary.

- Knowing parts of a circle helps in understanding geometry and measurement concepts.