IMPORTANT CONCEPTS

- **Point:** A fine dot showing position. It has no size.
  Example: A, B, C are points.

- **Line:** A straight path extending in both directions endlessly.

  Denoted as: $\overleftrightarrow{AB}$

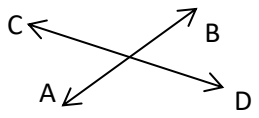
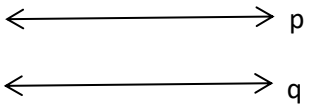
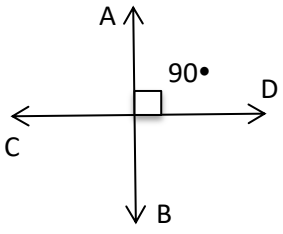
- **Line Segment:** A part of a line with two endpoints.•

  Example: Segment AB $(\overline{AB})$

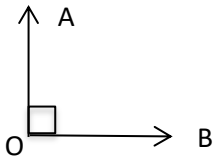
- **Ray:** A line that starts from a point and goes on in one direction.

  Example: Ray AB $(\overrightarrow{AB})$

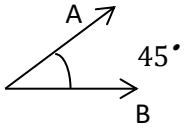
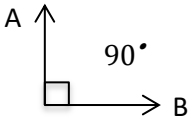
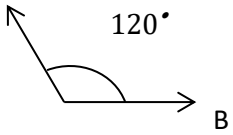
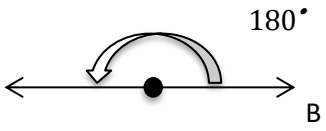
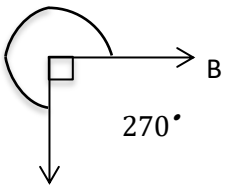
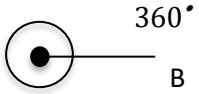
- **Types of Lines**

Type	Description	Diagram
Intersecting Lines	Lines that cross each other at a point.	
Parallel Lines	Lines that lie on same plane, but never meet/intersect.	
Perpendicular Lines	Lines that intersect at right angle (90°).	

• **Angles:** Formed when two rays (called arms) meet at a common endpoint (called Vertex).



Point O is the Vertex, where Ray OA and Ray OB meet.

Types	Description	Diagram
Acute Angle	Angle whose measure less than 90 degree.	
Right Angle	Angle whose measure is 90 degree.	
Obtuse Angle	Angle whose measure is more than 90 degree but less than 360 degree.	
Straight Angle	Angle whose measure is 180 degree.	
Reflex Angle	Angle whose measure is more than 180 degree but less than 360 degree.	
Complete Angle	Angle whose measure is 360 degree.	

• **Pair of Angles**

Pair Type	Description	Example
Complementary Angles	Sum of angles is 90°	30° + 60°
Supplementary Angles	Sum of angles is 180°	110° + 70°
Adjacent Angles	Share a common arm	∠ABC & ∠CBD

	and vertex	

- **Angle Measurement Tips**
  a. Use a protractor to measure angles.
  b. Place the midpoint of the protractor on the vertex.
  c. Ensure one arm of the angle lies along the 0° line.

- **Important Properties**
  a. **The vertically opposite angles are always equal.**
  b. **Sum of angles on a straight line** = 180°.
  c. **Complementary angle** = 90° – given angle.
  d. **Supplementary angle** = 180° – given angle.

- **Real-Life Examples**
  a. Hands of a clock at 3:00 → Right angle
  b. Edges of a book → Perpendicular lines
  c. Ladder leaning on wall → Acute angle