Lines and Angles

Line

A line is a collection of points extended endlessly in both the directions along a straight path.

Q

Y

- Look at the line PQ or QP below. We write it is written as \overrightarrow{PQ} or \overrightarrow{QP} .
- A line has no end points. It has no beginning and no end.
- The arrowheads on both the sides of a line show that we can extend it endlessly in both the directions.
- A line has no definite length.
- We name a line by naming any two points on it.

Х

Ρ

Line Segment

A line segment is a part of a line. XY is a line segment and we can write it as \overline{XY} or \overline{YX} .

- A line segment has two end points.
- A line segment has a fixed length

Intersecting Lines

Two or more lines that cross each other at a point are called intersecting lines.

AB and CD you see in the figure alongside are two intersecting lines. O is the point of intersection.



Lines and Angles

Parallel Lines

Lines which are at equal distance from each other and do not intersect are called **parallel lines**. The symbol for parallel lines is **II**. PQ is parallel to RS in the figure shown alongside, and we write them as PQ II RS.



Perpendicular Lines

When two lines meet each other to form a right angle (90°), then the lines are called **perpendicular lines**. The symbol used to represent perpendicular lines is \bot .

PQ is perpendicular to RS in the figure you see alongside. We can write them as PQ \perp RS

