Points and Lines

☞ **A. Point:** A point gives an idea of a location by making a dot by a sharp pencil on a paper. It has no Length, breadth and size. A point determines a location. A point has no dimension i.e., no shape or size.

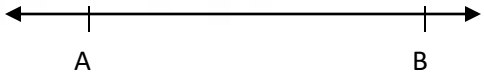
⇨ **For example:** The tip of a compass, the sharpened end of a pencil, the pointed end of a needle.

A point is denoted by a capital letter of the alphabet like A, B, C etc. .A .B .C

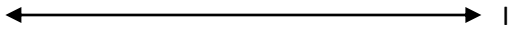
⇨ **B. Line:** A line is a straight path that extends indefinitely in both directions. It has no end points. It has neither breath nor thickness.

☞ Properties of lines

1. A line has no end points a line can be named in the following two ways:
(i) Two points, say A and B, are marked on the line in the line is named as AB and read as line AB.



(ii) A line is also named by a small letter of alphabet, such as l.

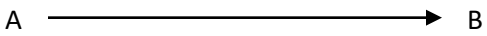


2. We mark arrowheads on the two ends of any model of a line. These Arrowheads indicate that the line extents indefinitely in both the directions.
3. We can draw an unlimited number of lines passing through a point.
4. We can mark and unlimited number of points on a given line.

2. Intersecting lines and rays - If two lines have one common point, they are called intersecting lines.

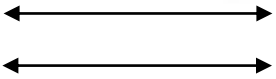
⇨ **C. Ray:** A ray is also part of a line which has only one end point and can be extended endlessly in One Direction. A Ray has no breath or thickness. Light coming from Sun or torch is an example of a ray.

A ray is represented by (AB). It shows that A is the fixed point and B is a point on the path of a ray.



⇨ **D. Parallel Lines:** When two lines do not intersect each other and they have no point in common, they are called parallel lines.

For example: the opposite edges of a ruler, rail lines, crossbars of a window etc. are parallel lines.



⇨ **E. Line segment:** A line segment is a portion of a line with two fixed end points.

For example: An edge of a box, a Tubelight, the edge of a postcard etc, the example of line segments.

⇨ **F. Collinear points:** Three or more points in a plane are said to be collinear if they all lie on the same line.

⇨ **G. Concurrent lines:** Three or more lines in a plane are said to be concurrent if all of them pass through the same point.

The point O is called the point of concurrence.