

# Coordinate Geometry

| S.no | Points  |
|------|---|
| 1    | We require two perpendicular axes to locate a point in the plane. One of them is horizontal and other is Vertical                                       |
| 2    | The plane is called Cartesian plane and axis are called the coordinates axis  |
| 3    | The horizontal axis is called x-axis and Vertical axis is called Y-axis   |
| 4    | The point of intersection of axis is called origin.   |
| 5    | The distance of a point from y axis is called x -coordinate or abscissa and the distance of the point from x -axis is called y – coordinate or Ordinate |
| 6    | The distance of a point from y axis is called x -coordinate or abscissa and the distance of the point from x -axis is called y – coordinate or Ordinate |
| 7    | The Origin has zero distance from both x-axis and y-axis so that its abscissa and ordinate both are zero. So the coordinate of the origin is (0, 0)     |
| 8    | A point on the x –axis has zero distance from x-axis so coordinate of any point on the x-axis will be (x, 0)  |
| 9    | A point on the y –axis has zero distance from y-axis so coordinate of any point on the y-axis will be (0, y)  |
| 10   | The axes divide the Cartesian plane in to four parts. These Four parts are called the quadrants   |

The coordinates of the points in the four quadrants will have sign according to the below table

| Quadrant       | x-coordinate | y-coordinate |
|----------------|--------------|--------------|
| Ist Quadrant   | +            | +            |
| IIInd quadrant | -            | +            |
| IIIrd quadrant | -            | -            |
| IVth quadrant  | +            | -            |