CO – ORDINATE GEOMETRY
CLASS 9

Basic Concepts

1. To locate the position of an object or a point in a plane, we require two perpendicular lines, one of them is horizontal and the other is vertical.
2. The horizontal line is called the $x-$ axis and the vertical line is called the $y-$ axis.
3. We call the plane, the cartesian plane, or the coordinate plane or the $xy-$ plane. The axes are called the coordinate axes.
4. The point of intersection of the axes that is $x-$ axis and $y-$ axis is called the origin.
5. The coordinate axes divide the plane into four parts, called quadrants.
6. The distance of a point from the $y-$ axis is called its $x-$ coordinate or abscissa. The distance of a point from the $x-$ axis is called the $y-$ coordinate or ordinate.
7. If $x \neq y$, then the position of (x, y) in the cartesian plane is different from the position of (y, x). It means the order of x and y is important in (x, y). Therefore, (x, y) is called an ordered pair.
8. A point in a plane can be represented by an ordered pair (x, y), where x is the $x-$ coordinate (abscissa) and y is the $y-$ coordinate (ordinate) of the point.
9. The coordinates of the origin are $(0, 0)$.
10. The coordinates of a point on the $x-$ axis are of the form $(x, 0)$ and that of a point on the $y-$ axis are $(0, y)$.
11. A point in the first quadrant will be of the form $(+, +)$. Similarly, a point in the second, third and fourth quadrants will be of the form $(-, +), (-, -)$ and $(+, -)$ respectively.