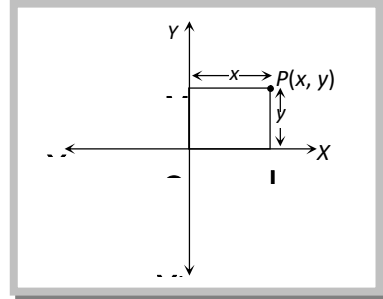


Cartesian Co-ordinates of a Point.

This is the most popular co-ordinate system.

Let us consider two intersecting lines XOX' and YOY' , which are perpendicular to each other. Let P be any point in the plane of lines. Draw the rectangle $OLPM$ with its adjacent sides OL, OM along the lines XOX' ; YOY' respectively. The position of the point P can be fixed in the plane provided the locations as well as the magnitudes of OL, OM are known.



Axis of x : The line XOX' is called axis of x .

Axis of y : The line YOY' is called axis of y .

Co-ordinate axes: x axis and y axis together are called axis of co-ordinates or axis of reference.

Origin: The point ' O ' is called the origin of co-ordinates or the origin.

Oblique axes: If both the axes are not perpendicular then they are called as oblique axes.

Let $OL=x$ and $OM=y$ which are respectively called the abscissa (or x -coordinate) and the ordinate (or y -coordinate). The co-ordinate of P are (x, y) .

Note: Co-ordinates of the origin is $(0, 0)$.

- The y co-ordinate of every point on x -axis is zero.
- The x co-ordinate of every point on y -axis is zero.