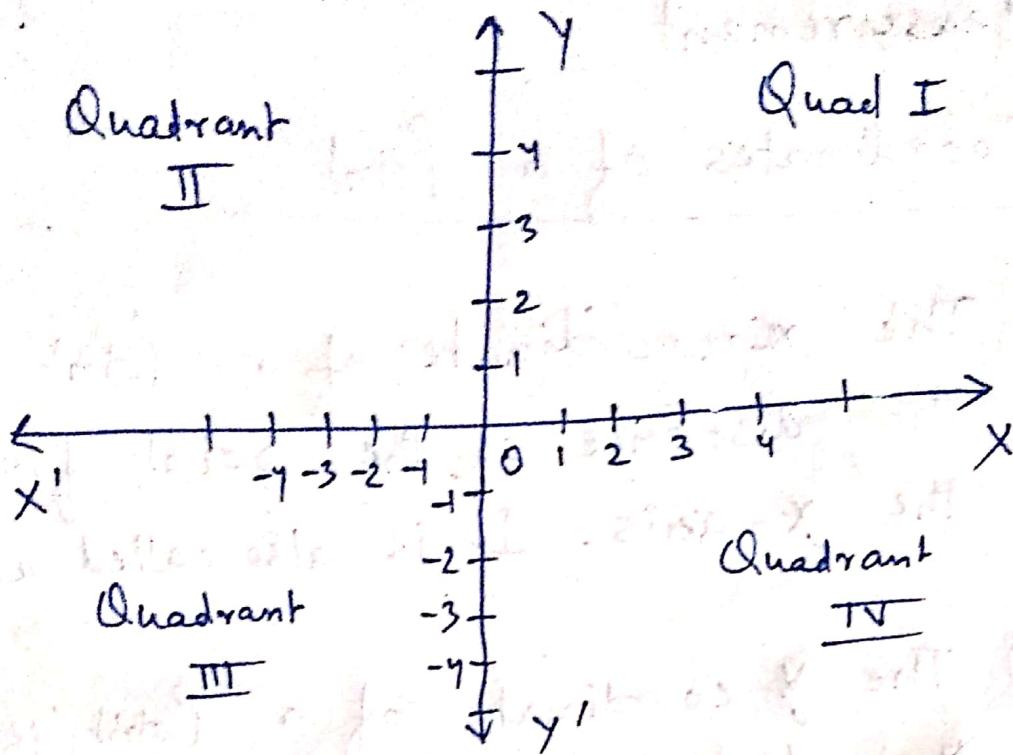


## Cartesian Coordinate System.

Descartes invented the idea of placing one vertical and one horizontal line perpendicular to each other on a plane such that they cross each other at their zeroes or origins.



(i) The line  $XX'$  is called the  $x$ -axis.

(ii) The line  $YY'$  is called the  $y$ -axis.

(iii) The point where  $x$ -axis and  $y$ -axis cross each other is called the origin.

(iv) Since  $OX$  and  $OY$  have positive numbers they are called positive directions of  $x$  and  $y$ -axis, respectively.

(v) Two lines divide the plane into four parts called as quadrant. Starting anticlockwise from  $OX$  called I, II, III and IV.

## Coordinates of a Point.

- 1) The  $x$ -coordinate of a point is the distance of the point from the  $y$ -axis. It is also called abscissa.
- 2) The  $y$ -coordinate of a point is its distance from the  $x$ -axis.  
 $y$ -coordinate is also called ordinate.
- 3) In stating the coordinate of a point we write inside a bracket  $x$ -coordinate and  $y$ -coordinate separated by a comma.  
ex :-  $(x, y)$