## ORDERED PAIR

A pair of real numbers p and q listed in a specific order with 'p' at the first place and 'q' at the second place is called an ordered pair and written as (p, q). This ordered pair is also known as coordinates of a point in space.

(p, q) and (q, p) represent two different points.

COORDINATE AXES

Draw two straight lines XOX' and YOY' intersecting at right angles at the point O. These lines are called coordinate axes or axes of reference.
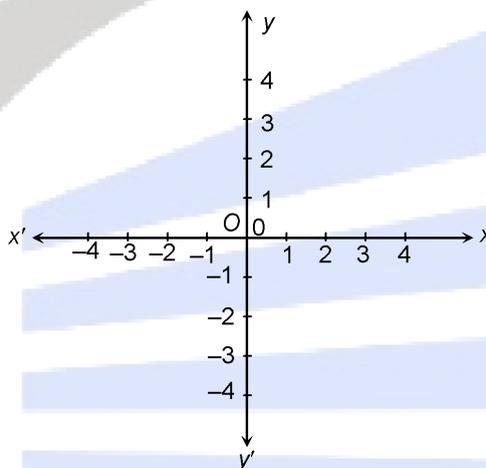
The horizontal line XOX' is called x-axis.

The vertical line YOY' is called y-axis.

The point O is called the origin.

OX represents positive x-axis.

OX' represents negative x-axis.

OY represents positive y-axis.

OY' represents negative y-axis.

Any convenient unit of length is selected and mark equal distances on both axes taking the origin as zero.
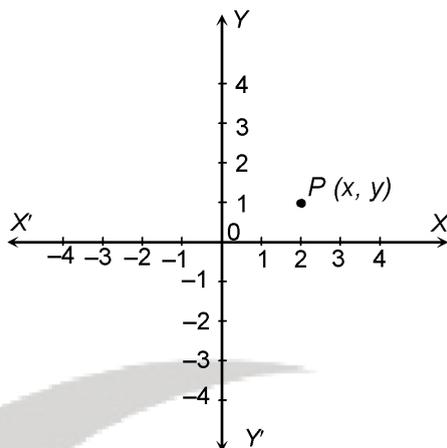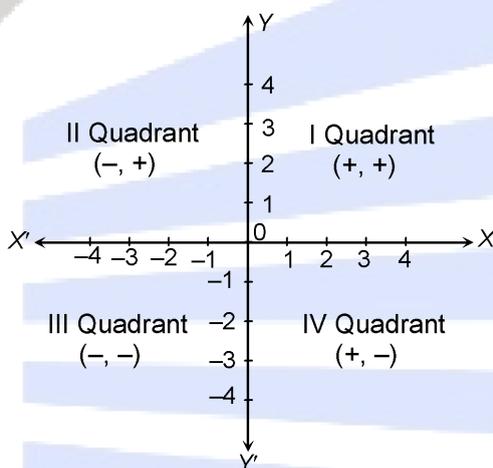
QUADRANTS

The coordinate axes XOX' and YOY' divide the plane of paper into 4 regions. XOY, YOX', $X'OY'$, $Y'OX$. These four regions are called the first, the second, the third and the fourth quadrants respectively.

The distance measured along x-axis is called x-coordinate or abscissa.

The distance measured along y-axis is called y-coordinate or ordinate.

While representing the coordinates of a point, x-coordinate should be written first and y.

oordinate should be written second. The $P(x, y)$ represents the coordinates of a point P in a plane.

SIGN CONVENTION

Region	Quadrant	x-coordinate	y-coordinate	Point
XOY	I	+	+	(+, +)
YOX'	II	−	+	(−, +)
$X'OY'$	III	−	−	(−,−)
$Y'OX$	IV	+	−	(+,−)

PLOTTING OF POINTS

2. GRAPH OF LINEAR EQUATION $ax + by + c_1 = 0$

1. Arrange the terms to find the value of y in terms of x
   i.e. $y = mx + c$ form

   where $m = -\dfrac{a}{b}$ and $c = -\dfrac{c_1}{a}$

2. Assume three integer values of x, and get the corresponding values of y.

3. Prepare a table for the ordered pairs (x, y).

4. Plot these points on a graph paper by considering suitable scale.

5. Join these points to obtain the graph of the line $ax + by + c_1 = 0$.

C-9, Greater Kailash Enclave 2, New Delhi; Phone: 9810815644, 9910393669
Email: info.educonclave@gmail.com; sangeettuli@gmail.com

3