B.B.S.S. Sec. School

CLASS-IX

Sub: Maths

Ch-3: Co-ordinate Geometry.

Co-ordinate Geometry :- A system of geometry in which the position of points on the plane is described using an oridered pair of numbers.
If we have to locate a point in a plane, co-ordinate geometry gives us the way to locate the point by using two numbers.

Cartesian Co-ordinate axes:

Let XOX' and YOY' be two mutually perpendicular references lines shown in fig. These two lins intersect at point O. the horizontal lins XOX' is called x-axis. The vertical line YOY' is called y-axis. the point O is called orgin.

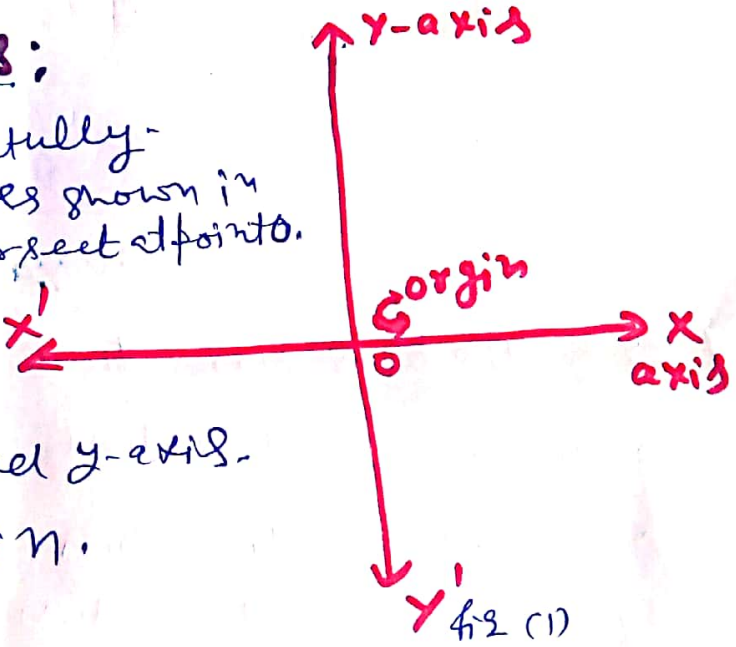


fig (1)

Co-ordinate plane:

The plane which holds the co-ordinate axis is known as co-ordinate plane. The two numbers written in ordered pair is known as the co-ordinate of the point.
In the fig(2) the point A has an x value of 3 and a x value of 4 These values are the co-ordinate of point A and is written as A(3,4) an the co-ordinate of intersecting point O is O(0,0).

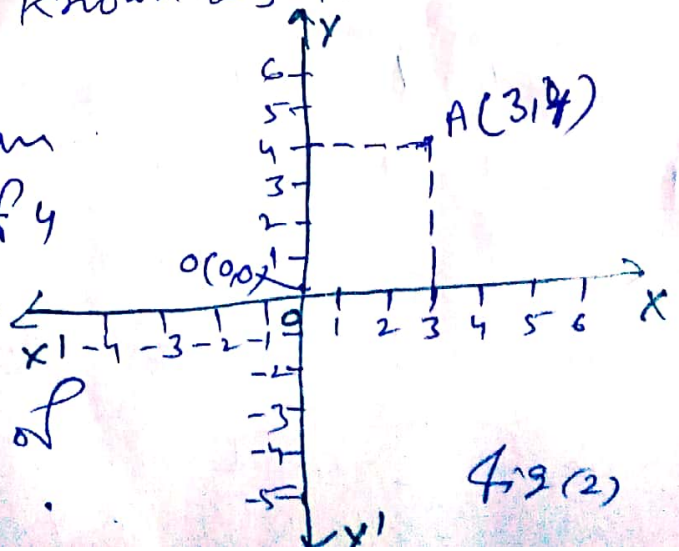
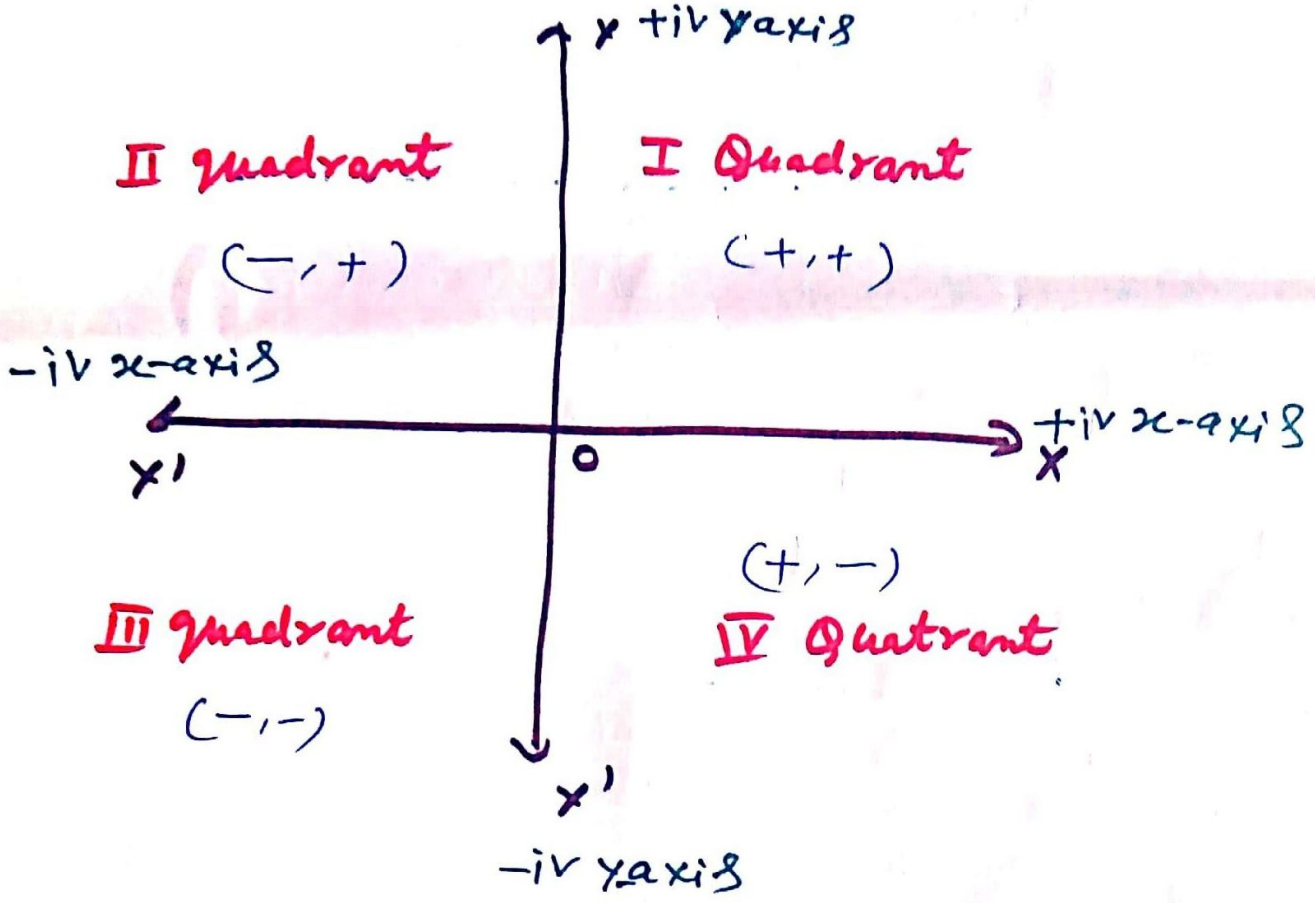


fig (2)

Convention of signs:-



OX is the +iv direction of x-axis,

OX' is the −iv direction of X-axis.

OY is the +iv direction of x-axis

OY' is the −iv direction of y-axis.

When a point is in.

I Quadrant x-value +iv and y value: +iv. (+, +)

II Quadrant, x value −iv and y value: +iv (−, +)

III Quadrant. x value −iv and y-value −iv. (−, −)

IV Quadrant x value +iv and y value iv. (+, −)

The x-co-ordinate of a point is its perpendicular distance from x-axis. X-co-ordinate of a point is known as abscissa.

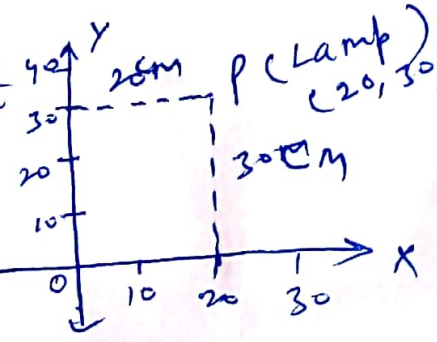
The y-co-ordinate of a point is its perpendicular distance from y-axis. y co-ordinate of a point is known as ordinate

Ex. 3.1 (NCERT)

Q.1 (-2,4) P and table as a plane

Consider the lamp as a point

choose any two ⊥ edges of the table, say OX and OY. measure the distance of the lamp P from the longer edge OX let it be 30cm. Again measure the distance of the lamp P from the shorter edge OY let it be 20cm. Thus the position of lamp P referred to the edge OX and OY is (30, 20).



Q.2 From the fig we have the following

(i) The coordinates of B are (-5, 2)

(ii) The co-ordinates of C are (5, -5)

(iii) The co-ordinate of (-3, -5) are identify by the point E.

HOMEWORK: NCERT Ex 3.1 Q.2

E 3.2. Q1, Q2 (iv) to (viii).

HOME ASSIGNMENT:

Q.1 Fill in the blanks

(i) Abscissa of point (2, -5) is ----

(ii) Ordinate of point (0, -3) is ----

(iii) Co-ordinate of a point on x axis is ---

(iv) Co-ordinate of a point on y axis is ---

(v) Point (2, -3) lies in ---- quadrant.

Q.2 plot the points given in the table below in the cartesian plane.

x	-1	3	0	-8	5	-3
y	7	4	7	0	-2	3

Q.3 In which quadrant or on which axis each of following point lie (i) (-3, 5) (ii) (4, -1) (iii) (2, 0) (iv) (-3, -5)