## ASSIGNMENT
CLASS – IX
CH. – 3 (CO- ORDINATE GEOMETRY)

1. Which of the following points lie in I and II quadrants?

   (1, 1), (2, –3), (–2, 3), (-1, 1), (–3, –2), (4, 3)

2. Which of the following points lie on (a) x-axis (b) y-axis ?

   (5, 1), (8, 0), (0, 4), (–3, 0), (0, –3), (0, 5), (0, 0)

3. If the x-coordinate of a point is negative, it can lie in which quadrants?

4. From the figure, write the coordinates of the point P, Q, R and S. Does the line joining P and Q pass through origin?
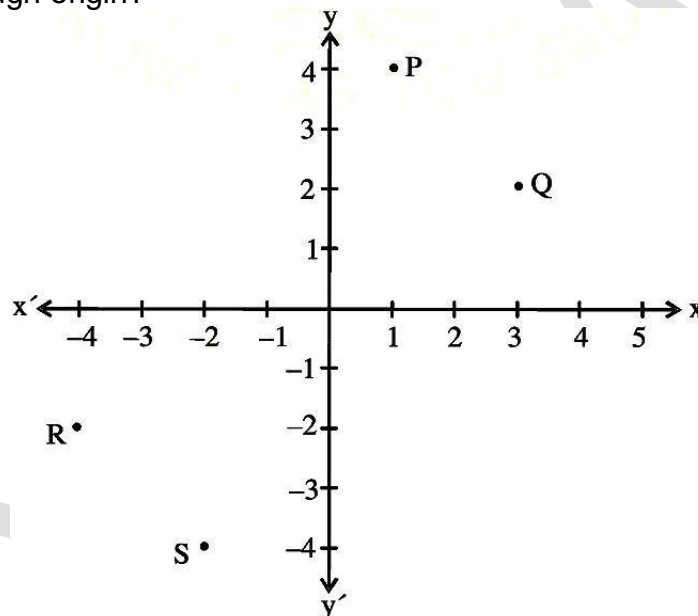
5. Write the coordinates of the following points:
   (i) lying on both axes
   (ii) lying on x-axis and with x-coordinate 4
   (iii) lying on y-axis with y-coordinate –3.

6. The coordinates of the three vertices of a rectangle ABCD are A(3, 2), B(–4, 2), C(–4, 5). Plot these points and write the coordinates of D.

7. ABC is an equilateral triangle as shown in the figure. Find the coordinates of its vertices.
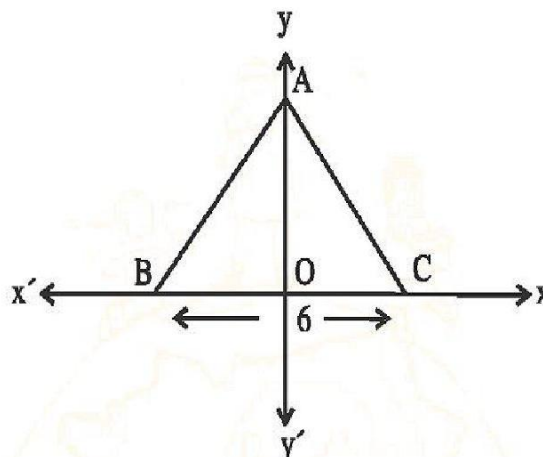
8. Plot the following points on a graph paper:

X	1	2	3	4	5
Y	5	8	11	14	17

Join these points. What do you observe?

9. What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?

(I) What is the name of each part of the plane formed by these two lines?

(II) Write the name of the point where these two lines intersect.

10. Locate the points (5, 0), (0, 5), (2, 5), (5, 2), (–3, 5), (–3, –5), (5, –3) and (6, 1) in the Cartesian plane.

11. Draw the line passing through (2, 3) and (3, 2). Find the coordinates of the points at which this line meets the *x*-axis and *y*-axis.

12. Plot the following ordered pairs of number (*x*, *y*) as points in the Cartesian plane. Use the scale 1cm = 1 unit on the axes.

X	–3	0	–1	4	2
Y	7	–3.5	–3	4	–3

13. Plot the points (*x*, *y*) given in the following table on the plane, choosing suitable units of distance on the axes.

X	–1	2	–4	2	–3
Y	0	–5	2	1	2

14. points A (4, 4) and (–4, 4) on a graph sheet. Join the lines OA, OB and BA. What figure do you obtain.

15. Plot the point P (– 6, 2) and from it draw PM and PN as perpendiculars to *x*-axis and *y*-axis, respectively. Write the coordinates of the points M and N.

16. Plot the following points and write the name of the figure thus obtained : P(–3, 2), Q (–7, –3), R (6, –3), S (2, 2)

17. Plot the following points and check whether they are collinear or not :
  a. (1, 3), (– 1, – 1), (– 2, – 3)
  b. (1, 1), (2, – 3), (– 1, – 2)
  c. (0, 0), (2, 2), (5, 5)

18. . Complete the following table by putting a tick or a cross for the given points and their location.

Point	I quadrant	II quadrant	III quadrant	IV quadrant	x-axis	y-axis
(0, 0)						
(1, 2)						
(1, –2)						
(–2, 1)						
(–1, –2)						
(0, –2)						
(–2, 0)						
(7, 9)						

19. Without plotting the points indicate the quadrant in which they will lie, if
(i) ordinate is 5 and abscissa is – 3
(ii) abscissa is – 5 and ordinate is – 3

(iii) abscissa is – 5 and ordinate is 3

(iv) ordinate is 5 and abscissa is 3

20. Which of the following points lie on *y*-axis?

A (1, 1), B (1, 0), C (0, 1), D (0, 0), E (0, – 1), F (– 1, 0), G (0, 5), H (–7, 0), I (3, 3).

21. A point lies on the *x*-axis at a distance of 7 units from the *y*-axis. What are its coordinates? What will be the coordinates if it lies on *y*-axis at a distance of –7 units from *x*-axis?

22. Find the coordinates of the point

(i) which lies on *x* and *y* axes both.

(ii) whose ordinate is – 4 and which lies on *y*-axis.

(iii) whose abscissa is 5 and which lies on *x*-axis.

23. Taking 0.5 cm as 1 unit, plot the following points on the graph paper : A (1, 3), B (– 3, – 1), C (1, – 4), D (– 2, 3), E (0, – 8), F (1, 0)

24. Plot the points P (1, 0), Q (4, 0) and S (1, 3). Find the coordinates of the point R such that PQRS is a square.