# Worksheet (Class IX)
## Coordinate Geometry

1.  Where does the following points lie on the coordinate plane?
    (i) (–3, 5)     (ii) (0, –7)     (iii) (0, 0)     (iv) (2, 0)     (v) (–2, –5)     (vi) (2, –3)

    [(i) II quad.    (ii) negative y-axis    (iii) point of intersection of x and y axes
    (iv) positive x-axis    (v) III quad.    (vi) IV quad.]

2.  What do we call the point at which two coordinate axes meet?        [origin]

3.  What is the abscissa and ordinate of all the points on x-axis?    [abscissa – any number
                                                      ordinate – 0]

4.  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.     [M(-6, 0), N(0, 2)]

5.  Plot the following points on a graph and name the figure obtained by joining them in order: P(-3, 2), Q(-7, -3), R(6, -3), S(2, 2).     [Trapezium]

6.  Points A(5, 3), B(-2, 3) and D(5, -4) are three vertices of a square ABCD. Plot these points on a graph and hence find the coordinates of the vertex C.     [C(-2, -4)]

7.  Write the coordinates of the vertices of a rectangle whose length and breadth are 5 and 3 units respectively, one vertex at the origin, the longer side lies on the x-axis and one of the vertices lies in the third quadrant.     [(0, 0), (-5, 0), (-5, -3), 90, -3)]

8.  Find the distance of the point P(4, 3) from the origin if a perpendicular from P is droped on x-axis.     [5 units]

9.  Plot the points A(4, 0), B(6, 0) and C(4, 6) on a graph and join them in order, then find the area of the figured obtained by joining A, B and C.     [12 cm$^2$]

10. Find the area of the triangle formed by joining the points P(0, 1), Q(0, 5) and R(3, 4).
                                                       [6 cm$^2$]

11. Where does two points having same abscissa but different ordinates lie on the coordinate plane.     [a line parallel to y-axis]