

National Institute of Open Schooling (NIOS)
Senior Secondary Course
Lesson – 13: Cartesian System of Rectangular Co-ordinates
Worksheet -13

1. If three vertices of a rectangle ABCD as $A(0,-1)$, $B(6,7)$, $C(-2,3)$, then find the co-ordinate the fourth vertex D.
2. Draw Cartesian co-ordinate axis on the plan paper. Identify four quadrants and take any two points on any quadrant.
3. If the co-ordinates of the mid-points of the sides of a triangle are $(1, 1)$, $(2, -3)$ and $(3, 4)$, then find its centroid.
4. Find the co-ordinates of the point which divides the line segment joining the points $(3, -4)$ and $(-5, 7)$ internally and externally in the ratio 5:3.
5. Take vertices of a rectangle and show that figure formed by joining the midpoints of the sides of a rectangle is a rhombus.
6. Taking randomly the co-ordinates of vertices of any triangle ABC, find the area of the triangle ABC.
7. For what value of x , three points $(2,3)$, $(x,5)$ and $(5, 12)$ are collinear?
8. If a line is equally inclined the axes, prove that slope is positive one or negative one.
9. Find the point's one x-axis, where distance from the line is $\frac{x}{3} + \frac{y}{4} = 1$ are 4 units.
10. Find the equation of the line perpendicular to the line $x - 7y + 5 = 0$ and having x-intercept 3.