

Mathematics Assignment (Class-X)

Chapter-7 Coordinate Geometry

	1 MARKER QUESTIONS
1	The distance of the point $(-6, 8)$ from the origin is _____ units: (a) 8 (b) 10 (c) 10 (d) 9
2	Two vertices of a triangle are $(-8, 11)$ and $(2, -5)$. The coordinates of the third vertex of the triangle, given that the centroid of the triangle is $(-1, 5)$, are: (a) $(8, 7)$ (b) $(3, 9)$ (c) $(11, -10)$ (d) $(5, -9)$
3	If the mid-point of the line segment joining the points $P(a, b - 2)$ and $Q(-2, 4)$ is $(2, -3)$, find the values of a and b .
4	If the points $(5, 4)$ and (x, y) are equidistant from the point $(4, 5)$; then find the relationship between x and y .
5	If the distance between the points $(0, y)$ and $(8, 9)$ is 8 units, find the value of y .
6	The area of a triangle whose vertices are $A(1, 2)$; $B(3, 5)$ and $C(-4, -7)$, is _____.
7	The coordinates of the point which divides the line segment joining the points $(1, 3)$ and $(2, 7)$ in the ratio $3 : 4$ are _____.
	2 MARKER QUESTIONS
8	If the distance of the point $P(x, y)$ from the points $A(5, 1)$ and $B(-1, 5)$ are equal, show that $3x = 2y$.
9	Show that the points $(1, 1)$; $(3, -2)$ and $(-1, 4)$ are collinear.
10	For what value of m , the points $(4, 3)$; $(m, 1)$ and $(1, 9)$ are collinear?
11	In what ratio does the point $(-4, 6)$ divide the line segment joining the points $A(-6, 10)$ and $B(3, -8)$.
12	$PQRS$ is a square of side ' b ' units. If P lies at the origin, sides PQ and PS lie along x -axis and y -axis respectively, find the coordinates of the vertices of the square $PQRS$.
13	A is a point on y -axis whose ordinate is 4 and B is a point on x -axis whose abscissa is -3 . Find the length of the line segment AB .
	3 MARKER QUESTIONS
14	Let $A(4, 2)$, $B(6, 5)$ and $C(1, 4)$ be the vertices of a triangle ABC . Find the coordinates of the points Q and R on medians BE and CF respectively such that $BQ : QE = 2 : 1$ and $CR : RF = 2 : 1$.
15	Show that the points $(-2, 5)$, $(3, -4)$ and $(7, 10)$ are the vertices of a right triangle. Is this triangle isosceles?

16	The centre of a circle is $(2a - 1, 7)$ and it passes through the point $(-3, -1)$. If the diameter of the circle is 20 units, then find the value of a .
17	If the point (x, y) is equidistant from the points $(a - b, a + b)$ and $(-a - b, a + b)$ prove that $x + b = 0$.
18	Find area of quadrilateral whose vertices taken in order are $(-4, -2)$, $(-3, -5)$, $(3, -2)$, $(2, 3)$.
19	Three consecutive vertices of a parallelogram are $(-2, -1)$, $(1, 0)$ and $(4, 3)$. Find the coordinates of the fourth vertex.
20	If the points $(10, 5)$, $(8, 4)$ and $(6, 6)$ are the mid-points of the sides of a triangle, find its vertices.
21	Find the ratio in which the line segment joining $A(1, -5)$ and $B(-4, 5)$ is divided by the x -axis. Also find the coordinates of the point of division.
22	If the points $(10, 5)$, $(8, 4)$ and $(6, 6)$ are the mid points of the sides of a triangle, find its vertices. Also find the co-ordinates of the centroid of the triangle.
	4 MARKER QUESTIONS
23	The line segment joining the points $P(3, 3)$ and $Q(6, -6)$ is trisected at the points A and B such that A is nearer to P . If A also lies on the line given by $2x + y + k$, find the value of k .
24	Find the centre of a circle passing through the points $(6, -6)$, $(3, -7)$ and $(3, 3)$.
25	$A(-4, -2)$, $B(-3, -5)$, $C(3, -2)$ and $D(2, k)$ are the vertices of a quadrilateral $ABCD$. Find the value of k , if the area of the quadrilateral is 28 square units.
	HOTS
26	In what ratio does the line $4x + y = 11$ divide the line segment joining the points $(1, 3)$ and $(2, 7)$.
27	Determine the ratio in which the line $2x + y - 4 = 0$ divides the line segment joining the points $A(2, -2)$ and $B(3, 7)$.
28	If the points $A(x, y)$, $B(a, 0)$ and $C(0, b)$ are collinear, then prove that $\frac{x}{a} + \frac{y}{b} = 1$
29	Prove that the coordinates of the centroid of a triangle ABC with vertices $A(x_1, y_1)$; $B(x_2, y_2)$; $C(x_3, y_3)$ are given by $(\frac{x_1 + x_2 + x_3}{3}, \frac{y_1 + y_2 + y_3}{3})$.