**ASSIGNMENT (2020-21)**

**CLASS - X SUBJECT – MATHEMATICS**

 **CH- 7(CO ORDINATE GEOMETRY)**

1. Find the value of P for which the point (–1, 3), (2, p) and (5, –1) are collinear.

        (a) 4 (b) 3 (c) 2 (d) 1

1. Find the value of k if the points A(2, 3), B(4, k) and C(6, –3) are collinear.

 (a) 2 (b) 3 (c) 0 (d) 1

1. Find the coordinates of the point equidistant from the points A(1, 2), B (3, –4) and C(5, –6).

 (a) (2, 3) (b) (–1, –2) (c) (0, 3 ) (d) (1, 3)

1. In what ratio of line x – y – 2 = 0 divides the line segment joining (3, –1) and (8, 9)?

 (a) 1 : 2 (b) 2 : 1 (c) 2 : 3 (d) 1 : 3

1. The vertices of a ΔABC and given by A(2, 3) and B(–2, 1) and its centroid is G$\left(1,\frac{2}{3}\right)$ .Find the coordinates of the third vertex C of the ΔABC.

 (a) (0, 2) (b) (1, –2) (c) (2, –3) (d) (–2, 3)

1. Find the relation between x and y if points (2, 1), (x, y) and (7, 5) are collinear.
2. If A (-2, 4), B (0, 0) and C (4, 2) are the vertices of triangle ABC, then find the length of the median through the vertex A.
3. Find the coordinates of the point P dividing the line segment joining the points A (1, 3) and B (4, 6) in the ratio 2:1.
4. The mid-point of segment AB is the point P (0, 4). If the Coordinates of B are (-2, 3) then find the coordinates of A.
5. If p (x, y) is any point on the line joining the points A (a, 0) and B (0, b), then

Show that$ \frac{x}{a}+\frac{y}{b}=1$.

1. Find the area of quadrilateral ABCD whose vertices are A (-4, -2), B (-3, -5), C (3, -2), D (2, 3).
2. Prove that the points (7, 10), (-2,5) and (3,-4) are the vertices of an isosceles right triangle.
3. If point A (0,2) is equidistant from the point B (3, p)and C (p, 5), find p.
4. If the coordinates of one end of a diameter of a circle are (2, 3) and the coordinates of its centre are (-2, 5), then what are the coordinates of the other end of the diameter?
5. The coordinates of A and B are (1, 2) and (2, 3). If P lies on AB then find the coordinates of P such that: $\frac{AP}{PB}=\frac{4}{3}$