DELHI PUBLIC SCHOOL JAMMU
SESSION: 2024-2025
ASSIGNMENT

CHAPTER: COORDINATE GEOMETRY

1. If the distance between the points A(2, -2) and B(-1, x) is equal to 5, then the value of x is:

   (a) 2

   (b) -2

   (c) 1

   (d) -1

2. The ratio in which the line segment joining the points P(-3, 10) and Q(6, –8) is divided by O(-1, 6) is:

   (a) 1:3

   (b) 3:4

   (c) 2:7

   (d) 2:5

3. A line intersects the y-axis and x-axis at the points P and Q, respectively. If (2, -5) is the midpoint of PQ, then the coordinates of P and Q are, respectively

   (a) (0, -5) and (2, 0)

   (b) (0, 10) and (-4, 0)

   (c) (0, 4) and (-10, 0)

   (d) (0, -10) and (4, 0)

4. Determine if the points (1, 5), (2, 3) and (-2, -11) are collinear.

5. Find the values of y for which the distance between the points P (2, -3) and Q (10, y) is 10 units.

6. Find the coordinates of the points of trisection (i.e., Points dividing in three equal parts) of the line segment joining the points A (2, -2) and B (-7, 4).

7. Find the ratio in which the point (-3, k) divides the line-segment joining the points (-5, 4) and (-2, 3). Also find the value of k.

8. If the points (2, 1) and (1, -2) are equidistant from the point (x, y), show that $x + 3y = 0$.

9. Prove that the points (2, 3), (-4, -6) and (1, 3/2) do not form a triangle.

10. Ayush starts walking from his house to the office. Instead of going to the office directly, he goes to the bank first, from there to his daughter's school and then reaches the office. What is the extra distance travelled by Ayush in reaching the office? (Assume that all distances covered are in straight lines). If the house is situated at (2, 4), bank at (5, 8), school at (13, 14) and office at (13, 26) and coordinates are in kilometers.

11. Find the ratio in which the point (2, y) divides the line segment joining the points A(-2, 2) and B(3, 7). Also, find the value of y.