INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet for the Academic Year 2023-24

CLASS: X SUBJECT: MATHEMATICS DATE:26-10-2023

LESSON:7 – CO-ORDINATE GEOMETRY

Level 1

1. Find the distance of the point P (3, -4) from the origin (Ans: 5 units)
2. If the points P (x, y) is equidistant from the points A (5,1) and B (1,5), then prove that x = y
3. Show that the points A (3,0), B 6,4) and C (-1,3) are vertices of a right-angled triangle
4. The line segment joining the points A (4, -5) and B (4,5) is divided by the point P such that AP: AB = 2:3. Find the coordinates of P (Ans: (4, -1))
5. If the points A (6,1), B (8,2), C (9,4) and D(p,3) are the vertices of a parallelogram, taken in order, then find the value of p (Ans: 7)
6. Find the value of k, if (6, k) lies on the line represented by x – 3y + 6 = 0

   (Ans:4)

7. Find the point on the X-axis which is equidistant from the points (-1,0) and (5,0) (Ans: (2,0))
8. Show that the points A (5, -1), B (8,3), C (4,0), and D (1, -4) are the vertices of a rhombus.
9. Determine the ratio in which the line 3x + y – 9 = 0 divides the segment joining the points (1,3) and (2,7) (Ans: 3:4)
10. Find the co-ordinates of the point R on the line segment joining the points P (-1,3) and Q (2,5) such that PR = $\frac{3}{5}$ PQ. (Ans: $\frac{4}{5}, \frac{21}{5}$)
11. Find the ratio in which the y-axis divides the line segment joining the points (5, -6) and (-1, -4). Also, find the co-ordinates of the point of division.

    (Ans: 5: 1, $(0, \frac{-13}{3})$)

Level 2

12. Find the centre of the circle passing through (5, -8), (2, -9) and (2,1) (Ans: (2, -4))
13. Two opposite vertices of a square are (-1,2) and (3,2). Find the coordinates of the other two vertices. (Ans: (1,0) and (1,4))
14. Points A (3,1), B (5,1), C (a, b) and D (4,3) are vertices of a parallelogram ABCD. Find the values of a & b (Ans: a = 6 & b = 3)
15. The line joining the points (2,1) and (5, -8) is trisected at the points P and Q. If point P lies on the line 2x – y + k = 0. Find the value of k (Ans: k = -8)
16. If (-2,3), (4, -3) and (4,5) are the mid points of the sides of a triangle, Find the coordinates of its centroid. (Ans: $(2,\frac{5}{3})$)

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