

**COORDINATE GEOMETRY****PRACTICE PAPER Class 10**

- Q1. Find the co-ordinates of a point which divide the segment AB in the ratio 3:5 internally, where A (4, -1) and B(-2, 4).
- Q2. Find the co-ordinates of points of trisection of the segment joining points (4, -8) and (7, 4).
- Q3. In what ratio does the point (3, 12) divide line segment joining the points (1, 4) and (4, 16)?
- Q4. Determine the ratio in which the line  $3x + y - 9 = 0$  divides the segment joining the points (1, 3) and (2, 7).
- Q5. Find the point which represents  $\frac{3}{4}$  of the distance from (3, 2) and (-5, 6).
- Q6. (a) In what ratio the line segment joining the points (-2, -3) and (3, 7) is divided by y-axis? Also, find the co-ordinates of the point of division.
- (b) In what ratio the line segment joining the points (2, -3) and (5, 6) is divided by y-axis? Also, find the co-ordinates of the point of division.
- Q7. If A (5, -1), B (-3, -2) and C (-1, 8) are the vertices of  $\triangle ABC$ , find length of median through A and also find the co-ordinates of the centroid.
- Q8. Find the co-ordinates of vertices of triangle, if the co-ordinates of mid points of sides of the Triangle are:
- (a) (3, 2), (4, 4) and (1, 3)
- (b) (3, 4), (4, 1) and (2, 0)
- Q9. Find co-ordinate of centroid of triangle whose vertices are:
- (a) (-2, 1), (-3, 4) and (8, -11)
- (b) (-2, 4), (7, -3) and (4, 5)
- Q10. Find the third vertex of triangle, if its two vertices are (-4, 1) and (5, 2) and its centroid is (1, 3).
- Q11. Three consecutive vertices of a parallelogram are (-2, -1), (1, 0) and (4, 3). Find its fourth vertex.
- Q12. Find the co-ordinates of points which divide the line segment joining the points (-4, 0) and (0, 6) in four equal parts.
- Q13. Find the value of x such that  $PQ = QR$ , where the co-ordinates of P, Q and R are (6, -1), (1, 3) and (x, 8).
- Q14. Find the point on x-axis which is equidistant from points (7, 6) and (-3, 4).
- Q15. A line segment joining the points (3, -4) and (1, 2) is trisected at the points P and Q. If the co-ordinates of P and Q are (p, -2) and ( $\frac{5}{3}$ , q) respectively. Find p and q.

Q16. Determine ratio in which the point  $P(m, 6)$  divides the join of  $A(-4, 3)$  and  $B(2, 8)$ .  
Also find  $m$ .

Q17. Prove that the four points whose co-ordinates are  $(0, 5)$ ,  $(-2, -2)$ ,  $(5, 0)$  and  $(7, 7)$  form rhombus.

Q18. Prove that  $(-5, 6)$ ,  $(3, 0)$  and  $(9, 8)$  are the vertices of an isosceles right-angled triangle.

Q19. The co-ordinates of the mid points of the sides of a triangle are  $(1, 1)$ ,  $(2, -3)$  and  $(3, 4)$ .

Find The co-ordinates of its centroid.

Q20. If two vertices of an equilateral triangle are  $(0, 0)$ ,  $(3, 3)$ , find the third vertex.

Q21. Find the lengths of the medians of a  $\triangle ABC$  whose vertices are  $A(7, -3)$ ,  $B(5, 3)$  and  $C(3, -1)$ .

Q22. 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  $k$ .

Q23. If the point  $(x, y)$  is equidistant from the points  $(a+b, b-a)$  and  $(a-b, a+b)$ , prove that  $bx = ay$ .

### Answers

Ans 1.  $(7/4, 7/8)$     Ans2.  $(5, -4)$  and  $(6, 0)$     Ans3.  $2:1$     Ans4.  $3:4$     Ans5.  $(-3, 5)$     Ans6. (a)  $2:3$  and  $(0, 1)$  (b)  $1:2$     Ans7.  $65$  and  $(1/3, 5/3)$     Ans8. (a)  $(0, 1)$ ,  $(6, 3)$  and  $(2, 5)$  (b)  $(1, 3)$ ,  $(5, 5)$  and  $(3, -3)$     Ans9. (a)  $(1, -2)$  (b)  $(3, 2)$     Ans10.  $(-1, 3)$     Ans11.  $(1, 2)$     Ans12.  $(-3, 3/2)$ ,  $(-2, 3)$  and  $(-1, 9/2)$   
Ans13.  $5$  or  $-3$     Ans14.  $3$     Ans15.  $p = 7/3$  and  $q = 0$     Ans16.  $3:2$ ,  $m = -2/5$     Ans19.  $(2, 2/3)$   
Ans20.  $(0, 2)$  or  $(3, -3)$     Ans21.  $5, 5, 10$     Ans 22.  $-8$