

CLASS 10

COORDINATE GEOMETRY

PRACTICE PAPER

- Q1. What is the perimeter of the triangle with vertices $(0, 0)$, $(0, 3)$ and $(4, 0)$?
- Q2. Do the points $(1, 1)$, $(13, 1)$ and $(13, 6)$ are the points of the vertices of a triangle?
- Q3. Find the value of ' k ' so that points $(8, 1)$, $(k, -4)$ and $(2, -5)$ are collinear.
- Q4. Find the relation between x and y if the points (x, y) , $(1, 2)$ and $(7, 0)$ are collinear.
- Q5. Find the ratio in which the point $P(m, 6)$ divides the line segment joining the points $A(-4, 3)$ and $B(2, 8)$. Also find the value of m .
- Q6. If in an equilateral $\triangle ABC$, the two vertices are $A(0,0)$ and $B(3, \sqrt{3})$. Find the third vertex.
- Q7. Find the value of k for which the points $(7, -2)$, $(5, 1)$, and $(3, k)$ are collinear. ($k = 4$)
- Q8. Find the value of m , for which the points with co-ordinates $(3, 5)$, $(m, 6)$ and $[1/2, 15/2]$ are collinear
($m = 2$)
- Q9. If $A(-5, 7)$, $B(-4, -5)$, $C(-1, -6)$ and $D(4, 5)$ are the vertices of a quadrilateral, find the area of the quadrilateral ABCD.
- Q10. ABCDE is polygon whose vertices are $A(-1, 0)$, $B(4, 0)$, $C(4, 4)$, $D(0, 7)$ and $E(-6, 2)$. Find the area of the polygon
- Q11. Using $A(4, -6)$, $B(3, -2)$ and $C(5, 2)$, verify that a median of the $\triangle ABC$ divides it into two triangles of equal areas
- Q12. The coordinates of A, B, C are $(3, 4)$, $(5, 2)$, (x, y) respectively. If area of $\triangle ABC = 3$, show that $x + y = 10$
- Q13. The coordinates of the vertices of $\triangle ABC$ are $A(4, 1)$, $B(-3, 2)$ and $C(0, k)$. Given that the area of $\triangle ABC$ is 12 unit^2 , Find the Value of k
($k = -13/7$)
- Q14. Find the ratio in which the point $(2, y)$ divides the line segment joining the points $A(-2, 2)$

- Q15. Show that the points (a, a) , $(-a, -a)$ and $(-\sqrt{3}a, \sqrt{3}a)$ are the vertices of an equilateral Δ
- Q16. Show that four points $(0, -1)$, $(6, 7)$, $(-2, 3)$ and $(8, 3)$ are the vertices of a rectangle
- Q17. Prove that $(4, -1)$, $(6, 0)$, $(7, 2)$ and $(5, 1)$ are the vertices of a rhombus. Is it a square?
- Q18. Show that the following points are the vertices of a right angled isosceles triangle: $(1, 2)$, $(1, 5)$ and $(4, 2)$
- Q19. Find a relation between x and y such that the point (x, y) is equidistant from the points $(7, 1)$ and $(3, 5)$ ($x - y = 2$)
- Q20. If the distance of $P(x, y)$ from the points $A(3, 6)$ and $B(-3, 4)$ are equal, prove that $3x + y = 5$
- Q21. Find the values of x for which the distance between the points $P(2, -3)$ and $Q(x, 5)$ is 10 units (8 or -4)
- Q22. Given $A(-2, 3)$ and $AB = 10$ units. If ordinate of B is 9, find abscissa of B $(-10, 6)$
- Q23. Find the coordinates of the point equidistant from three given points $A(5, 1)$, $B(-3, -7)$ and $C(7, -1)$ $(2, -4)$
- Q24. If the point $p(x, y)$ is equidistant from the points $A(a + b, b - a)$ and $B(a - b, a + b)$, prove that $b x = a y$
- Q25. Find the point on y -axis which is equidistant from the point $(5, -2)$ and $(-3, 2)$ $(0, -2)$
- Q26. Find the point on x -axis which is equidistant from the points $(2, -5)$ and $(-2, 9)$ $(-7, 0)$
- Q27. If the points $A(4, 3)$, and $B(x, 5)$ are on the circle with the centre. $O(2, 3)$, find the value of x ($x=2$)
- Q28. The three consecutive vertices of a parallelogram are $(-2, 1)$, $(1, 0)$ and $(4, 3)$. Find the Coordinates of the fourth vertex $(1, 4)$
- Q29. Find a relation between x and y , if (x, y) , $(1, 3)$ and $(8, 0)$ are collinear ($3x + 7y = 24$)
- Q30. If the points $(-2, 1)$, (a, b) and $(4, -1)$ are collinear and $a - b = 1$, then find the values of a and b ($a = 1, b = 0$)

- Q31. Check whether the points (4, 5), (7, 6) and (6, 3) are collinear.
- Q32. If P divides the join of A (-2, -2) and B (2, -4) such that $AP/AB = 3/7$, find the coordinates of P $(-2/7, -20/7)$
- Q33. Find the ratio in which the line $2x + y - 5 = 0$ divides the line segment joining A (2, -3) and B (3, 9) $(2:5)$
- Q35. Determine the ratio in which the line $3x + 4y - 9 = 0$ divides the line segment joining the points (1, 3) and (2, 7) $(k = -6/25)$
- Q36. Find the length of medians of triangle whose vertices are A (-1, 3), B (1, -1) and C (5, 1)
- Q37. If the midpoint of the segment joining A (a, b + 1), and B (a + 1, b + 2) is C (3/2, 5/2) Find a and b $(a=1, b=1)$
- Q38. The coordinates of one end point of a diameter of a circle are (4, -1) and the coordinates of the centre of the circle are (1, -3) Find the coordinates of the other end of the diameter $(-2, -5)$
- Q39. If P(x, y) is any point on the line joining the points A (a, 0), B (0, b), then show that $x/a + y/b = -1$
- Q40. 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. $(-4, 2)$