

CO-ORDINATE GEOMETRY (ONE MARK QUESTIONS)

CLASS X (BASIC & STANDARD)

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- Coordinates of the vertices of a triangle are A (-2, 2), B (0, 4) and C (4,-2) then the midpoint of the side BC is ____.
a) (1, 2) b) (2, 1) c) (1,0) d) (-1,3)
- Find the value of k if P (4, -2) is the mid-point of the line segment joining the points A (5k, 3) and B (-k, -7).
a) -2 b) 2 c) 3 d) 1
- Find the point on y-axis which is equidistant from the points (5, -2) and (-3, 2).
 $a = -2$
- Distance of the point (2,-4) from the origin is _____.
a) $2\sqrt{5}$ b) 4 c) $\sqrt{2}$ d) $2\sqrt{2}$
- If the opposite angular points of a square are (4,3) and (-2, -3) then the side of the square is ____
a) 6 b) $6\sqrt{2}$ c) $\sqrt{6}$ d) none
- End points of a diameter of a circle are (2, 3) and (5, 6) . Its centre is ____
a) (7, 9) b) (2,1) c) $(\frac{7}{2}, \frac{9}{2})$ d) (-3,-3)
- If the points (-1,-1); (0, 0) and (2, k) are collinear then the value of k is
a) -3 b) 3 c) 2 d) none
- The ratio in which the x-axis divides the line joining (4, 8) and (3,-5) is
a) 5:7 b) 8:3 c) 8:5 d) none
- What point on the x-axis is equidistant from (7, 6) and (-3, 4)?
a) (3, 0). b) (8, 0) c) (4,0) d) (-3, 0)
- 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.
a) 5 b) 3 c) 2 d) 4
- The centre of a circle is (2x - 1, 7) and it passes through the point (-3, -1). If the diameter of the circle is 20 units, then find the value of x.
a) -4, 2 b) -4, 3 c) 4, -2 d) -4, -2
- If the mid-point of the line segment joining the points P (6, b - 2) and Q (-2, 4) is (2, -3), find the value of b.
(a) -8 (b) 8 (c) -6 (d) -12
- If P (1, 2), Q (4, 6), R (5, 7) and S (a, b) are the vertices of a parallelogram PQRS then find the value of a and b.
a) $a = 2$ and $b = -3$ b) $a = 2$ and $b = 3$ c) $a = -2$ and $b = 3$ d) $a = -2$ and $b = -3$
- Find the ratio in which line formed by joining (-1, 1) and (5, 7) is divided by the line $x + y = 4$.
ANS: 1 : 2.
- If the point C (-1, 2) divides the line segment AB in the ratio 3 : 4, where the coordinates of A are (2, 5), find the coordinates of B.
ANS: (-5, -2).
- The line segment joining the points A (2, 1) and B (5, -8) is trisected at the points P and Q such that P is nearer to A. If P also lies on the line given by $2x - y + k = 0$, find the value of k.
ANS: $k = -8$

17. If C is a point lying on the line segment AB joining A(1, 1) and B(2, -3) such that $3AC = CB$, then find the coordinates of C.
ANS: $(\frac{5}{4}, 0)$
18. The coordinates of the mid-point of the line joining the points $(3p, 4)$ and $(-2, 2q)$ are $(5, p)$. Find the values of p and q .
ANS: $p = 4$ and $q = 2$
19. Find the ratio in which the line segment joining $(2, -3)$ and $(5, 6)$ is divided by x -axis.
ANS: $2 : 1$ internally
20. Point A is on the y -axis at a distance of 4 units from the origin. If coordinates of point B are $(-3, 0)$ then find the length of AB.
ANS: 5 units
21. Find the point on x -axis which is equidistant from the points $(2, -5)$ and $(-2, 9)$.
ANS: $a = -7$
22. Find the points on the x -axis which are at a distance of $2\sqrt{5}$ from the point $(7, -4)$. How many such points are there?
ANS: $(9, 0)$ and $(5, 0)$.
23. The centre of a circle is $(2a, a - 7)$. Find the values of a if the circle passes through the point $(11, -9)$ and has diameter $10\sqrt{2}$ units.
ANS: $a = 5, 3$
24. Find the perimeter of the triangle with vertices $(0, 4)$, $(0, 0)$ and $(3, 0)$.
ANS: 12 units.
25. Find the ratio in which the y -axis divides the line segment joining the points $(5, -6)$ and $(-1, -4)$.
ANS: $5 : 1$.
26. If $(\frac{a}{2}, 4)$, is the mid-point of the line segment joining the points A $(-6, 5)$ and B $(-2, 3)$ then find the value of a .
ANS: $a = -8$
27. Find the fourth vertex of a rectangle whose three vertices taken in order are $(4, 1)$, $(7, 4)$ and $(13, -2)$.
ANS: D(10, -5).
28. If origin is the mid-point of the line segment joined by the points $(2, 3)$ and (x, y) then find the value of (x, y) .
ANS: $x = -2$ $y = -3$.
29. If $(-2, -1)$; $(a, 0)$; $(4, b)$ and $(1, 2)$ are the vertices of a parallelogram, find the values of a and b .
ANS: $a = 1$; $b = 3$
30. In what ratio does the line $x - y - 2 = 0$ divide the line segment joining $(3, -1)$ and $(8, 9)$?
ANS: $2 : 3$.
31. If the line $3x + 4y = 24$ cuts the x -axis at A and y -axis at B, then find the area of $\triangle AOB$.
ANS: 24 sq. units
32. Find the ratio in which the line segment joining the points $(6, 4)$ and $(1, -7)$ is divided by x -axis
ANS: $4 : 7$.
33. Determine k , so that the following points are collinear: $(2, 3)$, $(k, 6)$ and $(3, 2)$.
ANS: $k = -1$
34. Point P divides the line segment joining the points A $(2, -5)$ and B $(5, 2)$ in the ratio $2 : 3$. Name the quadrant in which P lies.
35. The coordinates of one end point of a diameter of a circle are $(4, -1)$ and the coordinates of the centre are $(1, -3)$. Find the coordinates of the other end of the diameter.
36. The centre of a circle is $(2a + 3, 2a - 1)$. Find the value of a if the circle passes through the point $(11, 9)$ and has a diameter of length 20 units.