

Maths Worksheet

Class X , Chapter -7, Coordinate Geometry

Q.1 Tick the correct answer :

- 1) A line segment is of length 10 units. If the coordinates of its one end are (1,4) and the ordinate of the other end is -2, then its abscissa is
 a) 7, -9 b) 9, -7 c) -7, -9 d) 9, 7
- 2) The area of a triangle with vertices $(a, b+c)$, $(b, c+a)$ & $(c, a+b)$ is
 a) $(a+b+c)^2$ b) 0 c) $a+b+c$ d) abc
- 3) The perpendicular bisector of the line segment joining the points $A(1,5)$ and $B(4,6)$ cuts the y-axis at
 a) (0,13) b) (0, -13) c) (0, 12) d) (13, 0)
- 4) If the area of a triangle formed by the points $(k, 2k)$, $(-2, 6)$ and $(3, 1)$ is 20 square units, then $k =$
 (a) 5 (b) 4 (c) $\frac{3}{5}$ (d) $\frac{2}{3}$
- 5) The points which lies on the perpendicular bisector of the line segment joining the points $A(-2, -5)$ and $B(2, 5)$ is
 (a) (0, 0) (b) (0, 2) (c) (2, 0) (d) (-2, 0)
- 6) The co-ordinates of the points A and B are $(3, -5)$ & $(1, -2)$ respectively. Then the ordinate of a point C on the line segment AB, such that $\frac{AC}{AB} = \frac{4}{7}$ is
 (a) $\frac{23}{7}$ (b) $-\frac{23}{7}$ (c) $\frac{26}{7}$ (d) $-\frac{26}{7}$
- 7) The perimeter of a triangle with vertices $(0, 4)$, $(0, 0)$ & $(3, 0)$ is
 (a) 5 (b) 12 (c) 11 (d) 7.5
- 8) If the points $(1, x)$, $(5, 2)$ & $(9, 5)$ are collinear then value of x is
 a) $\frac{5}{2}$ (b) $-\frac{5}{2}$ (c) -1 (d) 1
- 9) The end points of diameter of circle are $(2, 4)$ & $(-3, -1)$. The radius of the circle is
 a) $\frac{5\sqrt{2}}{2}$ (b) $5\sqrt{2}$ (c) $3\sqrt{2}$ (d) $\frac{\pm 5\sqrt{2}}{2}$

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- 13 Find the ratio in which the line $x + 3y - 14 = 0$ divides the line segment joining the points $A(-2, 4)$ & $B(3, 7)$.
- 14 If the points (p, q) , (m, n) & $(p-m, q-n)$ are collinear, show that $pn = qm$.
- 15 In what ratio does the x-axis divide the line segment joining the points $(-4, -6)$ & $(-1, 7)$? Find the coordinates of the point of division.
- 16 If $D(\frac{-1}{2}, \frac{5}{2})$, $E(7, 3)$ and $F(\frac{7}{2}, \frac{1}{2})$ are the mid-points of sides of ΔABC , find the area of the ΔABC .
- 17 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.
- 18 Find the co-ordinates of the points which divide the line segment joining $A(5, -6)$ and $B(-1, 8)$ into four equal parts.
- 19 Find the third vertex of a triangle, if two of its vertices are at $(-3, 1)$ and $(0, -2)$ and the centroid is at the origin.
- 20 The area of a triangle is 5 square units. Two of its vertices are $(2, 1)$ and $(3, -2)$. The third vertex lies on the line $y = x + 3$. Find the third vertex.
- 21 If the points $A(1, 2)$, $B(2, 3)$, $C(a, 2)$ and $D(-4, -3)$ form a parallelogram, find the value of a and height of parallelogram taking AB as base.
- 22 Show that the points (a, a) , $(-a, -a)$ and $(-\sqrt{3}a, \sqrt{3}a)$ are the vertices of an equilateral triangle. Also find its area.
- 23 Find the area of the quadrilateral formed by joining the points $A(-4, 2)$, $B(-3, -5)$, $C(3, -2)$ and $D(2, 3)$.
- 24 Name the type of quadrilateral formed, if any, by the points $A(2, -1)$, $B(3, 4)$, $C(-2, 3)$ and $D(-3, -2)$. Give reasons.
- 25 If $(-4, 3)$ and $(4, 3)$ are the two vertices of an equilateral triangle, find the co-ordinates of the third vertex, given that the origin lies in the interior of the triangle.