

Coordinate Geometry

Question 1.

The ratio in which (4,5) divides the line segment joining the points (2,3) and (7,8) is

- (a) 2:3
- (b) -3:2
- (c) 3:2
- (d) -2:3

Answer: (a) 2:3

Question 2.

The values of x and y, if the distance of the point (x,y) from (-3,0) as well as from (3,0) is 4 are

- (a) $x = 1, y = 7$
- (b) $x = 2, y = 7$
- (c) $x = 0, y = -\sqrt{7}$
- (d) $x = 0, y = \pm \sqrt{7}$

Answer: (d) $x = 0, y = \pm \sqrt{7}$

Question 3.

The distance between the points (3,4) and (8,-6) is

- (a) $2\sqrt{5}$ units
- (b) $3\sqrt{5}$ units
- (c) $\sqrt{5}$ units
- (d) $5\sqrt{5}$ units

Answer: (d) $5\sqrt{5}$ units

Question 4.

The ratio in which the x-axis divides the segment joining A(3,6) and B(12,-3) is

- (a) 1:2
- (b) -2:1

- (c) 2:1
- (d) -1:-1

Answer: (c) 2:1

Question 5.

The horizontal and vertical lines drawn to determine the position of a point in a Cartesian plane are called

- (a) Intersecting lines
- (b) Transversals
- (c) Perpendicular lines
- (d) X-axis and Y-axis

Answer: (d) X-axis and Y-axis

Question 6.

The mid point of the line segment joining A(2a,4) and B(-2,3b) is M (1,2a + 1). The values of a and b are

- (a) 2,3
- (b) 1,1
- (c) -2,-2
- (d) 2,2

Answer: (d) 2,2

Question 7.

The points (1,1), (-2, 7) and (3, -3) are

- (a) vertices of an equilateral triangle
- (b) collinear
- (c) vertices of an isosceles triangle
- (d) none of these

Answer: (b) collinear

Question 8.

The line $3x + y - 9 = 0$ divides the line joining the points (1, 3) and (2, 7) internally in the ratio

- (a) 3 : 4
- (b) 3 : 2
- (c) 2 : 3
- (d) 4 : 3

Answer: (a) 3 : 4

Question 9.

The ordinate of a point is twice its abscissa. If its distance from the point (4,3) is $\sqrt{10}$, then the coordinates of the point are

- (a) (1,2) or (3,6)
- (b) (1,2) or (3,5)
- (c) (2,1) or (3,6)
- (d) (2,1) or (6,3)

Answer: (a) (1,2) or (3,6)

Question 10.

The mid-point of the line segment joining the points A (-2, 8) and B (-6, -4) is

- (a) (-4, -6)
- (b) (2, 6)
- (c) (-4, 2)
- (d) (4, 2)

Answer: (c) (-4, 2)

Question 11.

The distance of the point P (2, 3) from the x-axis is

- (a) 2
- (b) 3
- (c) 1
- (d) 5

Answer: (b) 3

Question 12.

The coordinates of the centre of a circle passing through (1, 2), (3, -4) and (5, -6) is:

- (a) (11, -2)
- (b) (-2, 11)
- (c) (11, 2)
- (d) (2, 11)

Answer: (c) (11, 2)

Question 13.

The distance between the point P(1, 4) and Q(4, 0) is

- (a) 4
- (b) 5
- (c) 6
- (d) $3\sqrt{3}$

Answer: (b) 5

Question 14.

The points (3, 2), (0, 5), (-3, 2) and (0, -1) are the vertices of a quadrilateral. Which quadrilateral is it?

- (a) Rectangle
- (b) Square
- (c) Parallelogram
- (d) Rhombus

Answer: (b) Square

Question 15.

The distance of the point P(6,-6) from the origin is equal to

- (a) $3\sqrt{4}$ units
- (b) 8 units
- (c) $6\sqrt{2}$ units
- (d) 3 units

Answer: (c) $6\sqrt{2}$ units

Question 16.

Origin divides the join of points (1,1) and (2,2) externally in the ratio

- (a) 1:2
- (b) 1:-2
- (c) -1:-2
- (d) -1:2

Answer: (a) 1:2

Question 17.

The distance between the points (-1, -5) and (-6, 7) is

- (a) 144 units

- (b) 13 units
- (c) 12 units
- (d) 169 units

Answer: (b) 13 units

Question 18.

If A and B are the points $(-6, 7)$ and $(-1, -5)$ respectively, then the distance $2AB$ is equal to

- (a) 26
- (b) 169
- (c) 13
- (d) 238

Answer: (a) 26

Question 19.

The perimeter of a triangle with vertices $(0, 4)$ $(0, 0)$ and $(3, 0)$ is:

- (a) 15
- (b) 12
- (c) 8
- (d) 10

Answer: (b) 12

Question 20.

If $(3,0)$, $(2,a)$, and $(b,6)$ are the vertices of ABC whose centroid is $(2,5)$, then the values of a and b are

- (a) $a = 3$, $b = -9$
- (b) $a = 0$, $b = 2$
- (c) $a = 1$, $b = 9$
- (d) $a = 9$, $b = 1$

Answer: (d) $a = 9$, $b = 1$

Question 21.

If $(\frac{a}{3}, 4)$ is the mid-point of the segment joining the points $P(-6, 5)$ and $R(-2, 3)$, then the value of 'a' is

- (a) 12
- (b) -6

- (c) -12
- (d) -4

Answer: (c) -12

Question 22.

If $(a, 0)$, $(0, b)$ and (x, y) are collinear, then

- (a) $ay + bx = ab$
- (b) $ax + by = 1$
- (c) $ax - by = ab$
- (d) $ay - bx = 1$

Answer: (a) $ay + bx = ab$

Question 23.

The area of the triangle formed by joining the mid-points of the sides of the triangle, whose vertices are $(0, -1)$, $(2, 1)$ and $(0, 3)$ is

- (a) 4
- (b) 2
- (c) 3
- (d) 1

Answer: (d) 1

Question 24.

The distance between the points (a, a) and $(-\sqrt{3}a, \sqrt{3}a)$ is

- (a) $3\sqrt{2}a$ units
- (b) $2\sqrt{2}a$ units
- (c) $2\sqrt{2}$ units
- (d) 2 units

Answer: (b) $2\sqrt{2}a$ units

Question 25.

The distance of the point $(-3, 4)$ from the origin is

- (a) 25 units
- (b) 1 unit
- (c) 7 units
- (d) 5 units

Answer: (d) 5 units

Question 26.

The area of the triangle whose vertices are A(1, 2), B(-2, 3) and C(-3, -4) is

- (a) 11
- (b) 22
- (c) 33
- (d) 21

Answer: (a) 11
