

# 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

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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)  $x = 0, y = \pm \sqrt{7}$

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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

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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

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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

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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

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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

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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

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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)

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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)

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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

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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)

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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

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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

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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

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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

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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

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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

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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

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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)  $a = 9, b = 1$

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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

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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)  $ay + bx = ab$

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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

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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

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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

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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

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