Coordinate Geometry questions are an uncommon type of questions asked in competitive exams. These questions carry a weightage of 1-2 questions (2-4 marks) in SSC exams. To get a good rank in competitive exams, you should have a great practice of a variety of trigonometry questions

Here are some tips for solving Coordinate Geometry questions: Understand basic concepts of points, lines, and shapes. Use the distance formula, slope formula, and midpoint formula, Memorize common geometric shapes and properties, practice a variety of questions, and crack the question you should have a great understanding and practice.

So, we have attached 10 questions of Coordinate Geometry for you to practice with. You should aim to solve these questions in less than half a minute for each.

Practice Questions on Coordinate Geometry

You can also download the Coordinate Geometry questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

Q:1 If a line 2x - y - 6 = 0 intersects the other line joining the points (3, 2) and (1, 2) in the ratio k : 1, then find the value of k.

1. -1/3

2. 3

3. 6

4. 3/5

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was not an easy one! Did you get it right?

Q:2 If 7x + 3y = 126, then how many possible non-negative pairs of integers (x, y) can satisfy the condition?

1. 4

2. 5

3. 6

4. 7

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) A conceptual question...

Q:3 The distance of a point (2, 3) from a line 3x + 4y = 8 is :

1. 8

2. 5/3

3. 6/5

4. 2

(**Difficulty:** 2, **Estimated Time:** 10 Seconds) A basic question....

Q:4 The equation of the line passing through the point (-2, -3) and perpendicular to the line 5x – 4y + 7 = 0.

1. x + 3y + 14 = 0

2. 5x + 4y – 2 = 0

3. 3x – 2y + 4 = 0

4. 4x + 5y + 23 = 0

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Should we increase the level?

Q:5 A line L passes through the point of intersection of two lines 15x – 2y = 22 and 2x + 3y = 16 and origin. What is the equation of the line L?

1. y = 2x

2. y = 3x

3. y = x

4. y = -x

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) We're halfway through. Have you got all your questions correct so far?

Q:6 Which of the following points divide the line segment AB in the ratio 3 : 1?

A = (5, 6, 8) and B = (5, 2, 4)

1. (5, 3, 5)

2. (5, 2, 3)

3. (5, 5, 2)

4. (5, 2, 5)

(**Difficulty:** 4, **Estimated Time:** 30 Seconds) This was a test of your concepts!

Q:7 What is the length of the chord formed by the line y = 1 in the circle $(x - 1)^2 + (y - 1)^2 = 4$?

1. 2 units

2. 3 units

3. 4 units

4. 6 units

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a hard nut to crack, be prepared for such questions in exam!

Q:8 The equation of line perpendicular to x + 3y = 0 and passing through origin is _____.

1. y – 3x = 0

2. 3y – x = 0

3. y – 9x = 0

4. 9y – x = 0

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) Another easy one!

Q:9 For the line 5x + 3y = 30, what is the sum of x and y intercepts?

1. 9

2. 11

3. 16

4. 18

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Yes, You know how to solve such questions!

Q:10 In which octant does (-3, -4, -5) lies in?

1. Octant V

2. Octant VI

3. Octant VII

4. Octant VIII

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) Do you remember the octants?

Answer Key

Let's check out your score in this test.

1. (1)	**2.** (4)	**3.** (4)	**4.** (4)	**5.** (1)
6. (1)	**7.** (3)	**8.** (1)	**9.** (3)	**10.** (3)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

Answers and Solutions

Q:1 The correct answer is **option 1** i.e. **-1/3.**

If the line segment joining the points

(x_1, y_1) and (x_2, y_2) is divided in the ratio k : 1 then the coordinates of the point dividing the line is

$\Rightarrow \{(kx_2 + x_1)/(k + 1), (ky_2 + y_1)/(k + 1)\}$

The coordinates of the point dividing the line is

$\Rightarrow \{(k + 3)/(k + 1), (2k + 2)/(k + 1)\}$

This coordinate satisfies the line

$\Rightarrow 2x - y - 6 = 0$

$\Rightarrow 2\{(k + 3)/(k + 1)\} - (2k + 2)/(k + 1) - 6 = 0$

$\Rightarrow (2k + 6 - 2k - 2)/(k + 1) = 6$

$\Rightarrow 4 = 6(k + 1)$

$\Rightarrow k = -1/3$

Q:2 The correct answer is **Option 4** i.e. **7**.

$\Rightarrow 7x + 3y = 126$

$\Rightarrow 7x = 126 - 3y$

$\Rightarrow 7x = 3(42 - y)$

x should be divisible by 3

⇒ x = 3m

⇒ 7m = 42 − y

⇒ y = 42 − 7m

⇒ y = 7(6 − m)

y should be divisible by 7

⇒ y = 7n

⇒ 7n = 7(6 − m)

⇒ n = 6 − m

⇒ n + m = 7

Number of pairs of (m, n) = 7: {(0, 6), (1, 5), (2, 4), (3, 3), (4, 2), (5, 1), (6, 0)}

Q:3 The correct answer is **Option 4** i.e. **2**

Given the equation, 3x - 4y = 8 and point (2 , 3)

As we know the distance from the point to the line is given by the formula-

$d = |Ax_1 + By_1 + C|/(A^2 + B^2)^{½}$

⇒ d = (3 × 2 + 4 × 3 - 8)/√(9 + 16)

⇒ d = 10/5 = 2

Q:4 The correct answer is **option 4** i.e. **4x + 5y + 23 = 0**

We have,

5x − 4y + 7 = 0

Slope of the line y = mx + c

∴ 4y = 5x + 7

$y = \frac{5}{4}x + \frac{7}{4}$

Slope, $m = \frac{5}{4}$

Also, slope of a line perpendicular to the given line = -4/5 $\left[m_2 = \frac{-1}{m_1}\right]$

Now, equation of a line with slope \frac{-4}{5} and passing through point (-2, -3) is given by

$\frac{y-y_1}{x-x_1} = m$

$\frac{y-(-3)}{x-(-2)} = \frac{-4}{5}$

$\Rightarrow \frac{y+3}{x+2} = \frac{-4}{5}$

⇒ 5y + 15 = -4x - 8

⇒ 5y + 4x + 23 = 0 which is required equation.

Q:5 The correct answer is **Option 1** i.e. **y = 2x.**

15x – 2y = 22 ---- 1

2x + 3y = 16 ---- 2

2 × Equation 2 + 3 × Equation 1

49x = 98

x = 2

Substituting in equation 2

4 + 3y = 16

y = 4

Equation of line passing through two points:

$(y - y_1) = (y_2 - y_1)/(x_2 - x_1) \times (x - x_1)$

First point = (0, 0)

Second point = (2, 4)

(y – 0) = (4 – 0) / (2 – 0) × (x – 0)

y = 2x

Q:6 The correct answer is **option 1** i.e. **(5, 3, 5).**

Let the point be (X, Y, Z)

X coordinate = $(mx_2 + nx_1)/(m + n)$

$\Rightarrow (3 \times 5 + 1 \times 5)/(3 + 1) = 5$

Y coordinate = $(my_2 + ny_1)/(m + n)$

$\Rightarrow (3 \times 2 + 1 \times 6)/(3 + 1) = 3$

Z coordinate = $(mz_2 + nz_1)/(m + n)$

$\Rightarrow (3 \times 4 + 1 \times 8)/(3 + 1) = 5$

$\therefore$ The required point = (5, 3, 5)

Q:7 The correct answer is **option 3** i.e. **4 units.**

When the circle intersects the line y = 1

there the equation of circle becomes,

$(x - 1)^2 = 4$

$x - 1 = \pm 2$

x = 3 or -1

The points of the chord are (3, 1) and (-1, 1)

Distance between them = $\sqrt{[(3 + 1)^2 + (1 - 1)^2]} = 4$ units

So, the length of chord = 4 units

Q:8 The correct answer is **Option 1** i.e. **y – 3x = 0**

Equation of line passing through origin: y = mx

The given line is x + 3y = 0.

$\Rightarrow 3y = -x$

$\Rightarrow y = -x/3$

⇒y = (-1/3) x + 0

compare this equation with y = mx + c

Slope of the given line is -1/3

The given line is perpendicular to the line

Slope of the line = -1/ Slope of (x + 3y = 0) ∵ Both are perpendicular

Slope of required line, m = 3

Required line: y=m+c

⇒ y = 3x + c

it passes through origin (0,0)

Therefore, y = 3x + c ⇒ 0 = 3 (0) + c ⇒ c = 0

∴ The required equation is y = 3x or y – 3x = 0

Q:9 The correct answer is **Option 3** i.e. **16**

5x + 3y = 30

5x/30 + 3y/30 = 1

x/6 + y/10 = 1

x intercept = 6

y intercept = 10

Sum of intercepts = 16

Q:10 The correct answer is **Option 3** i.e. **Octant VII.**

We know that,

Coordinates/Octants	I	II	III	IV	V	VI	VII	VIII
x	+	-	-	+	+	-	-	+
y	+	+	-	-	+	+	-	-
z	+	+	+	+	-	-	-	-

All three coordinate points are negative

$\therefore$ It lies in VIIth octant

So, this is it for today. We will meet again with another new topic. Till then, you can practice the questions again by downloading the PDF of Coordinate Geometry.