Swotters Academy

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Test / Exam Name: Maths – Coordinate Geometry **Standard: 9th** **Subject: Mathematics**

Student Name: ..... **Section:** ..... **Roll No.:** .....

Questions: 26 | **Time: 01:45 hh:mm** | **Marks: 50**

Instructions

1. 1. Keep the timer and then start the exam. 2. Keep your work tidy. 3. Make sure to write new section on the new page and all the questions number properly. 4. For Maths – make sure to do all the rough work on the right hand side only. 5. Recheck your paper before submitting. Check your paper like you are checking your enemy's paper – find the maximum mistakes and then correct it.

SECTION-A

Q1. The equation of x-axis is: **1 Mark**

A x = 0 **B** None of these. **C** y = x **D** y = 0

Q2. A point whose abscissa is -3 and ordinate 2 lies in: **1 Mark**

A Fourth quadrant. **B** Third quadrant. **C** First quadrant. **D** Second quadrant.

Q3. The point at which the two co-ordinate axes meet is called the: **1 Mark**

A Origin. **B** Quadrant. **C** Abscissa. **D** Ordinate.

Q4. The ordinate of any point on x-axis is: **1 Mark**

A 1 **B** -1 **C** 0 **D** Any number.

Q5. The abscissa of a point is positive in the: **1 Mark**

A Fourth and first quadrant. **B** Third and fourth quadrant.
C First and second quadrant. **D** Second and third quadrant.

Q6. The point (0, 9) lies **1 Mark**

A On the positive direction of x-axis **B** In quadrant III
C In quadrant IV **D** On the positive direction of y-axis

Q7. y co-ordinate is known as: **1 Mark**

A Ordinate. **B** Origin. **C** None of these. **D** Abscissa.

Q8. Write the correct answer in the following: **1 Mark**
On plotting the points O(0, 0), A(3, 0), B(3, 4), C(0, 4) and joining OA, AB, BC and CO which of the following figure is obtained?

A Square. **B** Rectangle. **C** Trapezium. **D** Rhombus.

Q9. Point (-7, 0) lies. **1 Mark**

A On the negative direction of the x-axis **B** On the negative direction of the y-axis
C In the IV quadrant. **D** In the III quadrant.

Q10. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following: **1 Mark**
Assertion (A): Origin lies on x axis.
Reasons (R): The coordinates of a point on the x - axis are of the form (x, 0) and that of the point on the y - axis are (0, y).

A Both A and R are true and R is the correct explanation of A. **B** Both A and R are true but R is not the correct explanation of A.
C A is true but R is false. **D** A is false but R is true.

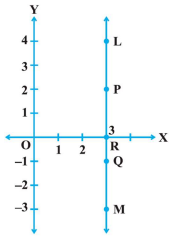
Q11. Write the answer of the following questions: **1 Mark**
Write the name of the point where these two lines intersect.

Q12. Write whether the following statements are True or False? Justify your answer. **1 Mark**
Point (3, 0) lies in the first quadrant.

Q13. Without plotting the points indicate the quadrant in which they will lie, if: **1 Mark**
Abscissa is -5 and ordinate is -3

Q14. Without plotting the points indicate the quadrant in which they will lie, if: **1 Mark**
Ordinate is 5 and abscissa is 3.

Q15. Write the answer of the following questions: **1 Mark**
What is the name of each part of the plane formed by these two lines?



1. What are the coordinates of the points P, R and Q?
2. What is the difference between the abscissa of the points L and M?

SECTION-B

Q16. LM is a line parallel to the y-axis at a distance of 3 units: **2 Marks**

Q17. Which of the following points lie on y-axis? **2 Marks**
A(1, 1), B(1, 0), C(0, 1), D(0, 0), E(0, -1), F(-1, 0), S(0, 5), H(7, 0), I(3, 3).

Q18. Which of the following points lie on the x-asis? **2 Marks**
1. A(0, 8)
2. B(4, 0)
3. C(0, -3)
4. D(-6, 0)
5. E(2, 1)
6. F(-2, -1)
7. G(-1, 0)
8. H(0, 2)

Q19. Plot the points (x, y) given by the following table: **2 Marks**

x	2	4	-3	-2	3	0
y	4	2	0	5	-3	0

Q20. Find the coordinates of the point: **3 Marks**
1. Which lies on x and y axes both.
2. Whose ordinate is -4 and which lies on y-axis.
3. whose abscissa is 5 and which lies on x-axis.

Q21. Plot the following points and check whether they are collinear or not: **3 Marks**
(1, 1), (2, -3), (-1, -2)

Q22. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes. **3 Marks**

x	-2	-1	0	1	3
y	8	7	-1.25	3	-1

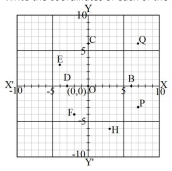
SECTION-C

Q23. **Read the case study given below and answer the questions that follow:** **4 Marks**
A city planner is designing a new park in the city. The park will have a rectangular shape and is to be plotted on a coordinate plane. The four corners of the park are located at points A(2, 3), B(2, 8), C(7, 8), and D(7, 3). The planner wants to include a fountain at the midpoint of the park. Calculate the coordinates of the midpoint where the fountain will be placed. Additionally, determine the lengths of the sides of the park and its perimeter. Explain how coordinate geometry is used to solve this real-world problem.
1. Find the coordinates of the midpoint of the park where the fountain will be placed.
2. What is the length of the side AB of the park?
3. Calculate the perimeter of the park.

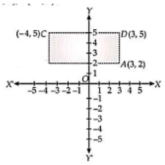
OR

3. Explain how coordinate geometry is used to solve the problem of designing the park and determining its dimensions.

Q24. Write the coordinates of each of the following points marked in the graph paper. **4 Marks**



Q25. **5 Marks**



Consider the above image for the passage. An university student uses a geometry software package, known as Cabri Geometry. It is a Geometer's Sketchpad, or similar application on a handheld device, to construct a figure from its definition of points and segments, as shown above in the figure. The student starts by placing points and extending it in the construction window. Based on the above information, answer the following questions.

1. According to the student, what is the definition of point D?
1. (3, 4)
2. (3, 5)
3. (5, 3)
4. (4, 3)
2. According to the student, what is the definition of point C?
1. (3, -2)
2. (5, -4)
3. (-4, 5)
4. None
3. According to the student, what is the definition of point A?
1. (3, 2)
2. (3, 3)
3. (5, 4)
4. (2, 3)
4. What is the difference between abscissa of A and D?
1. 0
2. 1
3. 2
4. 3
5. What is the difference between ordinates of C and D?
1. 3
2. 2
3. 1
4. 0

Q26. On the plane of a graph paper draw X' OX and YOY' as coordinate axes and plot each of the following points. **5 Marks**
1. A(5, 3)
2. B(6, 2)
3. C(-5, 3)
4. D(4, -6)
5. E(-3, -2)
6. F(-4, 4)
7. G(3, -4)
8. H(5, 4)
9. I(0, 6)
10. J(-3, 0)
11. K (0, -2)
12. O(0, 0)