

# St. Andrews Scots Sr. Sec. School

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Session: 2026-27

Class: IX

Subject: Mathematics

Topic: The Use of Coordinates

Worksheet - 01

## Multiple Choice Questions.

Q1: If the mirror image of the point P(5, 2) in the x-axis is Q and the image of Q in the y-axis is R, what are the coordinates of R?

- A) (5, -2)
- B) (-5, -2)
- C) (-5, 2)
- D) (2, 5)

Q2: In which quadrants are the signs of both coordinates the same?

- A) I AND II
- B) II AND III
- C) I AND III
- D) II AND IV

Q3: What is the equation of the x-axis?

- A)  $x = 0$
- B)  $y = 0$
- C)  $x = a$
- D)  $y = a$

Q4: What is the equation of a line parallel to the x-axis?

- A)  $x = 0$
- B)  $y = 0$
- C)  $x = a$
- D)  $y = a$

Q5: What is the equation of a line parallel to the y-axis?

- A)  $x = 0$
- B)  $y = 0$
- C)  $x = a$
- D)  $y = a$

Q6: Any point on the x-axis is of the form:

- A) (x, 0)
- B) (0, y)
- C) (x, y)
- D) (y, x)

Q7: If  $x > 0$  and  $y < 0$ , then the point (x, y) lies in which quadrant?

- A) I
- B) II
- C) III
- D) IV

Q8: The points A(9, 0), B(9, 6), C(-9, 6) and D(-9, 0) are the vertices of a:

- A) Square
- B) Rectangle
- C) Rhombus
- D) Trapezium

Q9: If  $(x + 2, 4) = (5, y - 2)$ , then coordinates of  $(x, y)$  are

- A) (7, 12)
- B) (6, 3)
- C) (3, 6)
- D) (2, 1)

Q10: Which formula is used to find the distance between two points?

- A)  $x + y$
- B)  $\sqrt{x^2 + y^2}$
- C)  $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
- D)  $x^2 + y^2$

Q11: Find the distance between (-1,2) and (3,2). (Ans: 4)

Q12: Find the Midpoint of (-2,2) and (2,6). [Ans: (0,4)]

Q13: If midpoint is (3,3) and one point is (1,1), find other the point. [Ans: (5,5)]

Q14: What type of triangle is formed by the vertices (-5, 0), (5, 0), and (0, 4)?

Show the solution of the question. [Ans: D]

- A. right-angled triangle
- B. isosceles triangle
- C. equilateral triangle
- D. scalene triangle

Q15: A line  $x/4 + y/6 = 1$  intersects the axes at P and Q. Find the midpoint of segment PQ. [Ans: (2,3)]

Q16: If (2, 6) is the midpoint of the line segment joining (a, 4) and (2, 2b), calculate the value of a + b. [Ans: 7]

Q17: Plot the following points on a Cartesian plane and join them in order.

Name the figure formed: A(1, 3), B(-1, 3), C(-1, -3), D(1, -3)

Q18: Plot the points P(1, 0), Q(4, 0), R(4, 3), S(1, 3) on a Cartesian plane. Join them in order. Find:

- (i) The type of quadrilateral formed.
- (ii) The perimeter.
- (iii) The area.
- (iv) Whether the diagonals bisect each other.

Q19: If the midpoint of the line segment joining the points A (2, 3) and B (k, 5) is Q (x, y) and  $x + y - 9 = 0$ , What is the value of k? [Ans: 8]

Q20: what are the points lies on the line  $y = 2x + 3$ ? [Ans: (3, 9)]

Q21: AOBC is a rectangle whose three vertices are A(0, 3), O(0, 0) and B(5, 0). Find The length of its diagonal. [Ans:  $\sqrt{34}$ ]

Q22: Find the perimeter of the triangle formed by the points (0, 0), (1, 0) and (0, 1). (Ans:  $2 + \sqrt{2}$ )

### Answer Key:

(MCQ:Q1B Q2D Q3A Q4D Q5C Q6A Q7D Q8B Q9C Q10C)

### **Exam Preparation Tips**

To score well in this chapter:

- 1. Practice Graphs Daily** Use graph paper and plot 10 points daily.
- 2. Learn Quadrants Properly** Remember signs of x and y.
- 3. Solve NCERT Exercises** Practice textbook examples and miscellaneous questions.
- 4. Revise Definitions** Origin, axes, ordered pair, quadrant.

### **Common Mistakes Students Make**

- Writing coordinates as (y,x) instead of (x,y)
- Forgetting signs of negative numbers
- Plotting points in wrong quadrant
- Confusing x-axis with y-axis

Avoid these mistakes for better marks.