CLASS : 9

Register Number

SECOND MID TERM TEST - 2024

MATHEMATICS

Time Allowed : 1.30 Hours] [Max. Marks : 50

PART - I

I. **Choose the correct Answer.** 7x1=7

1. Which of the following is a solution of the equation 2x-y=6

   (a) (2,4) (b) (4,2) (c) (3,-1) (d) (0,6)

2. The value of K for which the pair of linear equations 4x+6y-1=0 and 2x+ky-7=0 represents parallel lines is

   (a) K = 3 (b) K = 2 (c) K = 4 (d) K = -3

3. The interior angle made by the side in a parallelogram is 90^{o} then the parallelogram is a

   (a) rhombus (b) rectangle (c) trapezium (d) kite

4. If (x+2, 4)= (5,y-2), then the coordinates (x, y) are ----------

   (a) (7, 12) (b) (6, 3) (c) (3, 6) (d) (2, 1)

5. The point whose ordinate is 4 and which lies on the y- axis is --------

   (a) (4, 0) (b) (0, 4) (c) (1, 4) (d) (4, 2)

6. If The points A (2,0) B (-6, 0), C (3, a-3) lie on the X - axis then the value of 'a' is --------

   (a) 0 (b) 2 (c) 3 (d) -6

7. The distance between the two points (2,3) and (1,4) is ---------

   (a) 2 (b) $\sqrt{56}$ (c) $\sqrt{10}$ (d) $\sqrt{2}$

PART - II

II. **Answer any 5 Questions.** 5x2=10

8. Solve using the method of substitution 2x-3y=7, 5x+y=9

9. The angle of a quadrilateral are in the ratio 2:4:5:7.Find the angles.

10. Find the length of a Chord which is at a distance of $2\sqrt{11}$ cm from the centre of a circle of the radius 12 cm.

11. The Point (3,-4) is the centre of a circle. If AB is a diameter of the circle and B is (5,-6). Find the Coordinate of A.

12. In which quadrant does the following points lie?

a) (3,-8) b) (-1,-3) c) (2,5) d) (-7,3)

13. Find the distance between the following pairs of points. (1,2) and (4,3).

14. Find the mid - points of the line segments joint the points (8,-2) and (-8,0)

PART - III

III. Answer any 5. questions. **5x5=25**

15. Find the value of K for which the system of Linear equation 8x + 5y = 9, kx + 10y = 15.

16. Show that the Point (11, 2) is the centre of the circle Passing through the Points (1,2), (3,-4) and (5,-6)

17. A Chord is 12 cm away from the centre of the circle of radius 15cm. Find the length of the Chord.

18. Whether the given set of points in each are collinear or not. (7,-2), (5,1), (3,4).

19. Show that (4,3) is the centre of the circle passing through the points (9,3), (7,-1),(-1,3). Also find Radius.

20. The centre of a circle is (-4,2). If one end of the diameter of the circle is (-3,7). Then find the end.

21. The mid - point of the sides of a triangle are (2,4), (-2,3) and (5,2). Find the coordinates of the vertices of triangles.

PART - IV

IV. Answer Any One. **1x8=8**

22. (a) Use graphical method of solve the equation x+y=5, 2x-y=4.

(OR)

(b) Draw the Graph y = 3x - 1