

SECOND MID TERM TEST - 2023

Standard IX

Reg.No.

MATHS

Time : 1.30 hrs

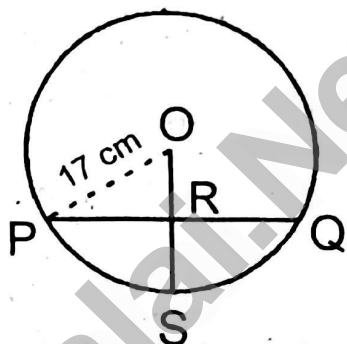
Marks : 50

I. Choose the correct answer:

7 x 1 = 7

1. A chord is at a distance of 15 cm from the centre of the circle radius 25 cm. The length of the chord is _____
 a) 25 cm b) 20 cm c) 40 cm d) 18 cm
2. If one angle of a cyclic quadrilateral is 75° , then the opposite angle is
 a) 100° b) 105° c) 85° d) 90°
3. In the given figure, if $OP = 17$ cm, $PQ = 30$ cm and OS is perpendicular to PQ , then RS is

- a) 10 cm b) 6 cm
 c) 7 cm d) 9 cm



4. 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)
5. If Q_1, Q_2, Q_3, Q_4 are the quadrants in a Cartesian plane then $Q_2 \cap Q_3$ is _____
 a) $Q_1 \cup Q_2$ b) $Q_2 \cup Q_3$ c) null set d) negative x-axis
6. The ratio in which the x-axis divides the line segment joining the points (6,4) and (1,-7) is
 a) 2 : 3 b) 3 : 4 c) 4 : 7 d) 4 : 3
7. If (1,-2), (3,6), (x,10) and (3,2) are the vertices of the parallelogram taken in order, then the value of x is
 a) 6 b) 5 c) 4 d) 3

II. Answer any 5 questions. (Q.No.14 is compulsory)

5 x 2 = 10

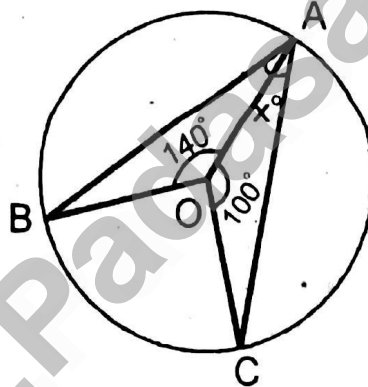
8. Write any two properties of parallelogram.
9. A chord is 12 cm away from the centre of the circle of radius 15 cm. Find the length of the chord.
10. In which quadrant does the following points lie?
 a) (3,-8) b) (-1,-3) c) (2,5) d) (-7,3)
11. Find the distance between the following pair of points (a,b) and (c,b)
12. 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 coordinates of A.
13. Find the coordinates of the point which divides the line segment joining the point A(4,-3) and B(9,7) in the ratio 3:2.

14. If $\left(\frac{3}{2}, 5\right)$, $\left(7, \frac{-9}{2}\right)$ and $\left(\frac{13}{2}, \frac{-13}{2}\right)$ are mid-points of the sides of a triangle, then find the centroid of the triangle.

III. Answer any 5 questions. (Q.No.21 is compulsory)

5 x 5 = 25

15. The lengths of the diagonals of your Rhombus are 12 cm and 16 cm. Find the side of the Rhombus.
16. One angle of a quadrilateral is 108° and the remaining three angles are equal. Find each of three equal angles.
17. Show that the following points taken in order form an isosceles triangle.
A(5,4), B(2,0), C(-2,3)
18. If the mid-point (x,y) of the line joining (3,4) and (p,7) lies on $2x + 2y + 1 = 0$, then what will be the value of p?
19. If the centroid of a triangle is (-2,1) and two of its vertices are (1,-6) and (-5,2), then find the third vertex of the triangle.
20. Find the coordinates of a point P on the line segment joining A(1,2) and B(6,7) in such a way that $AP = \frac{2}{5} AB$
21. Find the value of x° in the following figure :



IV. Answer the following question.

1 x 8 = 8

22. a) Draw the graph for the following :

$$y = 4x - 1$$

(OR)

- b) Taking 0.5 cm as 1 unit, plot the following points on the graph paper :

$$A(1,3), B(-3,-1), C(1,-4), D(-2,3), E(0,-8), F(1,0)$$

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