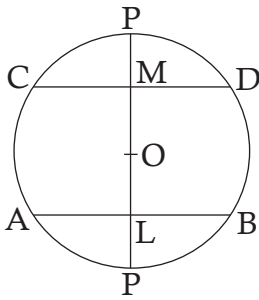


Q1. Match the definitions with the terms they define:

Definition	Term
The region of the circle enclosed by an arc and the corresponding chord	Diameter
A line which intersects the circle at two distinct points	Chord
A line which touches the circle at only one point	Segment
A chord that passes through the centre of the circle	Tangent

Q2. In the given circle, the diameter PQ is perpendicular to chords AB and CD. If $AB = CD$, prove that $LB = MC$.

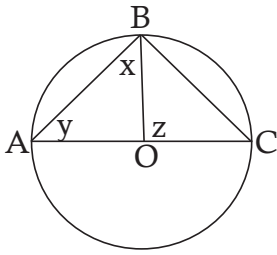


Answer: _____

Q3. A circle with centre O has radius 9 cm. A tangent is drawn from a point X in the exterior of the circle touching the circle at Y. If the distance from the centre of the circle to the point X is 15 cm, find the length of the tangent XY.

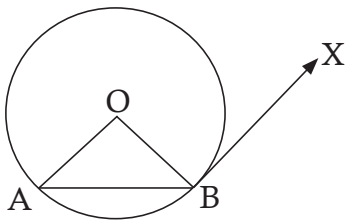
Answer: _____

Q4. In the given circle with centre O, chords AB and BC are of equal length. Find the value of x, y and z.



$x = \underline{\hspace{2cm}}$; $y = \underline{\hspace{2cm}}$; $z = \underline{\hspace{2cm}}$

Q5. The circle with centre O given below has a chord AB, such that $\angle AOB = 110^\circ$. Find the measure of $\angle ABX$.

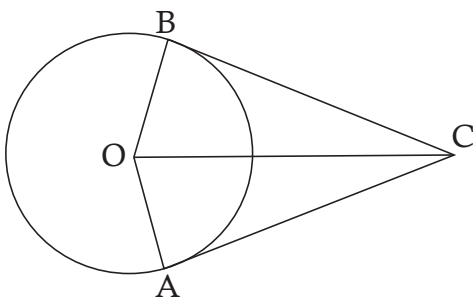


$\angle ABX = \underline{\hspace{2cm}}$

Q6. Two concentric circles C_1 and C_2 with centre O have radius 5 cm and 7 cm respectively. Find the position of the points P, Q and R, if:

- a. $OP = 6$ cm
Position of point P: $\underline{\hspace{4cm}}$
- b. $OQ = 70$ mm
Position of point Q: $\underline{\hspace{4cm}}$
- c. $OR = 490$ mm
Position of point R: $\underline{\hspace{4cm}}$

Q7. In the circle given below, CA and CB are tangents from point C to the circle with centre O. Determine the shape of the quadrilateral formed by AOBC and tick the correct option.



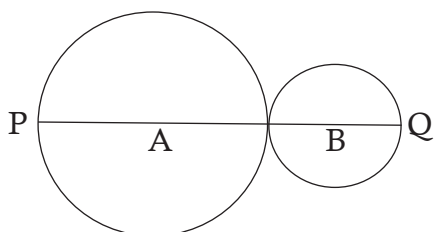
- a. Rhombus
- b. Parallelogram
- c. Kite
- d. Trapezium

Answer: _____

Q8. State the following statements as True or False:

- a. Circles with same centres may have different diameters. _____
- b. Concentric circles have equal radii but may have different centres. _____
- c. The region of the circle enclosed by an arc and the corresponding chord is called a sector. _____
- d. The diameter is a chord that passes through the centre of the circle. _____

Q9. In the figure given below, A and B are the centres of the larger and the smaller circle respectively. If the radius of the larger circle is 5 cm and length of the line segment PQ is 14 cm, find the radius of the smaller circle.



Radius of the smaller circle = _____

Q10. The largest rectangle that can be inscribed inside a circle has dimensions 3 cm by 4 cm. Find the radius of the circle which encircles the rectangle.

Answer: _____

Answers

1.

Definition	Term
The region of the circle enclosed by an arc and the corresponding chord	Segment
A line which intersects the circle at two distinct points	Chord
A line which touches the circle at only one point	Tangent
A chord that passes through the centre of the circle	Diameter

2. $MC = MD$ (Perpendicular from the centre bisects the chord)

Similarly, $AL = LB$

$$LB = \frac{1}{2} AB$$

$$MC = \frac{1}{2} CD$$

$AB = CD$ (given)

Thus, $LB = MC$

3. 12 cm

4. $x = 45^\circ$; $y = 45^\circ$; $z = 90^\circ$

5. 125°

6. a. Interior of C_2 but Exterior of C_1 ;

b. On the circumference of C_2 ;

c. Interior of C_1

7. (c)

8. a. True; b. False; c. False; d. True

9. 2 cm

10. 2.5 cm