

SATISH CHANDRA MEMORIAL SCHOOL

CH- 5 CLASS TEST

FM: 15

1. A, B and C are three distinct points on a circle with centre O. If $\angle ABC = 20^\circ$ then which of the following is the measure of $\angle AOC$ (provided O and B are on the same side of AC)?

1

- (a) 10° (b) 20° (c) 40° (d) 60°

2. The radius of a circle is 17 cm. A chord of length 30 cm is drawn. Find the distance of the chord from the centre.

1

- (a) 8 cm (b) 12 cm (c) 9 cm (d) 10 cm

3. **Assertion (A):** Angles in the same segment are equal.

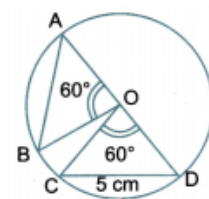
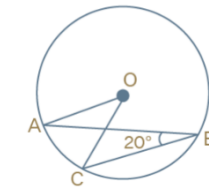
Reason (R): Angle in a semi-circle is a right angle.

1

- (a) A (✓) & R (✓) | $R \rightarrow A$ (b) A (✓) & R (✓) | $R \rightarrow \neg A$ (c) A (✓) & R (X) (d) A (X) & R (✓)

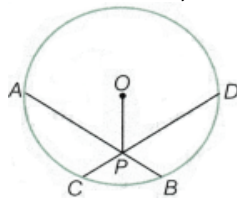
4. In the adjoining figure, O is the centre of the circle. Find the length of AB.

2



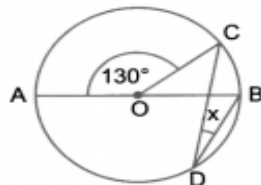
5. In the given figure, chord AB = chord CD, AP = 8 cm and PC = 3 cm, OP = 4 cm. Find the length of chords AB and CD.

3



6. If O is the centre of the circle, then find the value of x.

3



7. A civil engineer is designing a circular roundabout for a city intersection with centre O and radius 13 m. A pedestrian crossing represented by chord AB is planned across the roundabout. The perpendicular distance from the centre O to the chord AB is 5 m. Another crossing CD, equal in length to AB, is to be constructed symmetrically on the other side of the centre. A lamp post is to be installed at the midpoint M of chord AB.



- (i) Find the length of the pedestrian crossing AB. **1**
 (ii) What is the distance from the centre O to the second crossing CD? **1**
 (iii) A third, longer crossing PQ of length 24 m is proposed. Find its distance from the centre. **2**

OR

The engineer proposes a crossing that passes through the centre O itself. What is the length of this crossing?