

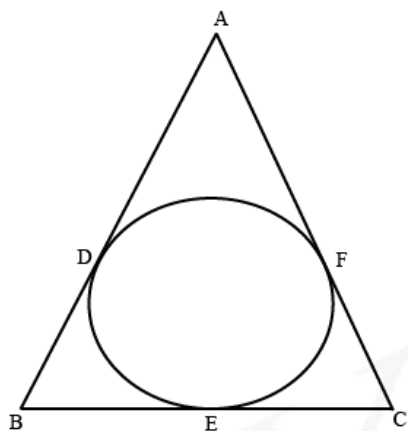
**Practice Challenge - Objective**

Subject: Mathematics

Topic : Circles Exam Prep 1

Class: X

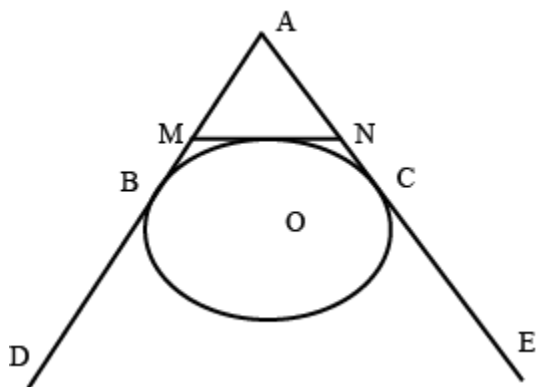
1. A Circle is inscribed in triangle ABC having sides 8 cm, 10 cm, and 12 cm as shown in the given figure. Find AD?



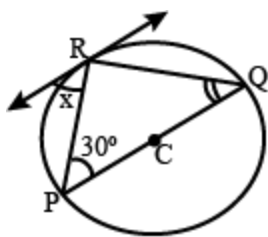
- A.** 2.5 cm  
**B.** 3 cm  
**C.** 5 cm  
**D.** 4 cm

## Practice Challenge - Objective

2. ABD and ACE are the two tangents to the circle having centre O, then  $AB + AC$  equals \_\_\_\_\_ of triangle AMN.



- A.  $2s$   
 B.  $s$   
 C.  $s/2$   
 D.  $3s$
3. In the given figure, if PQ is the diameter, then  $x$  is equal to ?



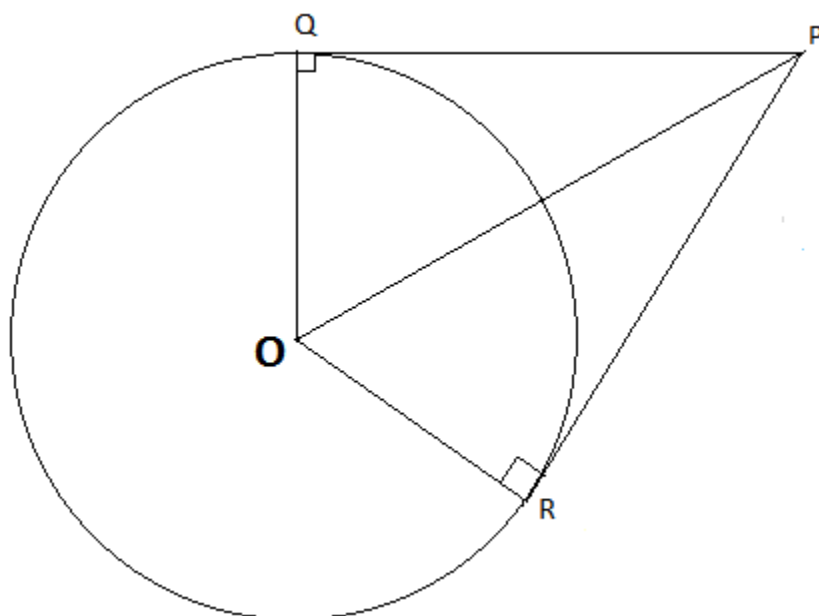
- A.  $30^\circ$   
 B.  $45^\circ$   
 C.  $70^\circ$   
 D.  $60^\circ$

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4. From a point outside a given circle, the maximum number of tangents drawn from that point to the circle is/are
- A. 4
  - B. 1
  - C. Infinite
  - D. 2
5. If radii of two concentric circles are 13 cm and 5 cm, then the length of each chord of one circle which touches the other circle is
- A. 6 cm
  - B. 12 cm
  - C. 24 cm
  - D. 36 cm

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6. From an external point P, two tangents are drawn that touch the circle at points Q and R. The centre of the circle is O. Points O and P are joined. The ratio of  $\angle OPR$  and  $\angle OPQ$  is \_\_\_\_\_.



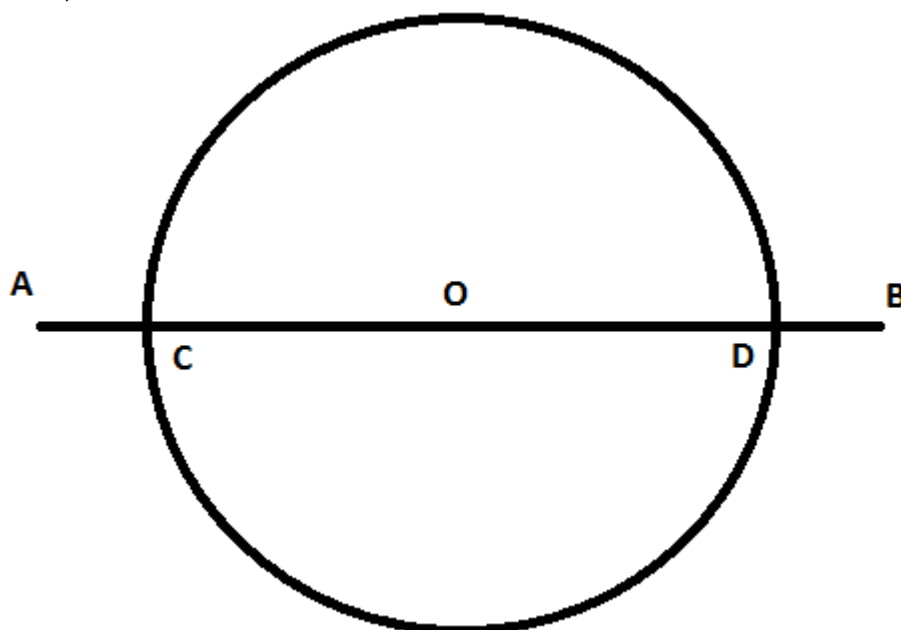
- A. 1 : 1
- B. 2 : 1
- C. 3 : 1
- D. 4 : 1

## Practice Challenge - Objective

7. Which of the following statements are true?
- 1) No tangents can be drawn to a circle from an interior point.
  - 2) Only two tangents, at most, can be drawn to a circle from an exterior point.
- A.** Only 1
- B.** Only 2
- C.** Both 1 and 2
- D.** Neither 1 nor 2

**Practice Challenge - Objective**

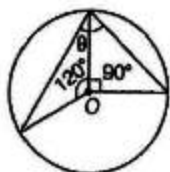
8. A line segment AB intersects a circle at two distinct points C and D as it passes through its centre, as shown in the figure. The line, whose segment is AB, is a:



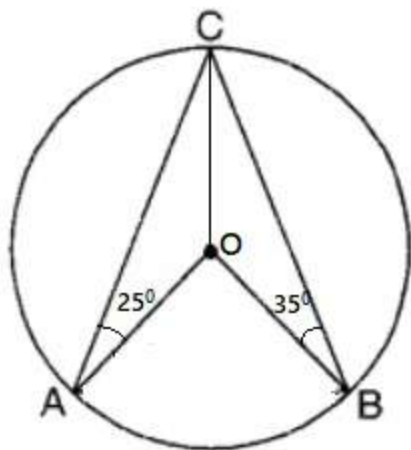
- A. Secant
- B. Chord
- C. Diameter
- D. Tangent

## Practice Challenge - Objective

9. If O is the center of the circle, then the value of  $\theta$  in the adjoining figure is



- A.  $45^\circ$
  - B.  $60^\circ$
  - C.  $90^\circ$
  - D.  $75^\circ$
10. In the adjoining figure 'O' is the center of circle,  $\angle CAO = 25^\circ$  and  $\angle CBO = 35^\circ$ . What is the value of  $\angle AOB$ ?



- A.  $55^\circ$
- B.  $110^\circ$
- C.  $120^\circ$
- D. Data insufficient