

## CHAPTER-9 | : Circle

QUIZ  
PART-13

1. In the given circle, if  $\angle BOC = 30^\circ$  and  $\angle AOB = 60^\circ$ , what is  $\angle ADC$ ?

- A)  $30^\circ$   
B)  $60^\circ$   
C)  $90^\circ$   
D)  $120^\circ$  (D)

**Explanation:**  $\angle ADC$  is supplementary to  $\angle BOC$ , and thus it equals  $120^\circ$ .

2. If a chord of a circle is equal to the radius, the angle subtended by it on the minor arc is:

- A)  $30^\circ$   
B)  $45^\circ$   
C)  $60^\circ$   
D)  $90^\circ$  (D)

**Explanation:** The angle subtended by a chord equal to the radius on the minor arc is  $90^\circ$ .

3. If a chord of a circle is equal to the radius, the angle subtended on the major arc is:

- A)  $90^\circ$   
B)  $45^\circ$   
C)  $60^\circ$   
D)  $30^\circ$  (A)

**Explanation:** The angle on the major arc will also be  $90^\circ$ , as the sum of angles subtended by the chord in the circle is  $180^\circ$ .

4. In the figure, if  $\angle PQR = 100^\circ$ , then what is  $\angle OPR$ ?

- A)  $40^\circ$   
B)  $50^\circ$   
C)  $60^\circ$   
D)  $90^\circ$  (B)

**Explanation:**  $\angle OPR$  is half of  $\angle PQR$ , so  $\angle OPR = 50^\circ$ .

5. The angle subtended by a chord at the center of the circle is:

- A) Half the angle at the circumference  
B) Twice the angle at the circumference  
C) Equal to the angle at the circumference  
D) None of the above (B)

**Explanation:** The angle at the center is twice the angle at the circumference, as per the central angle theorem.

6. If the radius of a circle is 5 cm and the length of a chord is equal to the radius, what is the angle subtended by the chord at the center?

- A)  $30^\circ$   
B)  $45^\circ$   
C)  $60^\circ$   
D)  $90^\circ$  (D)

**Explanation:** If the chord is equal to the radius, the angle at the center is always  $90^\circ$ .

7. In a circle, if the angle subtended by a chord at the center is  $120^\circ$ , what is the angle at the circumference on the same side of the chord?

- A)  $60^\circ$   
B)  $30^\circ$   
C)  $90^\circ$   
D)  $45^\circ$  (A)

**Explanation:** The angle at the circumference is half the angle at the center, so  $120^\circ / 2 = 60^\circ$ .

8. In a circle, if the angle at the center is  $180^\circ$ , what is the angle subtended at the circumference on the same side of the chord?

- A)  $90^\circ$   
B)  $120^\circ$   
C)  $60^\circ$   
D)  $90^\circ$  (A)

**Explanation:** The angle at the circumference is half of  $180^\circ$ , so it is  $90^\circ$ .

9. What is the relationship between the angles subtended by equal chords at the center of a circle?

- A) They are equal  
B) One is double the other  
C) They are supplementary  
D) One is half the other (A)

**Explanation:** Equal chords subtend equal angles at the center.

10. The sum of angles subtended by a chord at the center and at the circumference is:

- A)  $90^\circ$   
B)  $180^\circ$   
C)  $360^\circ$   
D)  $270^\circ$  (B)

**Explanation:** The sum of the angles is  $180^\circ$ , as the angle at the center is twice the angle at the circumference.