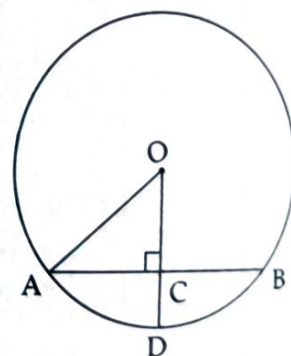


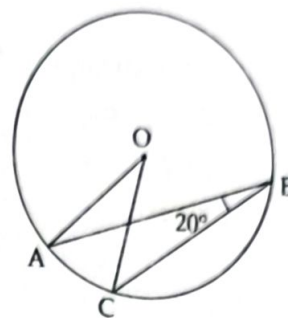
Multiple Choice Questions

Choose the correct answer from the given four options (5 to 19) :

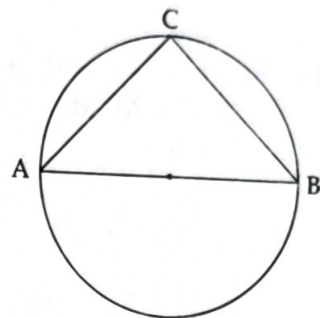
5. If P and Q are any two points on a circle, then the line segment PQ is called a
(a) radius of the circle (b) diameter of the circle
(c) chord of the circle (d) secant of the circle
6. If P is a point in the interior of a circle with centre O and radius r , then
(a) $OP = r$ (b) $OP > r$ (c) $OP \geq r$ (d) $OP < r$
7. The circumference of a circle must be
(a) a positive real number (b) a whole number
(c) a natural number (d) an integer
8. AD is a diameter of a circle and AB is a chord. If $AD = 34$ cm and $AB = 30$ cm, then the distance of AB from the centre of circle is
(a) 17 cm (b) 15 cm (c) 4 cm (d) 8 cm
9. If $AB = 12$ cm, $BC = 16$ cm and AB is perpendicular to BC, then the radius of the circle passing through the points A, B and C is
(a) 6 cm (b) 8 cm (c) 10 cm (d) 12 cm
10. In the adjoining figure, O is the centre of the circle. If $OA = 5$ cm, $AB = 8$ cm and $OD \perp AB$, then length of CD is equal to
(a) 2 cm (b) 3 cm
(c) 4 cm (d) 5 cm



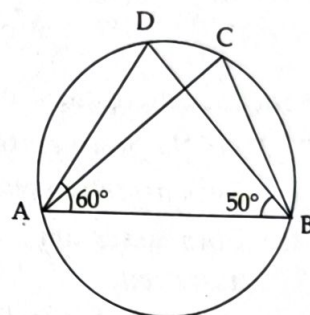
11. In the adjoining figure, O is the centre of the circle. If $\angle ABC = 20^\circ$, then $\angle AOC$ is equal to
- (a) 20° (b) 40°
(c) 60° (d) 10°



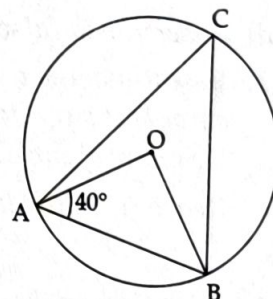
12. In the adjoining figure, AB is a diameter of the circle. If $AC = BC$, then $\angle CAB$ is equal to
- (a) 30° (b) 60°
(c) 90° (d) 45°



13. In the adjoining figure, if $\angle DAB = 60^\circ$ and $\angle ABD = 50^\circ$ then $\angle ACB$ is equal to
- (a) 60° (b) 50°
(c) 70° (d) 80°

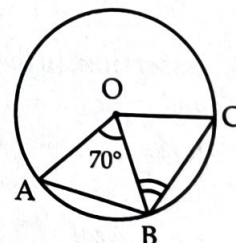


14. In the adjoining figure, O is the centre of the circle. If $\angle OAB = 40^\circ$, then $\angle ACB$ is equal to
- (a) 50° (b) 40°
(c) 60° (d) 70°

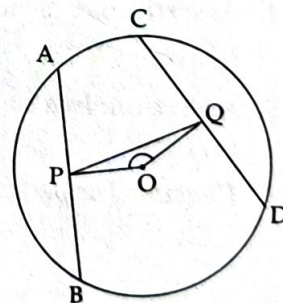


15. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and $\angle ADC = 140^\circ$, then $\angle BAC$ is equal to
- (a) 80° (b) 50° (c) 40° (d) 30°

16. In the adjoining figure, O is the centre of a circle. If $AB = BC$ and $\angle AOB = 70^\circ$, then $\angle OBC$ is
- (a) 55° (b) 65°
(c) 70° (d) 75°

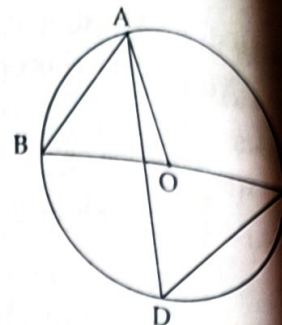


17. In the adjoining figure, AB and CD are two equal chords of a circle with centre O. If $OP \perp AB$, $OQ \perp CD$ and $\angle POQ = 150^\circ$, then $\angle APQ$ is equal to
- (a) 30° (b) 75°
(c) 15° (d) 60°

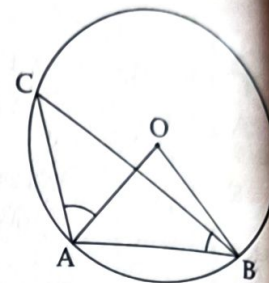


Hint. $AB = CD \Rightarrow OP = OQ$.

18. In the adjoining figure, O is the centre of the circle. If $\angle BAO = 60^\circ$, then $\angle ADC$ is equal to
- (a) 30° (b) 45°
(c) 60° (d) 120° (Exemplar)



19. In the adjoining figure, O is the centre of the circle. If $\angle AOB = 90^\circ$ and $\angle ABC = 30^\circ$, then $\angle CAO$ is equal to
- (a) 30° (b) 45°
(c) 90° (d) 60°



Assertion-Reason Type Questions (Solved)

In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Read the given statements carefully and choose the correct option:

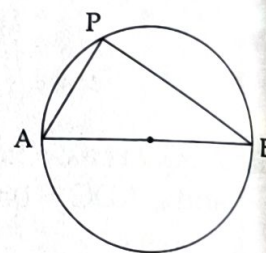
- (a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true and reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Assertion is false but reason is true.

1. **Assertion:** The region enclosed by a closed curve in a plane such that every point on the closed curve is at a constant distance from a fixed point in the plane is a circle. The fixed point is called the centre of circle and constant distance is called the radius of the circle.

Reason: A circle has infinitely many diameters.

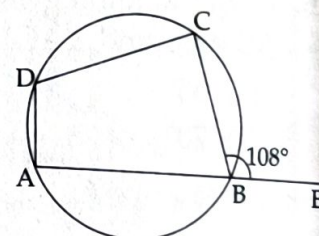
2. **Assertion:** In the adjoining figure, AB is a diameter of the circle and P is any point on the circle, then $AB^2 = AP^2 + BP^2$.

Reason: Angle in a semicircle is 90° .



3. **Assertion:** In the adjoining figure, ABCD is a cyclic quadrilateral and if $\angle EBC = 108^\circ$, then $\angle ADC = 108^\circ$.

Reason: In a cyclic quadrilateral, opposite angles are supplementary.



4. **Assertion:** A cyclic parallelogram is a rectangle.

Reason: Chords equidistant from the centre of a circle may not be equal.

5. **Assertion:** In a cyclic quadrilateral PQRS, if $\angle P - \angle R = 40^\circ$, then the larger of the two angles is 110° .

Reason: The perpendicular from the centre of a circle to a chord bisects the chord.