

INTERNATIONAL INDIAN SCHOOL BURAIDAH

Worksheet for the Academic Year 2026-27

CLASS: IX

SUBJECT: Mathematics

DATE: 04/09/26

LESSON 5 : I'M UP AND DOWN, AND ROUND AND ROUND

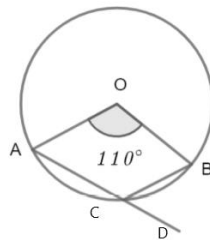
1. The radius of a circle is 13cm and length of one of its chord is 24cm. Find the distance of chord from the center.

- (a) 4cm (b) 5cm (c) 3cm (d) 2cm

2. Given a circle of radius 5 cm and center O. OM is drawn perpendicular to the chord XY. If OM = 3 cm, then length of chord XY is

- (a) 4 cm (b) 6 cm (c) 8 cm (d) 10 cm

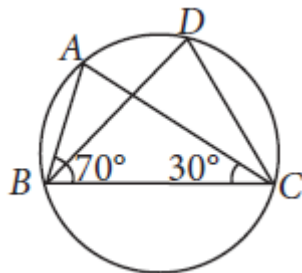
3. Assertion (A): If O is the center of the circle as shown in figure, then $\angle BCD = 55^\circ$.



Reason (R): Exterior angle of cyclic quadrilateral is equal to interior opposite angle.

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

4. Assertion (A): In the given figure, $\angle ABC = 70^\circ$ and $\angle ACB = 30^\circ$. Then, $\angle BDC = 80^\circ$.

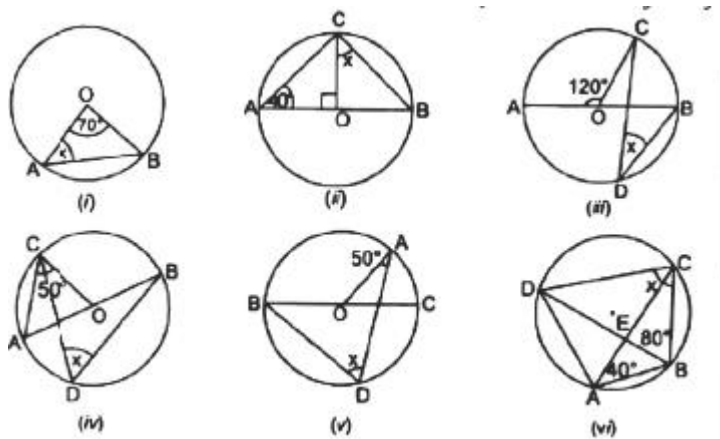


Reason (R): Angles in the same segment of a circle are equal.

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

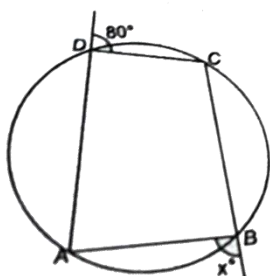
5. The lengths of two parallel chords of a circle are 6 cm and 8 cm. if the smaller chord is at a distance of 4 cm from the center, what is the distance of the other chord from the center?

6.



Find 'x'

7. In the below fig. ABCD is a cyclic quadrilateral. Find the value of x.



8. The lengths of two parallel chords of a circle are 6 cm and 8 cm. if the smaller chord is at a distance of 4 cm from the centre, what is the distance of the other chord from the centre? [3cm

9. In the below fig. O is the centre of the circle. If $\angle APB = 50^\circ$, find $\angle AOB$ and $\angle OAB$.

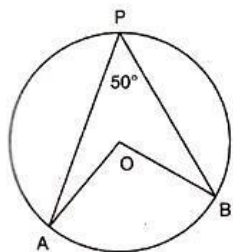


Fig. 16.120

10. ABCD is a cyclic trapezium with $AD \parallel BC$. If $\angle B = 70^\circ$, determine other three angles of the trapezium.

11. A, B and C are three points on a circle with centre O, such that $\angle BOC = 30^\circ$ and $\angle AOB = 60^\circ$. If D is a point on the circle other than the arc ABC, find $\angle ADC$.

12. AC and BD are chords of a circle which bisect each other. Prove that (i) AC and BD are diameters; (ii) ABCD is a rectangle.

13. Two chords AB and CD of lengths 5 cm and 11 cm, respectively, of a circle, are parallel to each other and are on opposite sides of its centre. If the distance between AB and CD is 6, find the radius of the circle. $[\frac{5}{2} \times \sqrt{5} \text{ cm}]$

14. Prove that a cyclic parallelogram is a rectangle.

15. ABCD is a cyclic quadrilateral whose diagonals intersect at point E. If $\angle DBC = 70^\circ$, $\angle BAC$ is 30° , find $\angle BCD$.

16. In the below fig. O is the centre of the circle and $\angle DAB = 50^\circ$. Calculate the values of x and y

