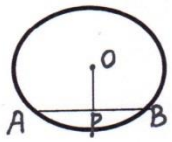
INTERNATIONAL INDIAN SCHOOL
BURAIDAH

Worksheet For The Academic Year 2023-24

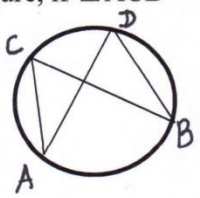
CLASS: IX SUBJECT: Mathematics DATE: 19/10/2023

LESSON-10 Circles

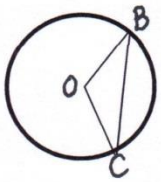
1) In the figure , O is the centre of the circle and PA = PB . Find ∟OPA.



2) In the figure, if ∟ACB = 40° , find ∟ADB.

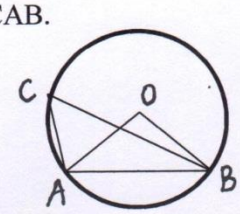


3) In the figure , if ∟OCB = 40, find ∟OBC.



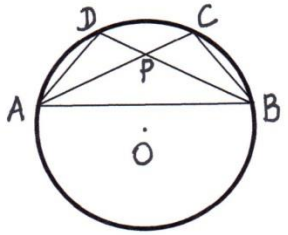
4) If a line intersects two concentric circles with common centre O at points P , Q , R , S , prove that PQ = RS.

5) In the figure , ∟AOB = 90° and ∟ABC = 30° then find the measure of ∟CAB.



6) Prove that ' Equal chords of a circle subtend equal angles at the centre'.

7) In the figure , ∟PBC = 15°and ∟APB = 120° , find ∟ADB.



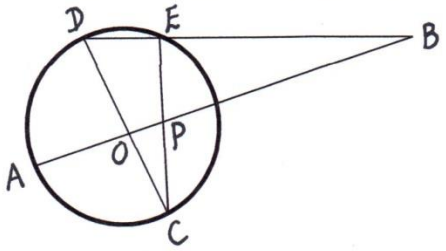
8) A chord 12cm long is 8cm away from the centre of a circle.What is the length of a chord which is 6cm away in the same circle?

9) If two circlesintersect at two points , prove that their centres lie on the Perpendicular bisector of the common chord.

10) Prove that ' The angle subtended by an arc at the centre is the double the angle subtended by it at any point on the remaining part of the circle".

11) Three boys Raj ,Ramu and Roni are sitting at equal distance on the boundary of a circle. The radius of the circle is 40m. Find the distance between each of them.

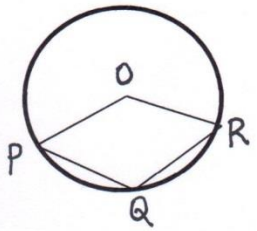
12) In the figure , AB and CD pass through the centre of a circle O. If ∟OCE = 40° and ∟AOD = 75° , find ∟CDE and ∟OBE.



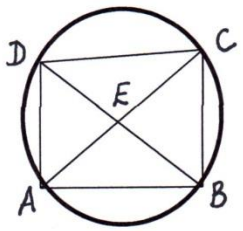
13) If two equal chords of a circle intersect within the circle, prove that the segments of one chord are equal to the corresponding segments of the other chord.

14) If two intersecting chords of a circle make equal angles with the diameter Passing through their point of intersection ,prove that the chords are equal.

15) In the figure , if ∟POR = 110° then find ∟PQR.



16) In the figure , ABCD is a cyclic quadrilateral whose diagonals intersect at E. If ∟DBC = 70° and ∟BAC = 30° , find ∟BCD. Further if AB = AC find ∟ECD.



ANSWERS

1) 90°	8) 16cm
2) 40°	11) $40\sqrt{3}$ m
3) 40°	12) 50° , 25°
5) 105°	15) 125°
7) 105°	16) 80° , 50°