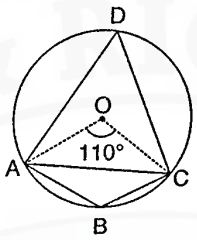
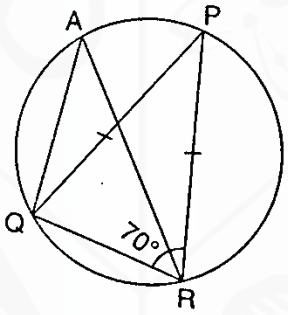
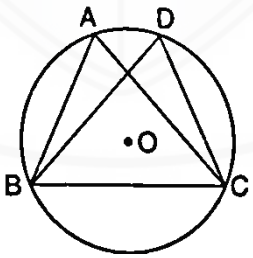
**1.** In the adjoining figure; ∠AOC = 110° ; calculate:

i. ∠ ADC ii. ∠ABC iii. ∠OAC.

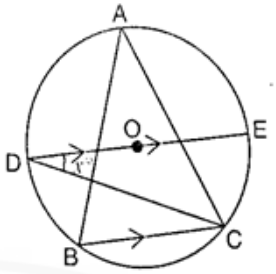



**3.** The given figure shows a circle through the points A, B, C and D. If ∠BAC = 67°, find: ∠DBC + ∠DCB.

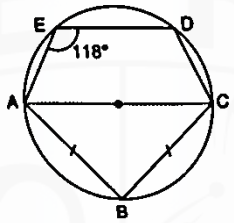



**4.** In the given figure, BA//DE and O is the centre of the circle. If ∠ CDE = x°, the value of ∠BAC.

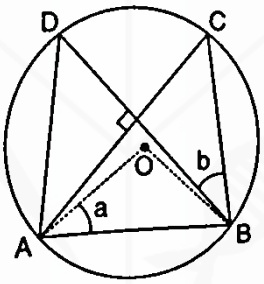



**5.** In the adjoining figure; AC is a diameter of the circle. AB = BC and ∠ AED = 118°. Calculate:

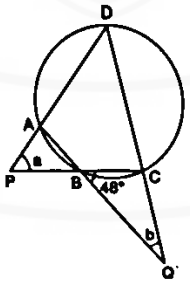
ii. ∠DAB




**6.** In the adjoining figure; O is centre of the circle, chords AC and BD are perpendicular to each other, ∠OAB = a and ∠DBC = b. show that a = b



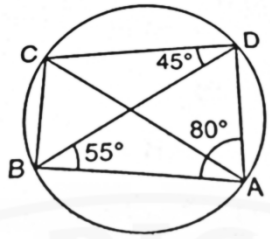

**7.** In the adjoining figure; ABCD is a cyclic quadrilateral, ∠ CBQ = 48° and a = 2b. Calculate the numerical value of b.




**8.** In the given figure, ∠BAD = 80°, ∠ABD = 55° and ∠BDC =45°. Find :

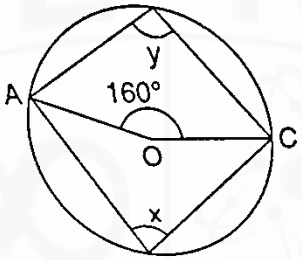
ii. ∠ADB

Hence, show that AC is a diameter.

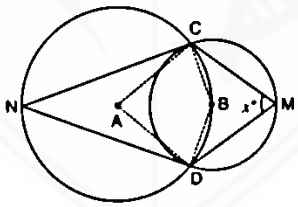



**9.** In a circle, with centre O, a diameter AB and a chord AD are drawn. Another circle is drawn with AO as diameter to cut AD at C. Prove that : BD = 2 x OC.

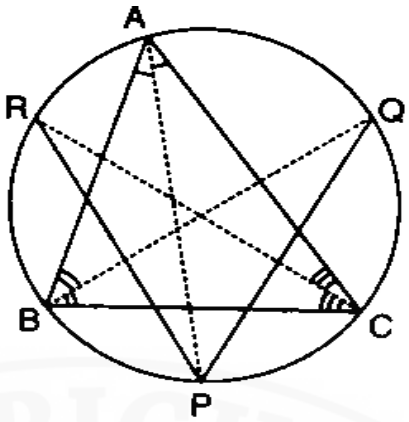
**10.** In the figure, given alongside, O is the centre of the circle and ∠AOC = 160°. Prove that : 3∠y - 2∠x =140°.




**11.** Two unequal circles with centres A and B intersect each other at points C and D. The centre B of the smaller circle lies on the circumference of the bigger circle with centre A. If ∠CMD = x°, find in terms of x, the measure of angle DAC.

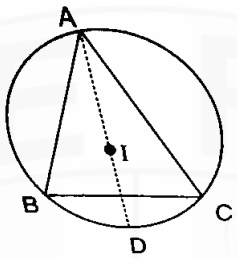



**12.** The given figure shows a triangle ABC with ∠BAC = 56° and ∠ABC = 64°. Bisectors of angles A, B and C meet the circumcircle of the ΔABC at points P,Q and R respectively. Find the measure of ∠QPR.



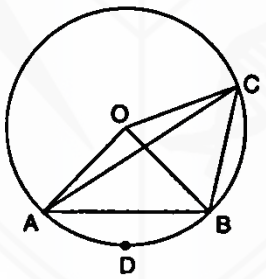

**13.** In the given figure, I is the in centre of triangle ABC. AI produced meets the circumcircle of the triangle ABC at point D. If ∠BAC =50° and ∠ABC = 70°, find :

i. ∠BCD ii. ∠ICD iii. ∠BIC




**14.** In the given figure, the lengths of arc AB and arc BC are in the ratio 3 : 2. If ∠AOB = 96°; find :

i. ∠CAB ii. ∠ADB




**15.** If two sides of a cyclic quadrilateral are parallel, prove that the other two sides are equal.