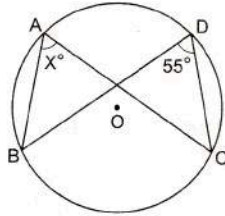
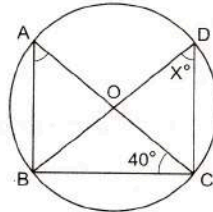


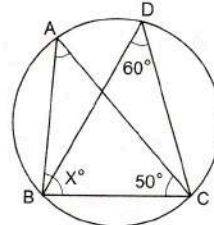
1. In the figures given below,  $O$  is the centre of the circle in each case. Find the value of  $x$ .



(i)

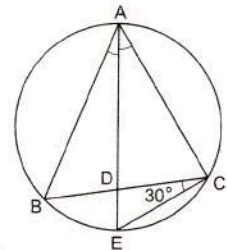


(ii)

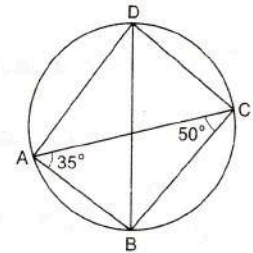


(iii)

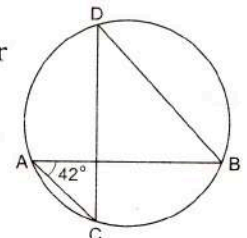
2.  $\triangle ABC$  is inscribed in a circle. The bisector of  $\angle BAC$  meets  $BC$  at  $D$  and the circle at  $E$  and  $EC$  is joined. If  $\angle ECD = 30^\circ$ , find  $\angle BAC$ .



3. A quadrilateral  $ABCD$  is inscribed in a circle. Diagonals  $AC$  and  $BD$  are joined. If  $\angle ACB = 50^\circ$  and  $\angle CAB = 35^\circ$ , find  $\angle ADC$ .

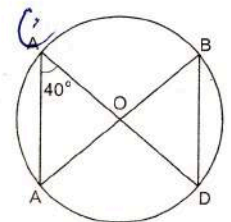


4. In the adjoining figure, two chords  $AB$  and  $CD$  of a circle cut each other at right angles.  $AC$  and  $BD$  are joined. If  $\angle CAB = 42^\circ$ , find  $\angle ABD$ .

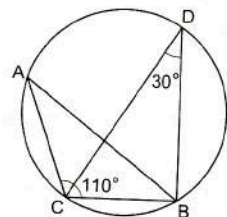


5. In the figure,  $AOB$  and  $COD$  are two diameters of a circle. If  $\angle ACO = 40^\circ$ , find  $\angle ODB$ .

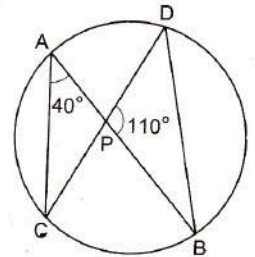
Hint.  $\angle AOD = 80^\circ$  and  $\angle BOD = 100^\circ$ .



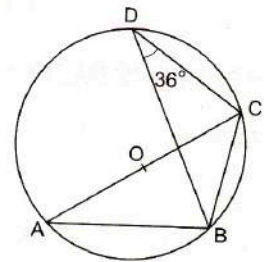
6. In the given figure, two chords  $AB$  and  $CD$  of a circle cut each other.  $AC$ ,  $BD$  and  $CB$  are joined. If  $\angle ACB = 110^\circ$ ,  $\angle BDC = 30^\circ$ , find  $\angle ABC$ .



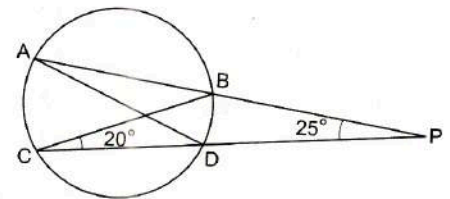
7. In the adjoining figure,  $AB$  and  $CD$  are two chords of a circle, intersecting each other at  $P$ . If  $\angle BAC = 40^\circ$  and  $\angle BPD = 110^\circ$ , find  $\angle PBD$ .



8. In the figure,  $O$  is the centre of a circle and  $\angle BDC = 36^\circ$ . Find  $\angle ACB$ .

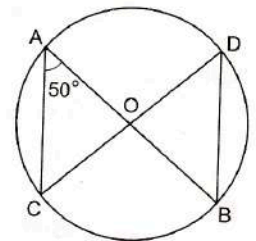


9. The chords  $AB$  and  $CD$  of a circle meet at a point  $P$  outside the circle when produced.  $AD$  and  $BC$  are joined. If  $\angle BCD = 20^\circ$  and  $\angle BPC = 25^\circ$ , find  $\angle ADP$ .

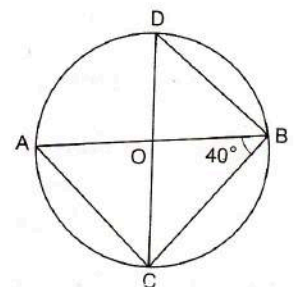


10. In the given figure,  $AB$  and  $CD$  are two diameters of a circle with centre  $O$ .  $AC$  and  $BD$  are joined. If  $\angle BAC = 50^\circ$ , find  $\angle ABD$ .

**Hint.** Since  $OA = OC$ , we have  $\angle ACO = \angle CAO = 50^\circ$ .



11. In the given figure,  $AB$  and  $CD$  are two diameters of a circle with centre  $O$ .  $AC$ ,  $BC$  and  $BD$  are joined. If  $\angle OBC = 40^\circ$ , find  $\angle BDO$ .



12.  $ABCD$  is a quadrilateral inscribed in a circle.  $AC$  and  $BD$  are joined. If  $\angle CAD = 35^\circ$ ,  $\angle CDB = 30^\circ$ , find  $\angle BCD$ .

