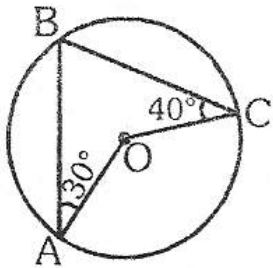
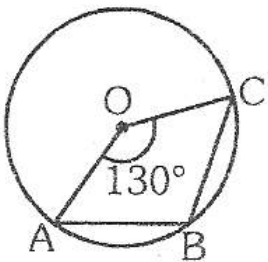


Class 09 Chapter – Circle CBSE Test Paper – 05

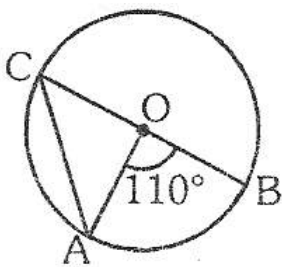
1. In the given figure, O is the centre of the circle $\angle OAB = 30^\circ$ and $\angle OCB = 40^\circ$. Calculate $\angle AOC$.



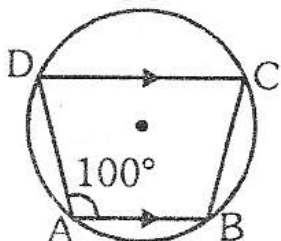
2. In the given figure, O is the centre of the circle and $\angle AOC = 130^\circ$. Find $\angle ABC$.



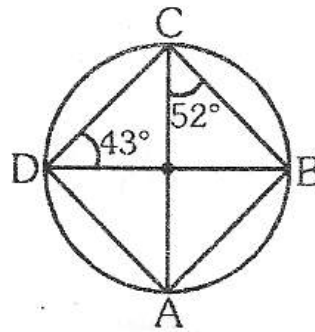
3. In the given figure, O is the centre of the circle and $\angle AOB = 110^\circ$. Calculate (i) $\angle ACO$ (ii) $\angle CAO$.



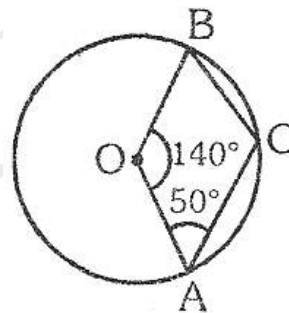
4. In the given figure, $AB \parallel DC$ and $\angle BAD = 100^\circ$. Calculate : (i) $\angle BCD$ (ii) $\angle ADC$ (iii) $\angle ABC$.



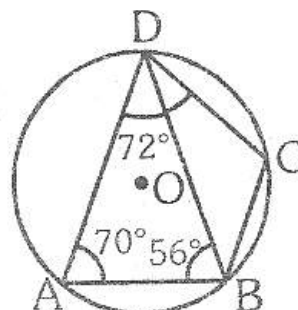
5. In the given figure, $\angle ACB = 52^\circ$ and $\angle BDC = 43^\circ$. Calculate (i) $\angle ADB$ (ii) $\angle BAC$ (iii) $\angle ABC$.



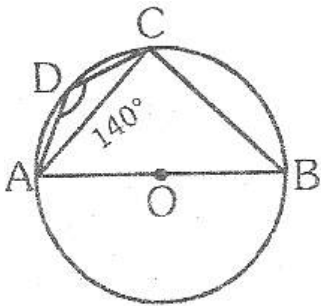
6. In the given figure, O is the centre of the circle. If $\angle AOB = 140^\circ$ and $\angle OAC = 50^\circ$, find (i) $\angle ABC$ (ii) $\angle BCO$ (iii) $\angle OAB$ (iv) $\angle BCA$.



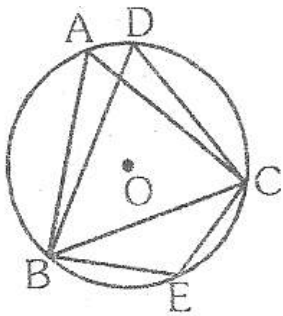
7. In the given figure, $\angle BAD = 70^\circ$, $\angle ABD = 56^\circ$ and $\angle ADC = 72^\circ$. Calculate (i) $\angle DBC$ (ii) $\angle BCD$ (iii) $\angle BCA$.



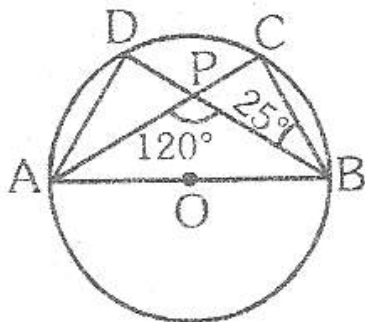
8. In the given figure, O is the centre of the circle. If $\angle ADC = 140^\circ$, find $\angle BAC$.



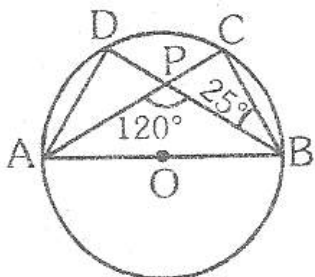
9. In the given figure, O is the centre of the circle and $\triangle ABC$ is equilateral. Find (i) $\angle BDC$ (ii) $\angle BEC$.



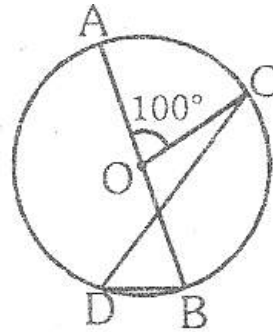
10. In the given figure, O is the centre of the circle and $\angle AOC = 160^\circ$. Prove that $3\angle y - 2\angle x = 140^\circ$



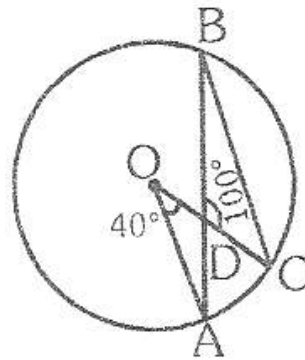
11. In the given figure, O is the centre of the circle. If $\angle CBD = 25^\circ$ and $\angle APB = 120^\circ$, find $\angle ADB$.



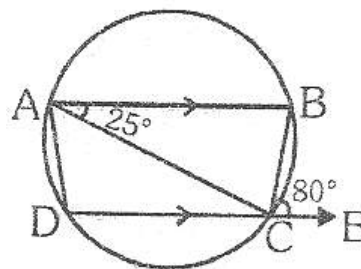
12. (i) In the given figure, AOB is a diameter of the circle O and $\angle AOC = 100^\circ$, find $\angle BDC$.



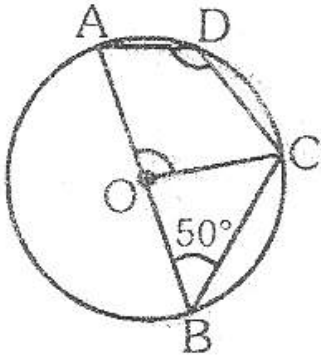
(ii) In the given figure, O is the centre of the circle; $\angle AOD = 40^\circ$ and $\angle BDC = 100^\circ$. Find $\angle OCB$.



13. In the figure, AB is parallel to DC, $\angle BCE = 80^\circ$ and $\angle BAC = 25^\circ$. Find : (i) $\angle CAD$ (ii) $\angle CBD$ (iii) $\angle ADC$.

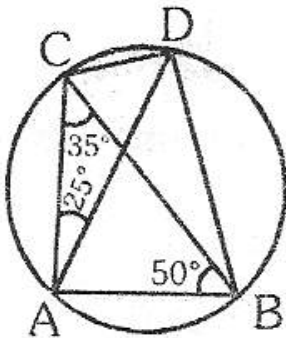


14. In the given figure, O is the centre of the circle and $\angle OBC = 50^\circ$. Calculate (i) $\angle ADC$ (ii) $\angle AOC$.



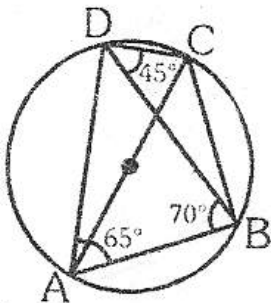
15. In the given figure, ABCD is a cyclic quadrilateral in which $\angle CAD = 25^\circ$, $\angle ABC = 50^\circ$ and $\angle ACB = 35^\circ$. Calculate

(i) $\angle CBD$ (ii) $\angle DAB$ (iii) $\angle ADB$



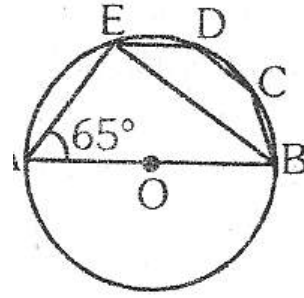
16. In the adjoining figure, $\angle BAD = 65^\circ$, $\angle ABD = 70^\circ$ and $\angle BDC = 45^\circ$. Find (i) $\angle BCD$ (ii) $\angle ADB$ Hence, show that

AC is a diameter.

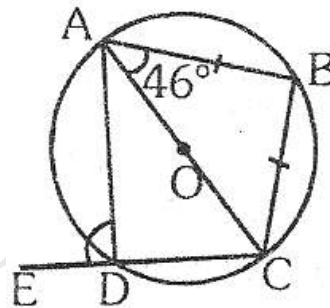


17. In the given figure, AB is a diameter of a circle with centre O and chord ED is parallel to AB and $\angle EAB = 65^\circ$

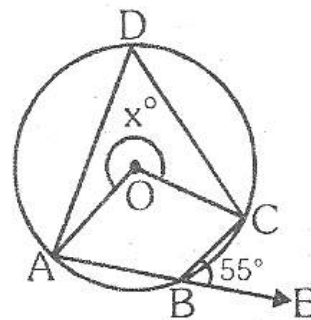
Calculate (i) $\angle EBA$ (ii) $\angle BED$ (iii) $\angle BCD$



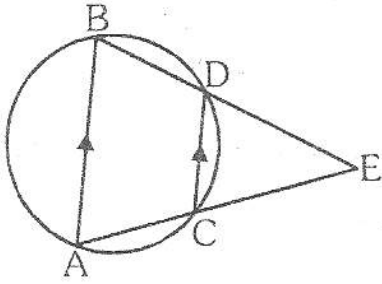
18. In the given figure, ABCD is a cyclic quadrilateral whose side CD has been produced to E. If $BA = BC$ and $\angle BAC = 46^\circ$, find $\angle ADE$.



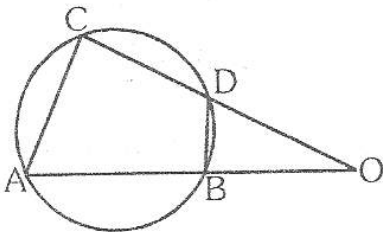
19. In the given figure, O is the centre of a circle and ABE is a straight line. If $\angle CBE = 55^\circ$, find : (i) $\angle ADC$ (ii) $\angle ABC$ (iii) the value of x.



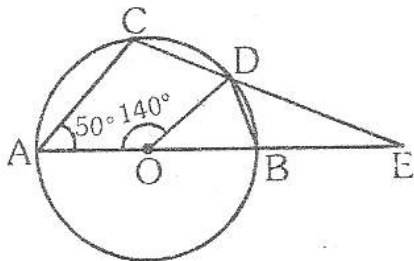
20. In the given figure AB and CD are two parallel chords of a circle. If BDE and ACE are straight lines, intersecting at E, prove that $\triangle AEB$ is isosceles.



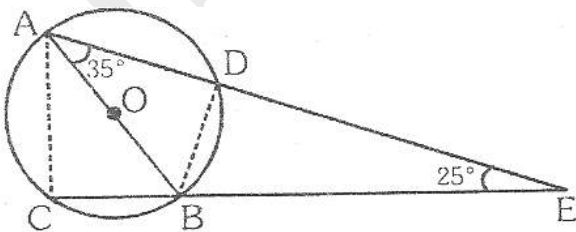
21. In the given figure, chords AB and CD of a circle are produced to meet at O. Prove that $\angle ODB$ and $\angle OAC$ are similar. If $BO = 3$ cm, $DO = 6$ cm and $CD = 2$ cm, find AB.



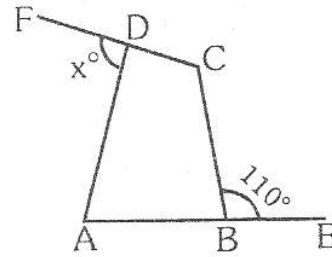
22. In the given figure, O is the centre of the circle, If $\angle AOD = 140$ and $\angle CAB = 50$, calculate : (i) $\angle EDB$ (ii) $\angle EBD$



23. In the given figure, AB is diameter of a circle with centre O. If ADE and CBE are straight lines, meeting at E such that $\angle BAD = 35$ and $\angle BED = 25$, find : (i) $\angle DCB$ (ii) $\angle DBC$ (iii) $\angle BDC$

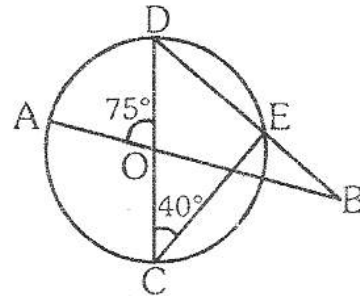


24. In the given figure, find whether the points A, B, C, D are concyclic, when (i) $x = 70$ (ii) $x = 80$

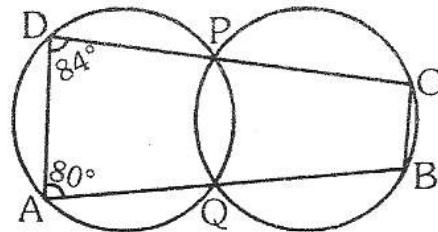


25. In the given figure, the straight lines AB and CD pass through the centre O of the circle. if $\angle AOD = 750$ and

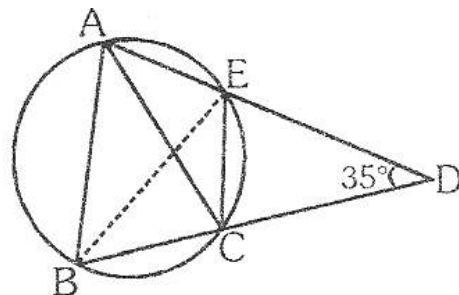
$\angle OCE = 40$, find (i) $\angle CDE$ (ii) $\angle OBE$.



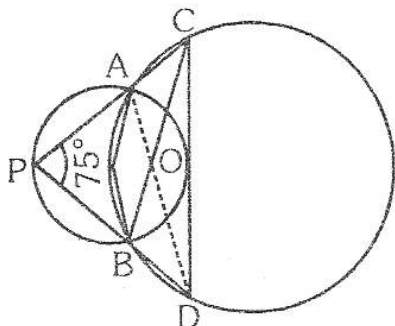
26. In the given figure, the two circles intersect at P and Q. If $\angle A = 80$ and $\angle D = 84$ calculate : (i) $\angle QBC$ (ii) $\angle BCP$



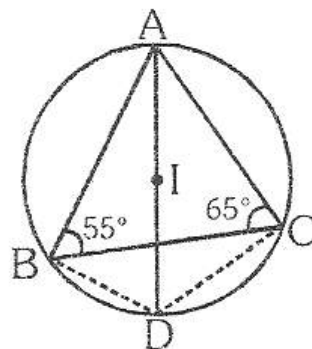
27. In the adjoining figure, $AB = AC = CD$, $\angle ADC = 35$. Calculate : (i) $\angle ABC$ (ii) $\angle BEC$



28. In the adjoining figure, two circles intersect at A and B. The centre of the smaller circle is O and lies on the circumference of the larger circle. If PAC and PBD are straight lines and $\angle APB = 75^\circ$, find (i) $\angle AOB$ (ii) $\angle ACB$ (iii) $\angle ADB$.



30. In the given figure, I is the incentre of $\triangle ABC$. AI produced meets the circumcircle of $\triangle ABC$ at D: $\angle ABC = 55^\circ$ and $\angle ACB = 65^\circ$. Calculate : (i) $\angle BCD$ (ii) $\angle CBD$ (iii) $\angle DCI$ (iv) $\angle BIC$



29. The exterior angles B and C in $\square ABC$ are bisected to meet at a point P. Prove that $\angle BPC = 90^\circ - \frac{A}{2}$. Is ABPC a cyclic quadrilateral ?

Solution:

1. $\angle AOC = 140^\circ$ 2. $\angle ABC = 115^\circ$ 3. (i) 55° (ii) 55° 4. (i) $\angle BCD = 80^\circ$ (ii) $\angle ADC = 80^\circ$ (iii) $\angle ABC = 100^\circ$
5. (i) $\angle ADB = 52^\circ$ (ii) $\angle BAC = 43^\circ$ (iii) $\angle ABC = 85^\circ$
6. (i) $\angle ABC = 40^\circ$ (ii) $\angle BCO = 60^\circ$ (iii) $\angle OAB = 20^\circ$ (iv) $\angle BCA = 110^\circ$
7. (i) $\angle BDC = 180^\circ$ (ii) $\angle BCD = 60^\circ$ (iii) $\angle BCA = 54^\circ$
8. $\angle BAC = 50^\circ$ 9. (i) $\angle BDC = 60^\circ$ (iii) $\angle BEC = 120^\circ$ 10. (i) $\angle BAD = 62.5^\circ$ (ii) $\angle BCD = 117.5^\circ$
11. $\angle ADB = 95^\circ$ 12. $\angle BDC = 40^\circ$ (ii) $\angle OCB = 60^\circ$ 13. (i) $\angle CAD = 55^\circ$ (ii) $\angle CBD = 55^\circ$ (iii) $\angle ADC = 100^\circ$
14. (i) $\angle ADC = 130^\circ$ (ii) $\angle AOC = 100^\circ$ 15. $\angle CBD = 25^\circ$ (ii) $\angle DAB = 70^\circ$ (iii) $\angle ADB = 35^\circ$
17. (i) $\angle EBA = 25^\circ$ (ii) $\angle BED = 25^\circ$ (iii) $\angle BCD = 155^\circ$ 18. 88°
19. (i) $\angle ADC = 55^\circ$ (ii) $\angle ABC = 125^\circ$ (iii) $x = 250$ 21. $AB = 13 \text{ cm}$
22. (i) $\angle EDB = 50^\circ$ (ii) $\angle EBD = 110^\circ$ 23. (i) $\angle DCB = 35^\circ$ (ii) $\angle DBC = 115^\circ$ (iii) $\angle DBC = 30^\circ$
24. (i) Yes (ii) No. 25. (i) $\angle CDE = 50^\circ$ (ii) $\angle OBE = 25^\circ$ 26. (i) $\angle QBC = 100^\circ$ (ii) $\angle BCP = 96^\circ$
27. (i) $\angle ABC = 40^\circ$ (ii) $\angle BEC = 40^\circ$ 28. (i) $\angle AOB = 150^\circ$ (ii) $\angle ACB = 30^\circ$ (iii) $\angle ADB = 30^\circ$
29. No 30. (i) $\angle BCD = 25^\circ$ (ii) $\angle CBD = 35^\circ$ (iii) $\angle DCI = 55^\circ$ (iv) $\angle BIC = 120^\circ$