doubtnut
India's Number 1 Education App

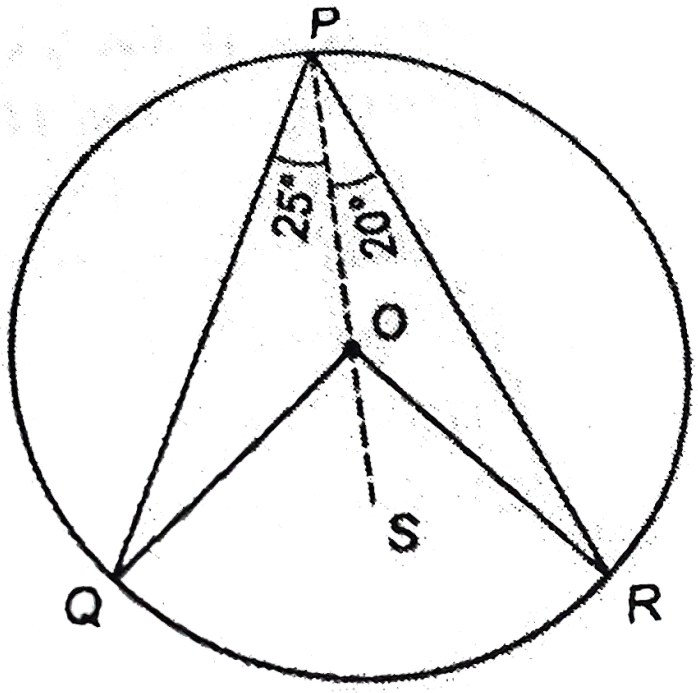
MATHS

BOOKS - NAGEEN MATHS (HINGLISH)

CIRCLE

Solved Examples

1. In the adjoining figure $\angle QPO = 25^\circ$ and $\angle SPR = 20^\circ$, find the value of $\angle QOR$.



A. 70°

B. 180°

C. 45°

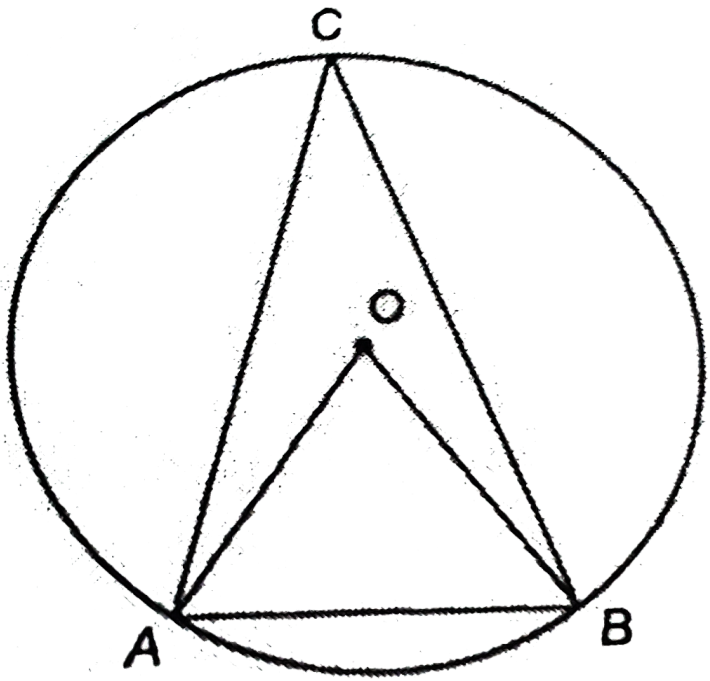
D. 90°

Answer: D

Watch Video Solution

2. In the adjoining figure O is the centre of the circle . If chord $AB = 2$ cm radius $OA = 2$

cm, then find the value of $\angle ACB$.



A. $= 60^\circ$

B. $= 45^\circ$

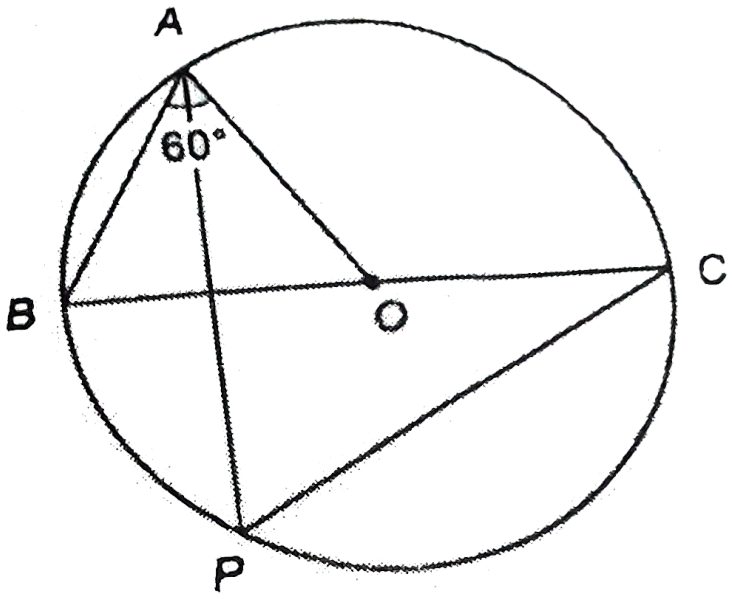
C. $= 30^\circ$

D. $= 50^\circ$

Answer: C

Watch Video Solution

3. In the adjoining figure , O is the centre of the circle and $\angle OAB = 60^\circ$. Find $\angle APC$.



A. $= 60^\circ$

B. $= 45^\circ$

C. $= 30^\circ$

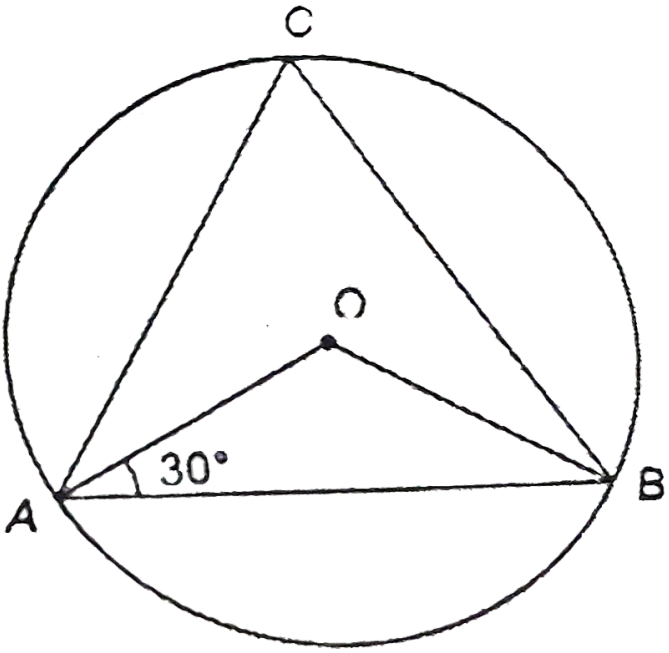
D. $= 50^\circ$

Answer: A

Watch Video Solution

4. In the adjoining , O is the centre of the circle. ACB is a segment. If $\angle OAB = 30^\circ$,

then find the value of $\angle ACB$.



A. $= 60^\circ$

B. $= 45^\circ$

C. $= 30^\circ$

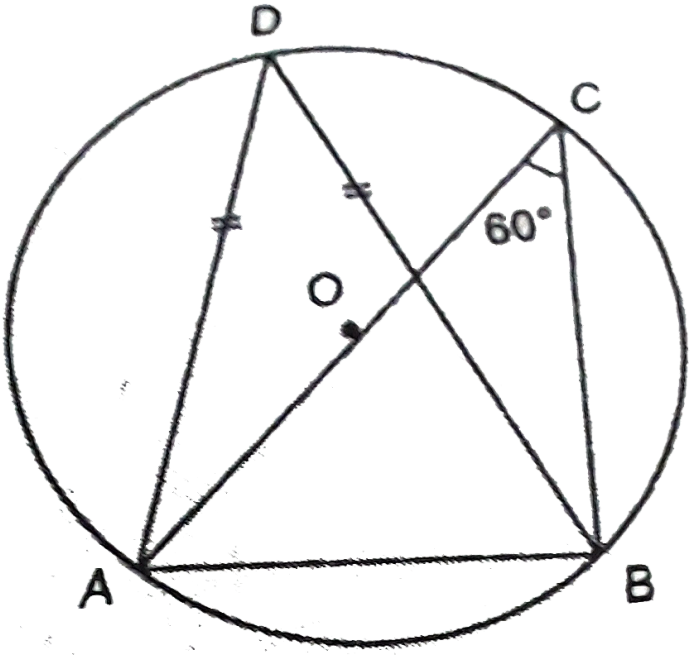
D. $= 50^\circ$

Answer: A

Watch Video Solution

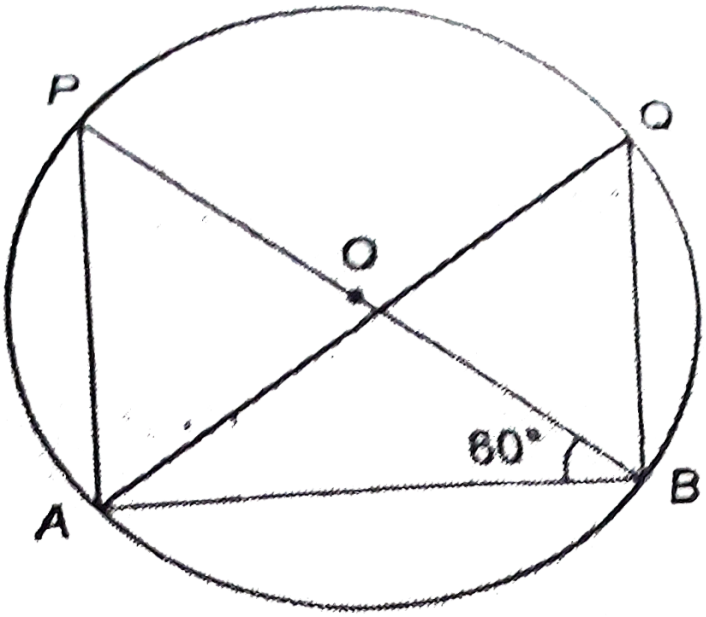
5. In the following figure O is the centre of the circel. If $\angle ACB = 60^\circ$ and $DA = DB$ then

prove that ΔADB is an equilateral triangle.



Watch Video Solution

6. In the adjoining figure, BP is the diameter of the circle. If $\angle ABP = 60^\circ$, then find $\angle AQB$.



A. 60°

B. 45°

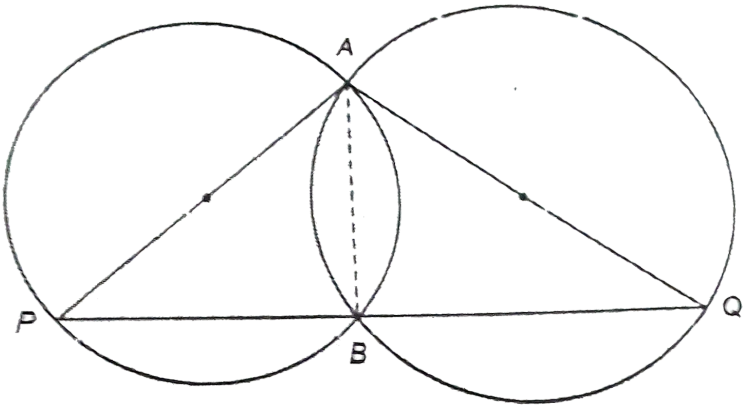
C. 30°

D. 50°

Answer: C

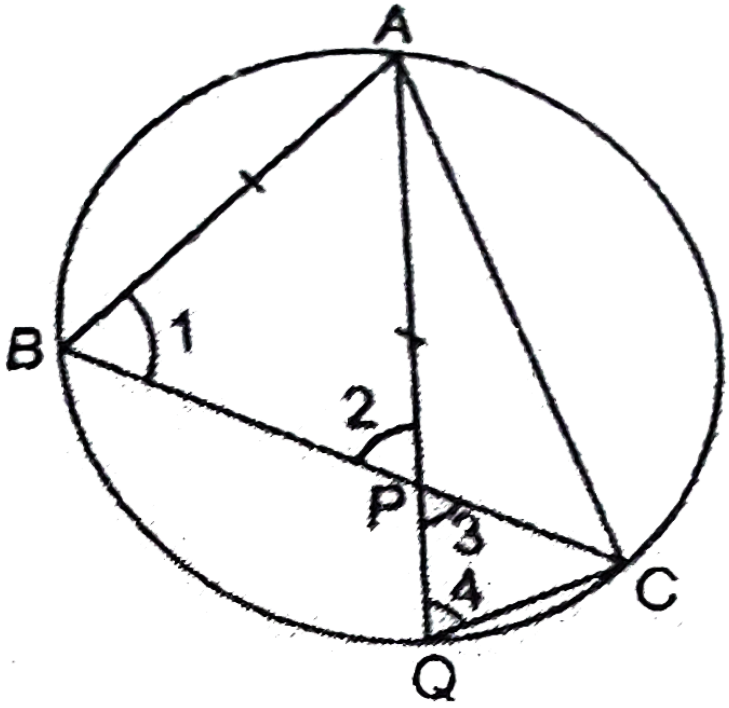
Watch Video Solution

7. In the figure, two circles intersect each other at points A and B. AP and AQ are the diameters of these circles. Prove that PBQ is a straight line.



Watch Video Solution

8. In given figure, ABC is a triangle produced meets the circumcircle of ΔABC at Q, prove that $CP = CQ$



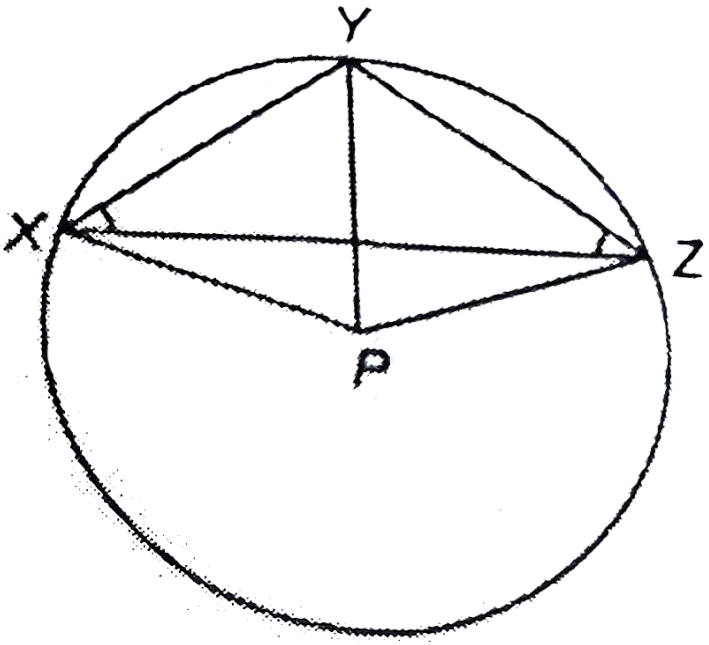
Watch Video Solution

9. D is a point on the circumcircle of ΔABC in which $AB = AC$ such that B and D are on opposite sides of line AC. If CD is produced to a point E such that $CE = BD$, prove that $AD = AE$.

Watch Video Solution

10. In the figure, P is the centre of the circle.

Prove that : $\angle XPZ = 2(\angle XZY + \angle YXZ)$.



Watch Video Solution

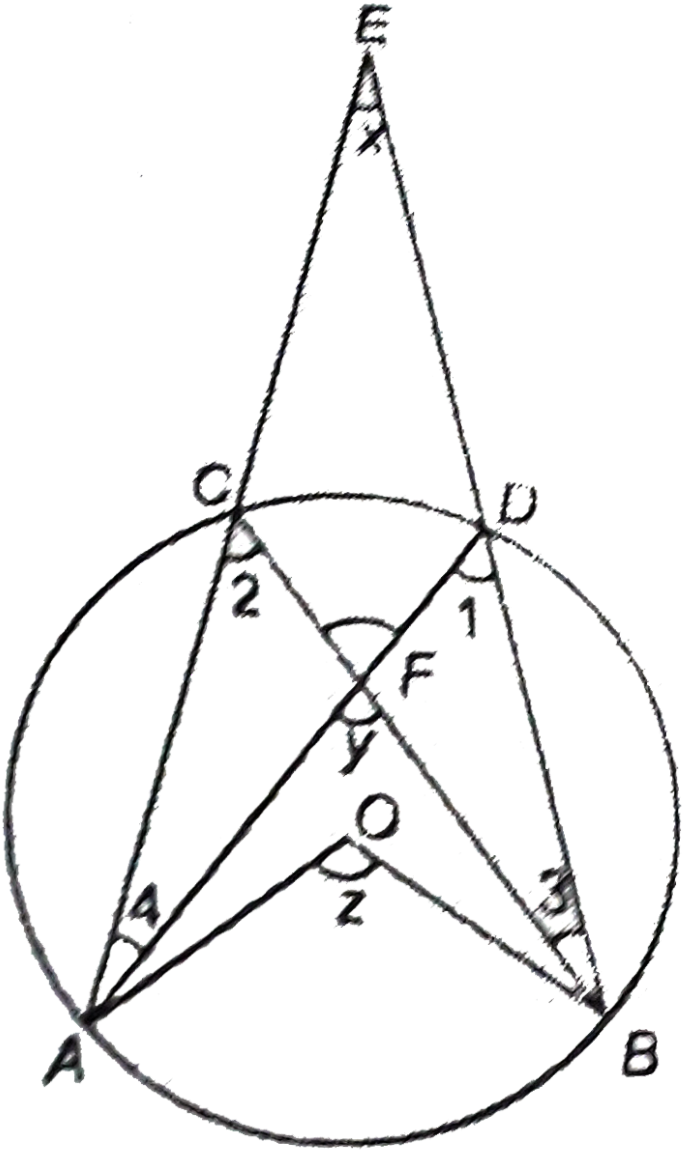
11. Prove that the circle drawn on any one of the equal sides of an isosceles triangle as diameter bisects the base.

Watch Video Solution

12. In a circel with centre O. chords AB and CD interest inside the circumference at E. Prove that $\angle AOC + BOD = 2\angle AEC$.

Watch Video Solution

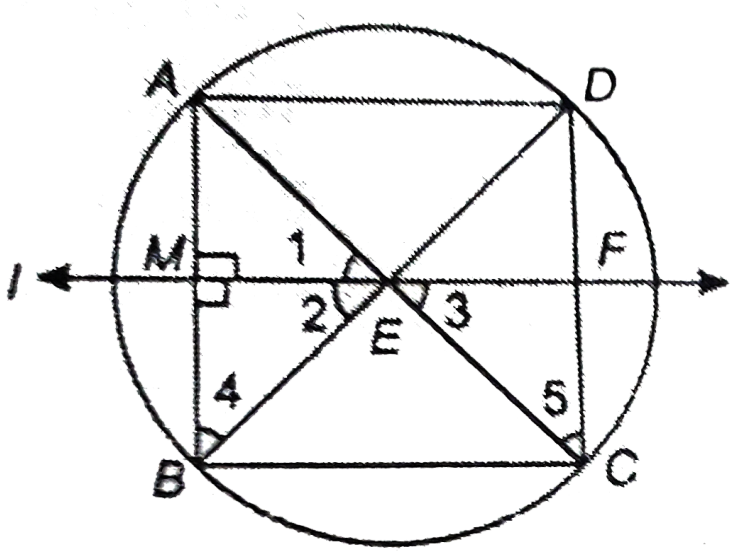
13. In figure O is the centre of the circle, prove that $\angle z = \angle x + \angle y$.



Watch Video Solution

14. The diagonals AC and BD of a cyclic quadrilateral $ABCD$ interest at right angles at E (figure). A line l drawn through E and perpendicular to AB meets CD at F. Prove that

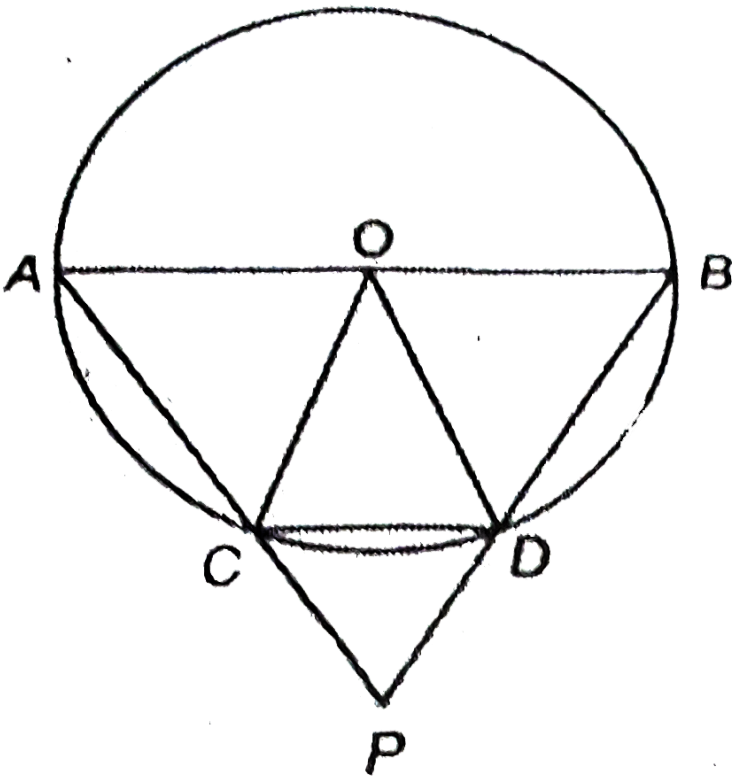
F is the mid-point of CD.



Watch Video Solution

15. AB is a diameter of the circle with centre O and chord CD is equal to radius OC (fig). AC and BD proudced meet at P. Prove that

$\angle CPD = 60^\circ$.



A. 60°

B. 30°

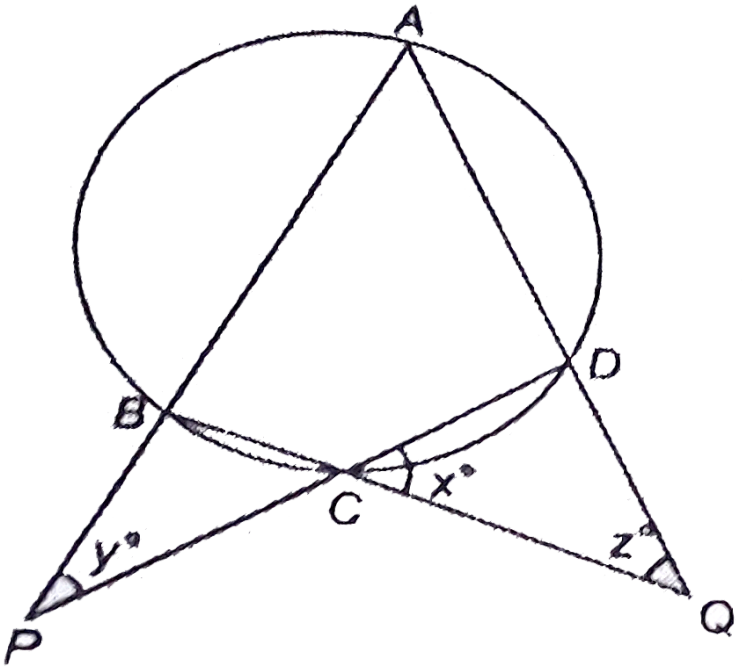
C. 90°

D. 160°

Answer: A

Watch Video Solution

16. In given fig., if $\frac{x}{3} = \frac{y}{4} = \frac{z}{5}$, then calculate the values of x,y and z.

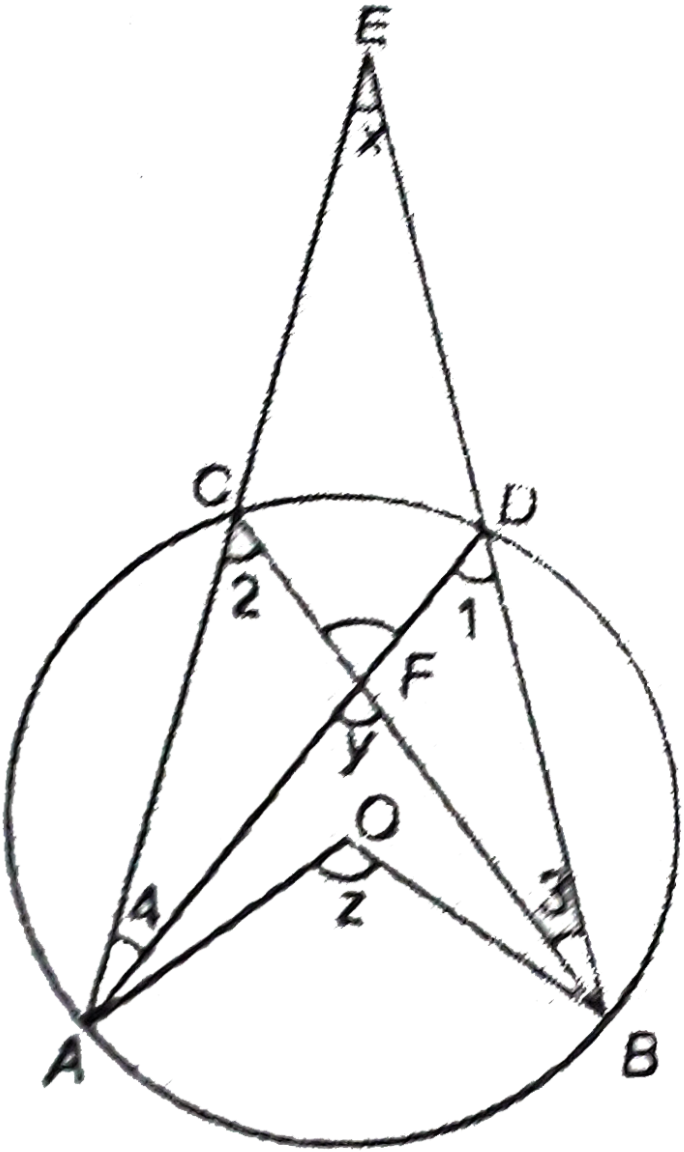


Watch Video Solution

17. Prove that any four vertices of a regular pentagon are concyclic.

Watch Video Solution

18. In figure O is the centre of the circle, prove that $\angle z = \angle x + \angle y$.



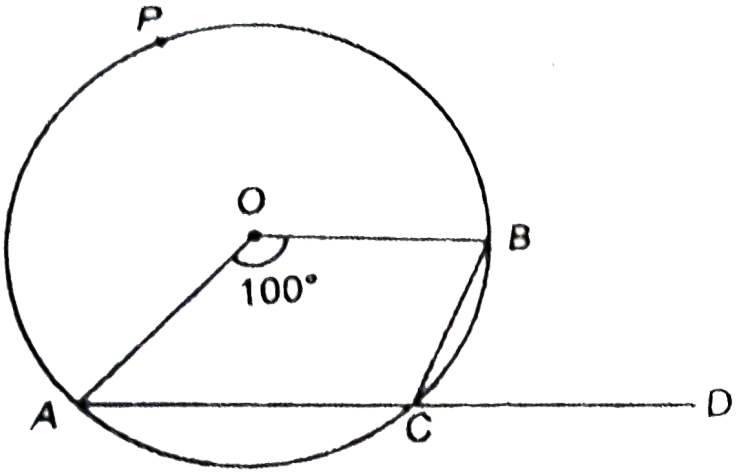
Watch Video Solution

19. Two chords PQ and QR are equildistant form O the centre of the circle. If QS, is the diameter, then show that QS bisects $\angle PQR$ and $\angle PSR$.

Watch Video Solution

20. In the adjoining figure O is the centre of the circle and $\angle AOB = 100^\circ$. Find the value

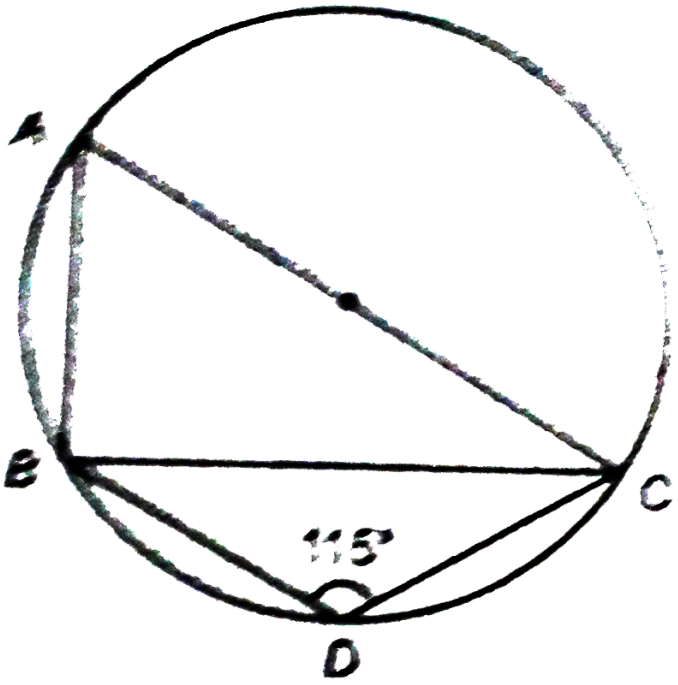
of $\angle BCD$.



Watch Video Solution

21. In the adjoining figure, AC is the diameter of the circle. If $\angle BDC = 115^\circ$, then find the

value of $\angle ACB$.

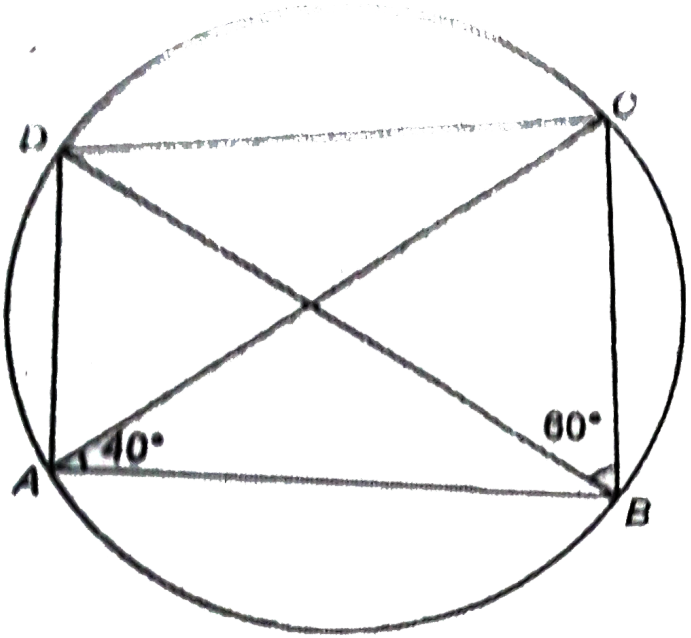


Watch Video Solution

22. In the adjoining figure, $ABCD$ is a cyclic quadrilateral. If $\angle DBC = 60^\circ$ and

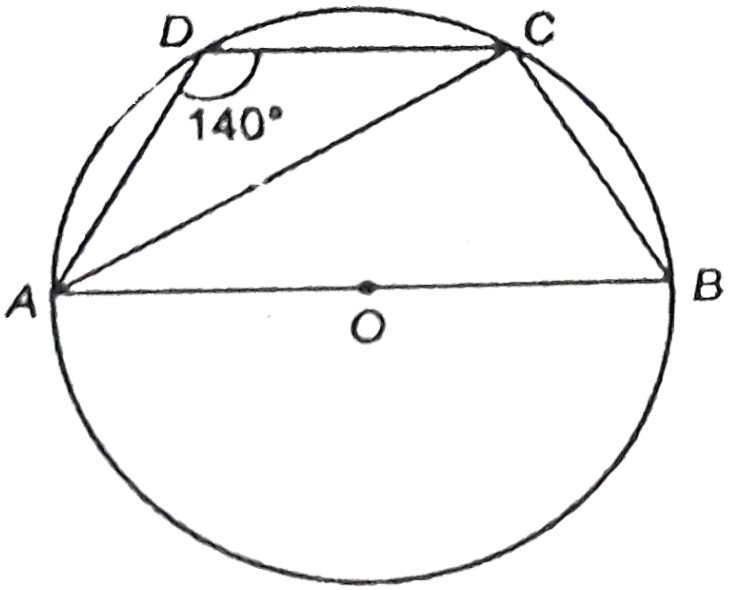
$\angle BAC = 40^\circ$, then find the value of $\angle BCD$

.



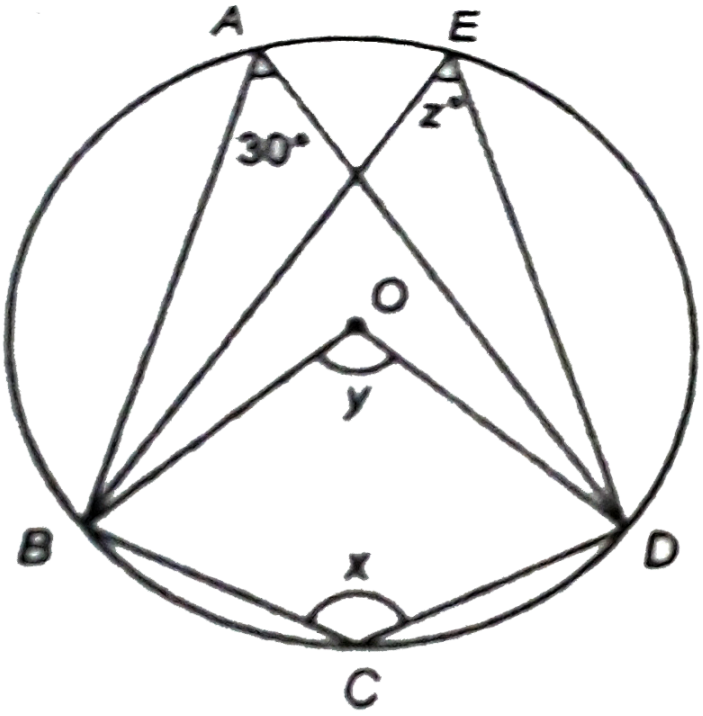
Watch Video Solution

23. In the adjoining figure, $ABCD$ is a cyclic quadrilateral whose side AB is the diameter of the circle . If $\angle ADC = 140^\circ$, then find the value of $\angle BAC$.



Watch Video Solution

24. In the adjoining figure , O is the center of the circle. If $\angle BAD = 30^\circ$, then find the values of x, y and z.



Watch Video Solution

25. In a cyclic trapezium $ABCD$, side AB is parallel to side DC. Prove that :

side AD = side BC.

Watch Video Solution

26. If the two sides of a pair of opposite sides of a cyclic quadrilateral are equal, prove that its diagonals are equal.

Watch Video Solution

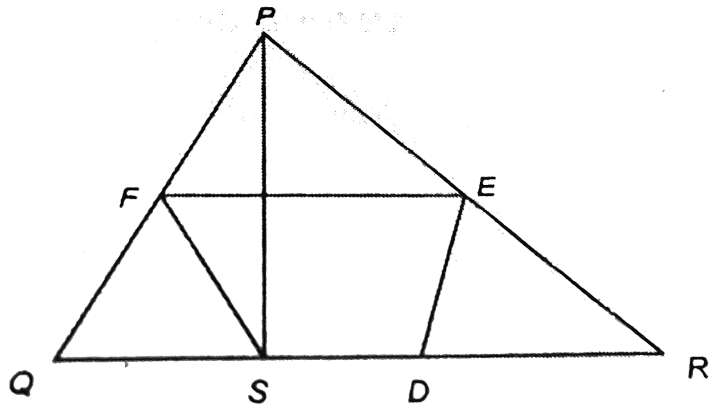
27. In the adjoining figure, D, E and F are the mid- points of the sides of ΔPQR and S is the foot of perpendicular form P to side S.

Prove that:

(i) $FQ = FS$ and $\angle FQS = \angle FSQ$.

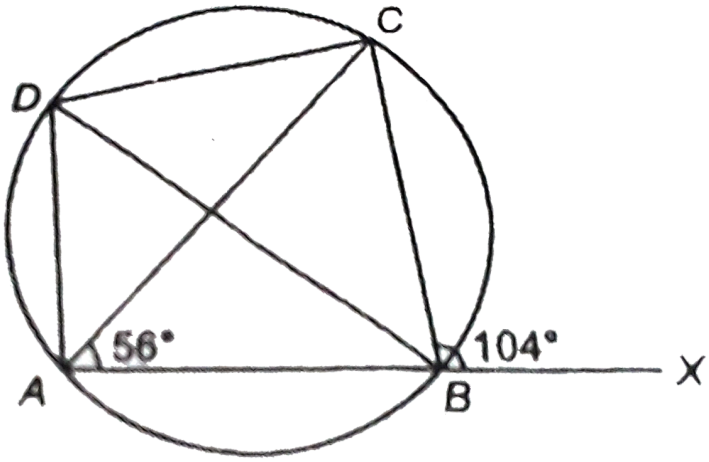
(ii)$\angle FQS = \angle FED$.

(iii) square $FSDE$ is a cyclic quadrilateral.



Watch Video Solution

28. In the adjoining figure, $ABCD$ is a cyclic quadrilateral . If $\angle CBX = 104^\circ$ and $\angle CAB = 56^\circ$, then find the value of $\angle ADB$.



A. 28°

B. 48°

C. 58°

D. 18°

Answer: B

Watch Video Solution

29. $ABCD$ is a cyclic trapezium , in which $AB||DC$. If $\angle B = 75^\circ$, then find other angles.

Watch Video Solution

30. The sides AB and DC of a cyclic quadrilateral $ABCD$ when produced meet at E and the sides DA and CB when produced meet at F. Given $\angle BEC = 38^\circ$, $\angle BAD = 102^\circ$. Find the values of $\angle AFB$ and $\angle ADC$.

Watch Video Solution

31. ABCD is a parallelogram . The circle passing through the vertices. A, B and C intersects CD

(or CD produced) at E. Prove that $AE = AD$.

Watch Video Solution

32. Prove that the perpendicular let fall from the vertices of a triangle to the opposite sides are concurrent.

Watch Video Solution

33. A circle intersects the side AD of a parallelogram $ABCD$ at P and BC produced

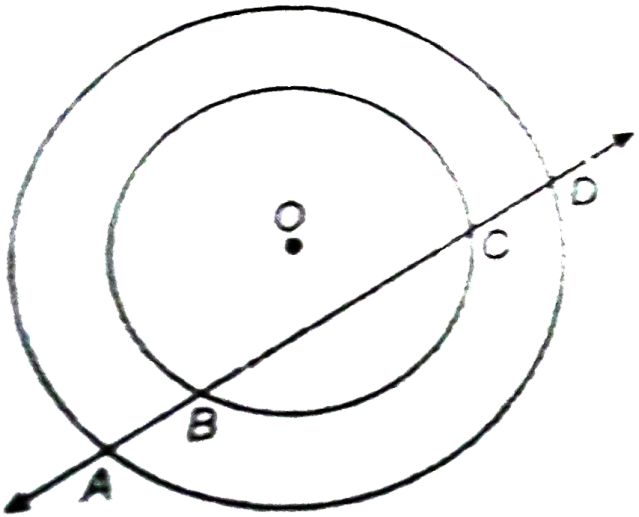
at Q. Prove that square $PDQC$ is cyclic .

Watch Video Solution

34. The line joining the foot of perpendicular drawn from a point lying on the circumcircle. Of a triangle to the sides of a triangle is a straight line.

Watch Video Solution

35. If a line intersects two concenteric circles (circles with the same centre) with center O at A,B,C and D, prove that AB=CD (see figure).



View Text Solution

36. Three girls Reshma, Salma and Mandip are playing a game by standing on a circle of radius 5m drawn in a park. Reshma throws a ball to Salma, Salma to Mandip, Mandip to Reshma. If the distance between Reshma and Salma and between Salma and Mandip

Watch Video Solution

37. A circular park of radius 20m is situated in a colony. Three boys Ankur, Syed and David are

sitting at equal distance on its boundary each having a toy telephone in his hands to talk each other. Find the length of the string of each phone.

38. If the non-parallel sides of a trapezium are equal, prove that it is cyclic.

39. Two circles intersect at two points B and C. Through B, two line segments ABD and PBQ are drawn to intersect the circles at A, D and P, Q respectively (see Fig. 10.40). Prove that $\angle ACP = \angle QCD$.

Watch Video Solution

40. The circumcentre of the triangle ABC is O . Prove that $\angle OBC + \angle BAC = 90^\circ$.

Watch Video Solution

41. If P, Q and R are the mid-points of the sides, BC, CA and AB of a triangle and AD is the perpendicular from A on BC, then prove that P, Q, R and D are concyclic.

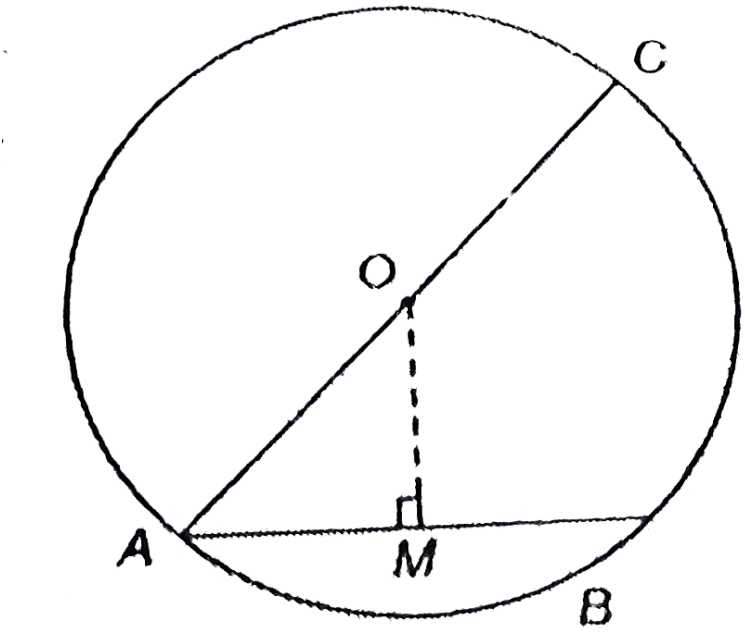
Watch Video Solution

42. If bisectors of opposite angles of a cyclic quadrilateral ABCD intersect the circle, circumscribing it at the points P and Q, prove that PQ is a diameter of the circle.

Watch Video Solution

43. In the adjoining figure, O is the centre of the centre of the circle. If diameter AC=26cm and chord AB=10cm, then find the distances of

the chord AB from the centre of the circle.



Watch Video Solution

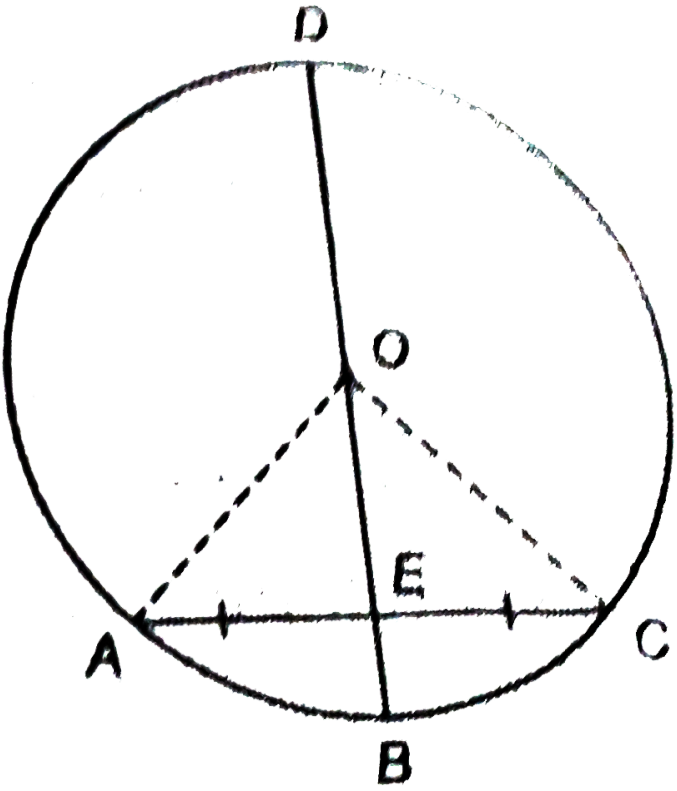
44. A chord 16 cm long is 6 cm distant form the centre of the circle . Find the diameter of

the circle.

Watch Video Solution

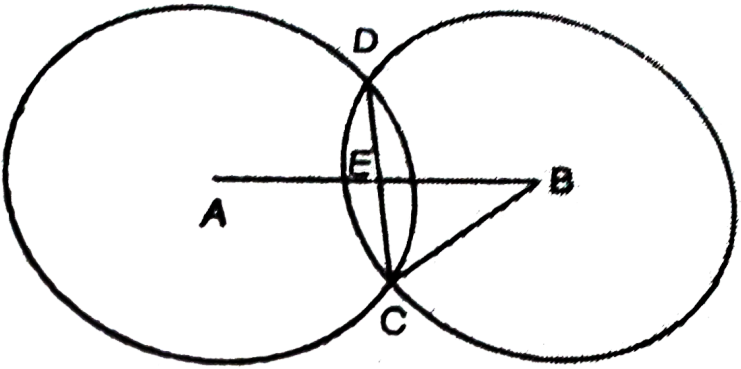
45. In the adjoining figure, BD is the diameter of the circle which bisects the chord AC at point E. If $AC = 8cm$, $BE = 2cm$, then find

the radius of the circle.



Watch Video Solution

46. In the adjoining figure, A and B are the centres of two circles. If CB=17cm, EB=15cm, then find the length of common chord.



Watch Video Solution

47. If a line segment joining mid-points of two chords of a circle passes through the centre of the circle, prove that the two chords are parallel.

Watch Video Solution

48. Prove that the line joining the mid-points of two parallel chords of a circle passes through the center.

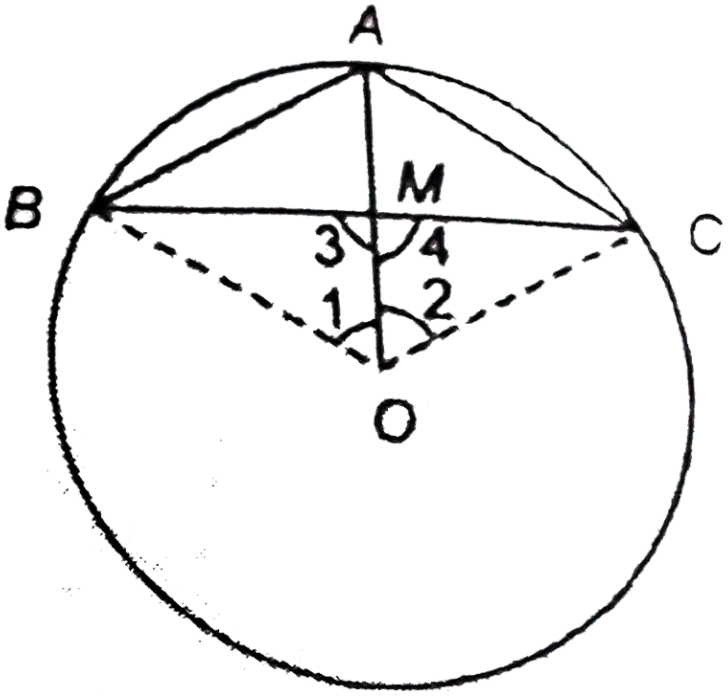
Watch Video Solution

49. In an equilateral triangle prove that the centroid and the centre of the circumcircle (circumcentre) coincide.

Watch Video Solution

50. In figure, $\overset{\frown}{AB} \cong \overset{\frown}{AC}$ and O is the centre of the circle,Prove that OA is the perpendicualr

bisector of BC.



Watch Video Solution

51. AB and CD are two parallel chords of a circle which are on opposite sides of the centre such that AB=10 cm, CD=24 cm and the distance between AB and CD is 17 cm.Find the radius of the circle.

Watch Video Solution

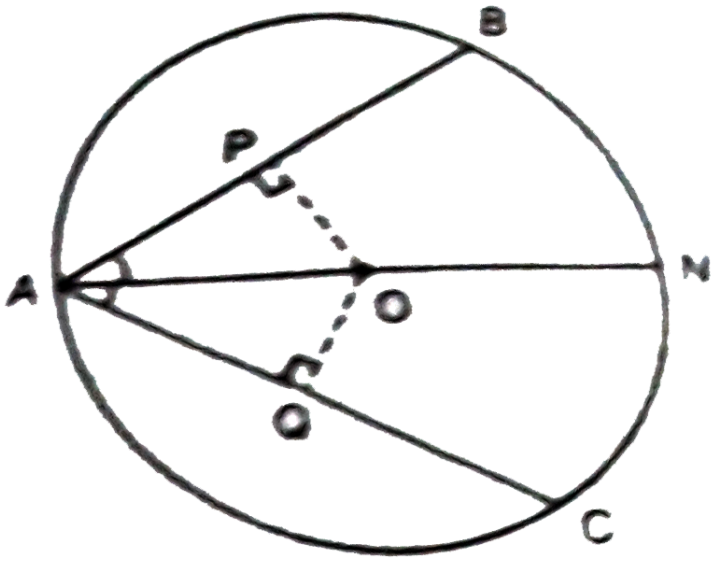
52. A point P lies outside the circle with centre O. two lines PAOB and PDC are drawn on the

circle from P. if PD =OD, then prove that arc $BC = 3 \times ArcAD.$

Watch Video Solution

53. Prove that the chords inclined on the same angle to the radius or diameter of a circle are

equal in length.



Watch Video Solution

54. In the figure, OD is perpendicular to the chord AB of a circle whose centre is O. If BC

is a diameter, show that $CA = 2OD$.

Watch Video Solution

55. AB *and* CD are two parallel chords of a circle whose diameter is AC . Prove that $AB = CD$

Watch Video Solution

56. Two circles whose centres are O and O' intersect at P. Through P, a line l parallel to

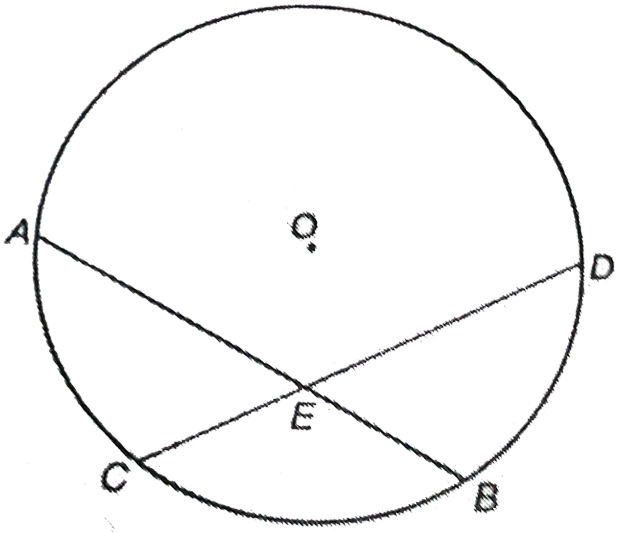
OO' intersecting the circles at $C\ and\ D$ is drawn. Prove that $CD = 2\,OO'$

Watch Video Solution

57. prove that the line joining the mid-point of two equal chords of a circle subtends equal angles with the chord.

Watch Video Solution

58. In the adjoining figure. If two equal chords AB and CD of a circle intersect each other at E. then prove that chords AC and DB are equal.



Watch Video Solution

59. AB is the chord of a circle with centreO. AB is produced to C, such that BC =OB, CO is joined and produced to meet the circle in D. If $\angle ACD = Y^\circ$ and $\angle AOD = x^\circ$, Prove that $x = 3y$.

Watch Video Solution

60. Two circles of radii 5 cm and 3 cm intersect at two points and the distance between their

centres is 4 cm. Find the length of the common chord.

Watch Video Solution

61. In the figure, two circles with centres A and B and of radii $5cm$ and $3cm$ touch each other intermally. If the perpendicular bisectors of segment AB meets the bigger circle in P and Q. Find the length of PQ.

Watch Video Solution

62. Of any two chords of a circle show that the one which is nearer to the centre is larger.

Watch Video Solution

Exercise 10 A

1. In a circle 10 cm long chord is at a distance of 12 cm form the centre. Find the length of a chord at a distance of 5cm from the centre.

Watch Video Solution

2. The radius of a circle is 5cm. Find the length of its longest chord.

(ii) write the method to determine the centre of a circle passing through three non-collinear points.

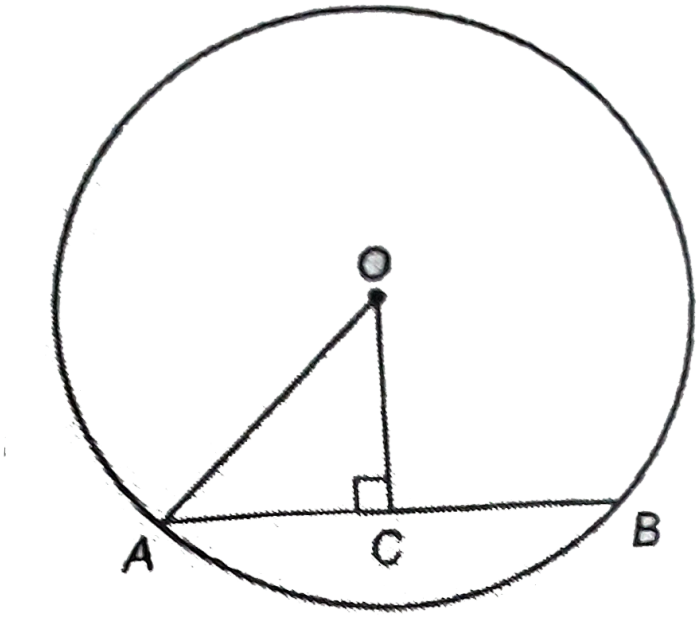
(iii) Arc of a circle is given. How will you complete the circle?

Watch Video Solution

3. The radius of a circle is 10 cm and the perpendicular form the centre to a chord is 8cm. Find the length of the chord.

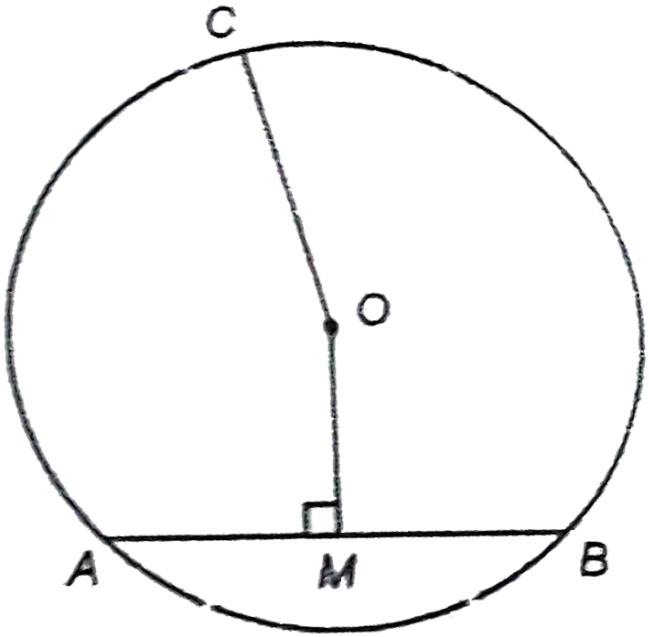
(ii) The radius of a circle is 10 cm. its one chord is 16 cm long. Find the perpendicular distance of this chord form the centre.

(iii) in the adjoining figure O is the centre of circle. the radius of circle is 17 cm . if OC=8cm, then find the length of chord AB.



(iv) In the adjoining figure, $OM \perp AB$, radius $OC = 5cm$ and chord $AB = 8cm$.Find the

length of OM.



Watch Video Solution

4. (i) Find the length of a chord which is at a distance of 12 cm from the centre of a circle of

radius 13cm.

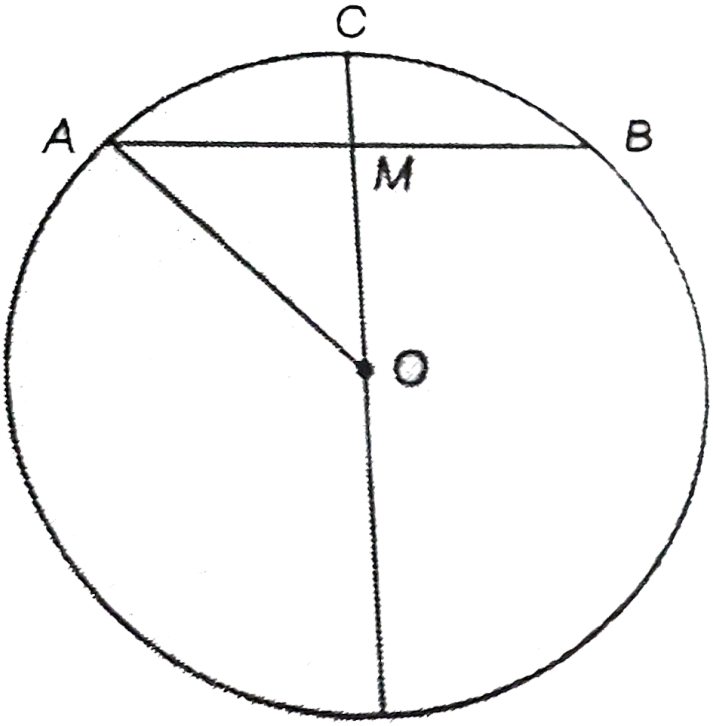
(ii) The length of a chord is 16 cm of a circle of diameter 2 cm. find the perpendicular distance of this chord from the centre of the circle.

Watch Video Solution

5. A chord of length 24 cm is at a distance of 5 cm form the centre of the circle. Find the length of another chord of circle which is at a distance of 12 cm from the centre.

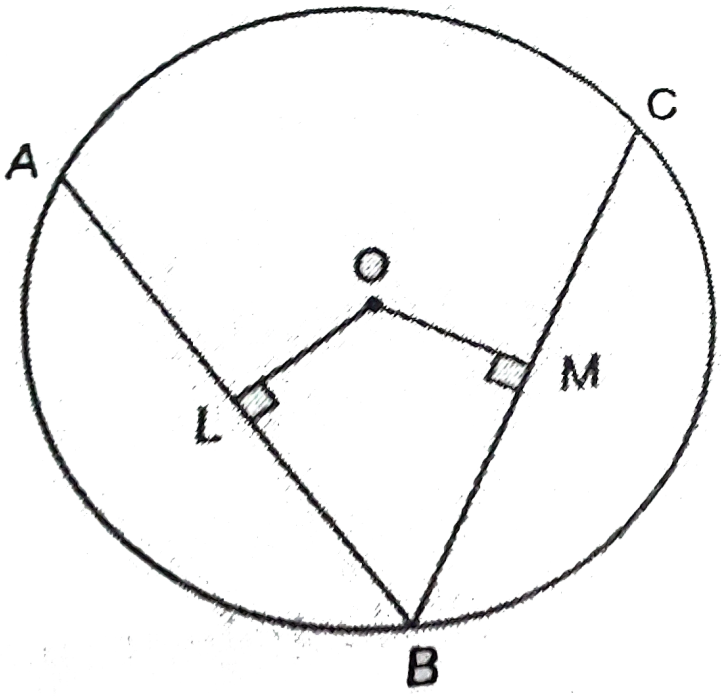
Watch Video Solution

6. In the adjoining figure, AP=8cm, BP=2cm and $\angle CPA = 90^\circ$. Find the length of chord CD.



Watch Video Solution

7. The height of circular arc ACB is 0.6 m. if the radius of circle is 3m , then find the length of the corresponding chord.



Watch Video Solution

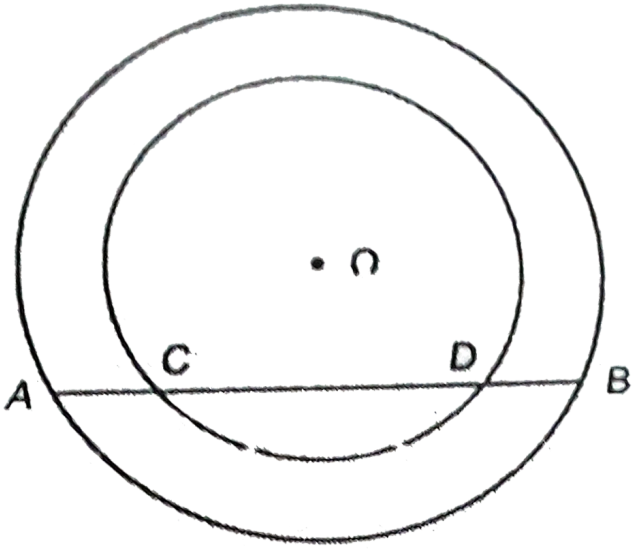
8. In the adjoining figure, 'O' is the centre of the circle. OL and OM are perpendiculars from O to the chords AB and BC respectively. If $OL = OM$ and $AB = 16cm$, then find the length of BC.

Watch Video Solution

9. In the adjoining figure,O is the centre of two concentric circles. The chord AB of larger circle intersects the smaller circle at C and D.

(i) Find $AC : BD$.

(ii) If $AC = 2cm$, then find the length of BD.



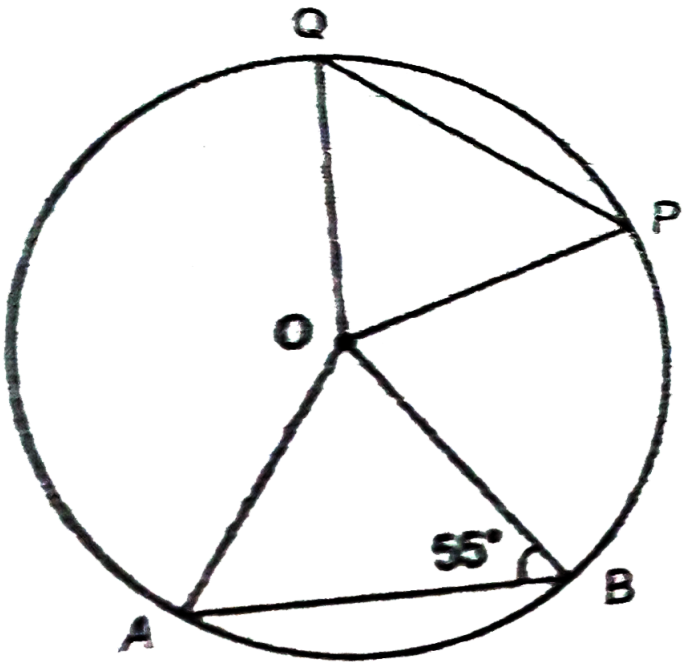
Watch Video Solution

10. The length of common chord of two circles is 30 cm. if the diameters of circles are 50 cm

and 34 cm, then find the distance between these centres.

Watch Video Solution

11. In the adjoining figure, chord $AB =$ chord PQ. If $\angle OBA = 55^\circ$, then find $\angle POQ$.



Watch Video Solution

12. Show that if two chords of a circle bisect one another they must be diameters.

Watch Video Solution

13. Two congruent circles intersect each other at points A and B. Through A any linesegment PAQ is drawn so that P, Q lie on the two circles. Prove that $BP = BQ$.

Watch Video Solution

14. If the two equal chords of a circle intersect :

(i) inside

(ii) on

(iii) outside

the circle, then show that the line segment joining the point of intersection to the centre of the circle will bisect the angle between the chords.

Watch Video Solution

15. prove that the line joining the mid-point of two equal chords of a circle subtends equal angles with the chord.

Watch Video Solution

16. Two circles itnersect each other in two points. Prove that the line through their centres is the perpendicular bisector of the common chord.

Watch Video Solution

17. Two parallel chords of a circle , 12 cm and 16 cm long are on the same of the centre. The

distance between them is 2 cm. Find the radius of the circle.

Watch Video Solution

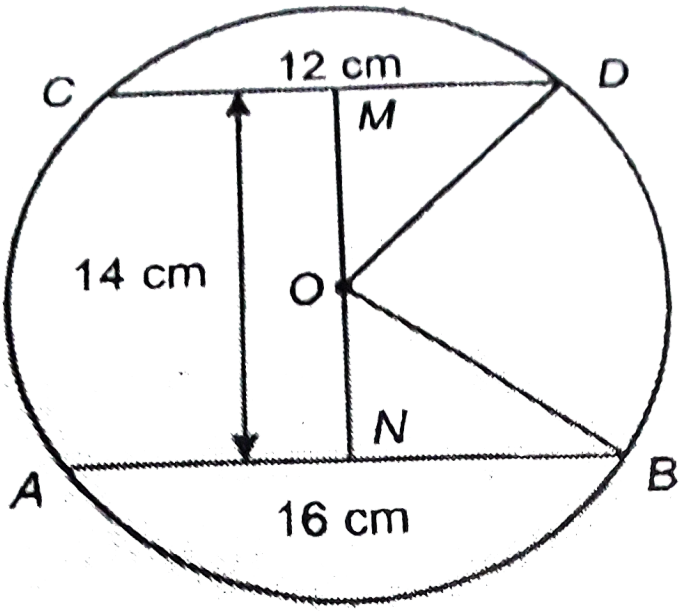
18. The diameter of a circle is 20 cm. There are two parallel chords of length 16 cm . And 12 cm. Find the distance between these chords if chords are on the:

(i) same side

(ii) opposite side of the centre.

Watch Video Solution

19. In the adjoining figure ,AB and CD are two parallel chords of a circle with centre O , whose length are 16 cm and 12 cm respectively. Find the radius of the circle if the distance between them is 14 cm.



Watch Video Solution

20. The length of two parallel chords of a circle are 6 cm and 8 cm . The radius of the circle is 5 cm. Find the distance btween them if :

(i) chords are on the same side of the centre.

(ii) chords are on the opposite side of the centre.

Watch Video Solution

21. What happen to area of circle, if its radius is doubled?

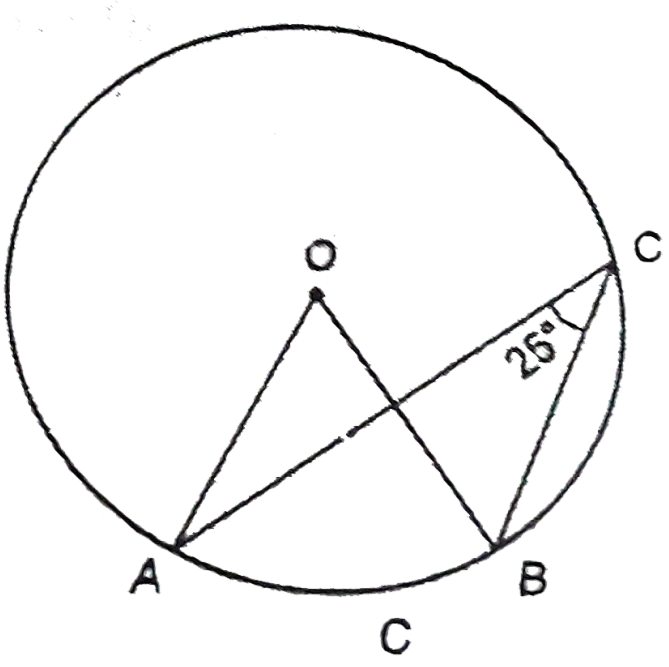
Watch Video Solution

22. Name the shape shown in centre of our national flag. In how many parts it is divided ? Also explain the value shown.

Watch Video Solution

Exercise 10 B

1. In the adjoining figure , O is the centre of the circle. If $\angle ACB = 25^\circ$, then find $\angle AOB$.



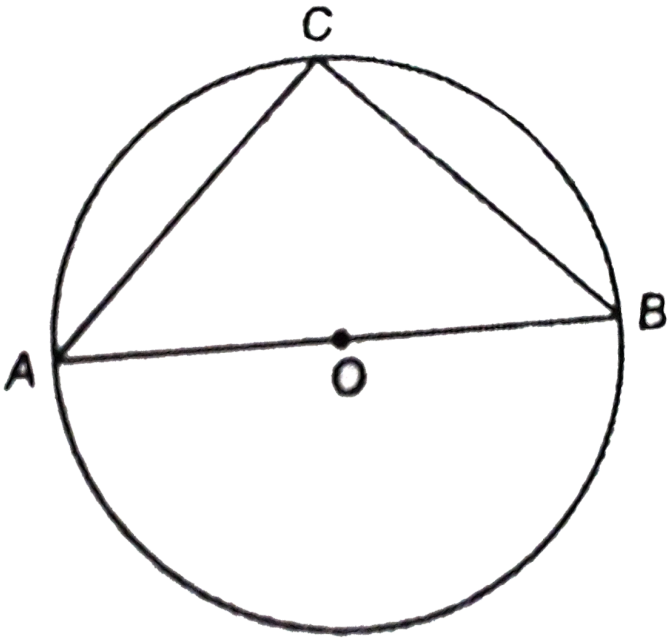
Watch Video Solution

2. O is the centre of a circle and an equilateral ΔABC is inscribed in it. Find the value of $\angle BOC$.

Watch Video Solution

3. O is the centre of a circle of diameter AB. If chord $AC =$ chord BC, then find the value of

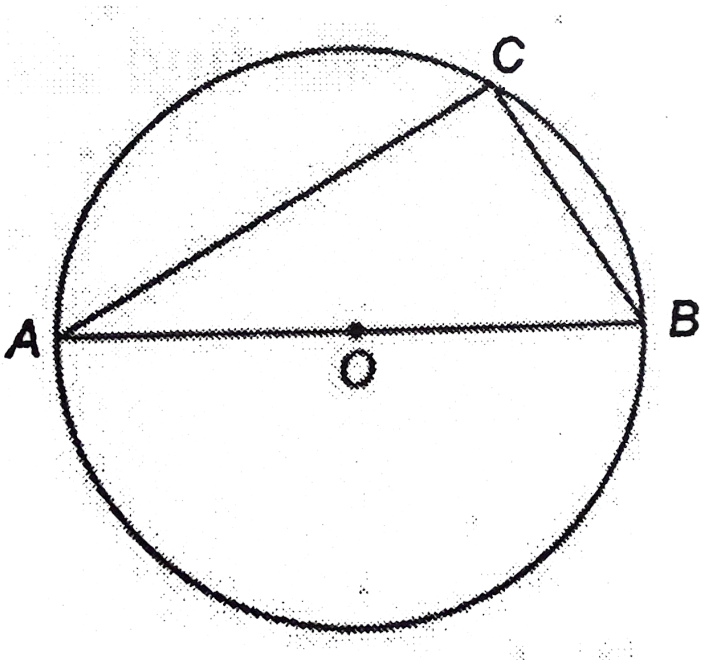
$\angle ABC$.



Watch Video Solution

4. In the adjoining figure, O is the centre of the circle and AB is its diameter. If AC=8 cm

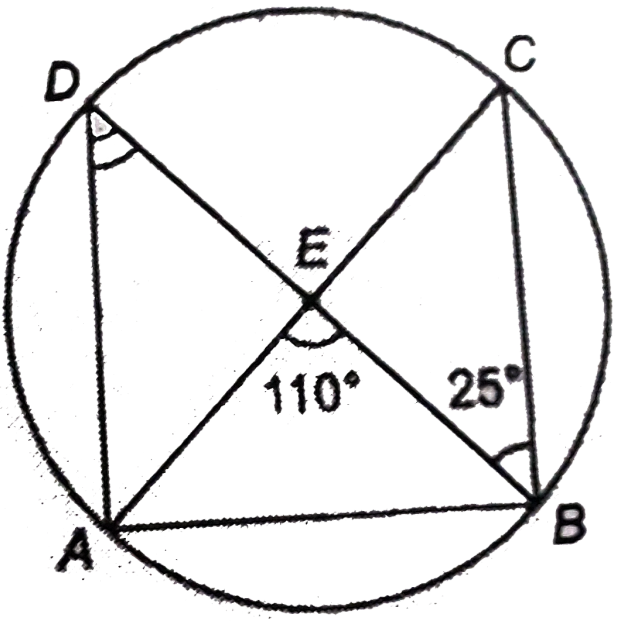
and BC= 6cm, then find the radius of the circle.



Watch Video Solution

5. In the adjoining figure, AB is a chord of the circle. If $\angle AEB = 110^\circ$ and $\angle EBC = 25^\circ$

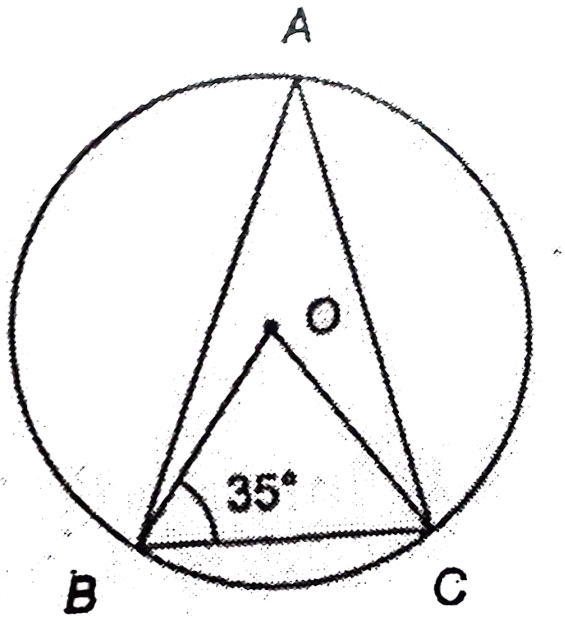
,then find the value of $\angle ADB$.



Watch Video Solution

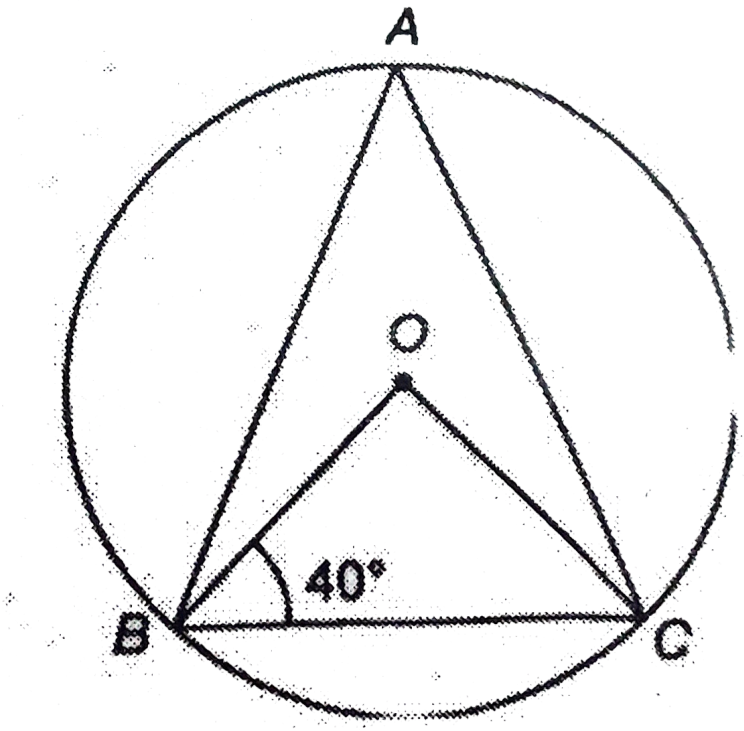
6. (i) In the adjoining figure, O is the centre of the circle. If $\angle OBC = 35^\circ$, then find the value

of $\angle BAC$.



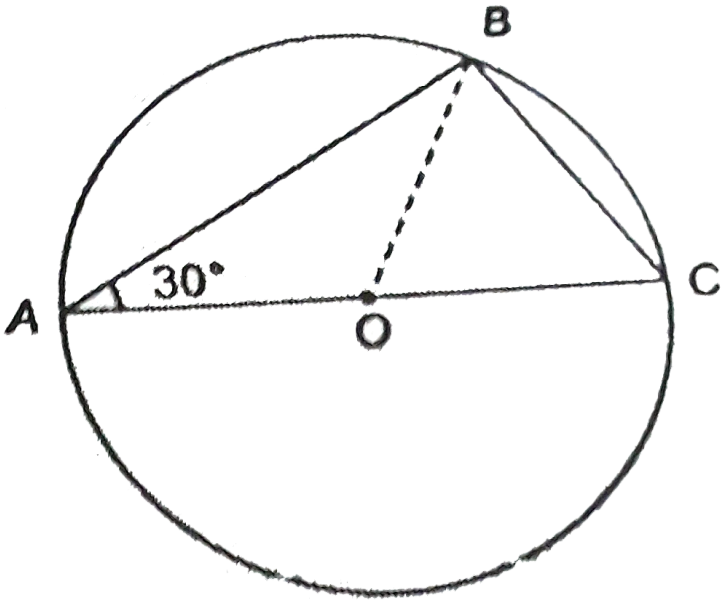
(ii) In the adjoining figure, O is the centre of the circle. If $\angle OBC = 40^\circ$, then find the value

of $\angle BAC$.



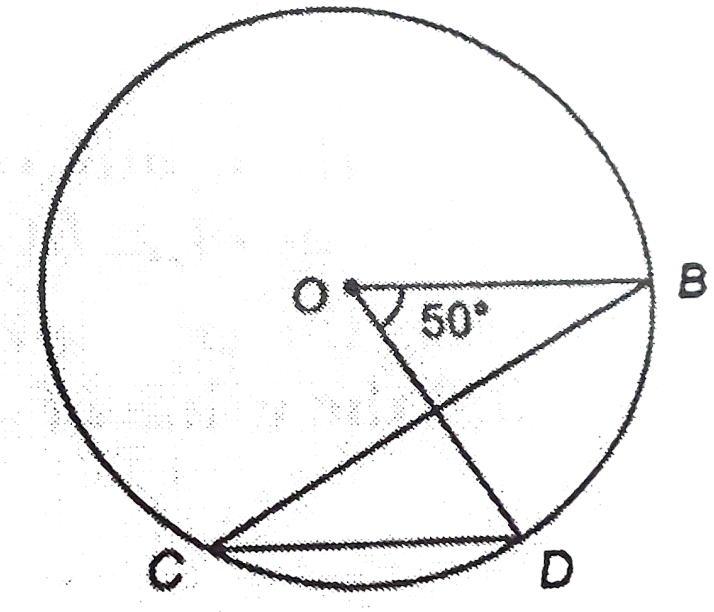
Watch Video Solution

7. In the adjoining figure, O is the centre of the circle and AC is its diameter. If $\angle BAC = 30^\circ$, then find $\angle BOC$.



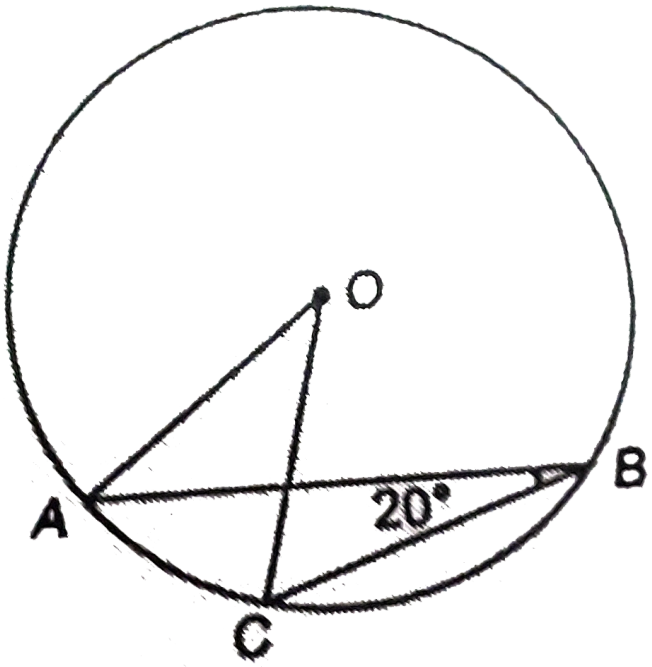
Watch Video Solution

8. In the adjoining figure, O is the centre of the circle. If $\angle BOD = 50^\circ$, then find $\angle BCD$.



(ii) In the adjoining figure,O is the centre of

the circle. If $\angle ABC = 20^\circ$, then find $\angle AOC$.



Watch Video Solution

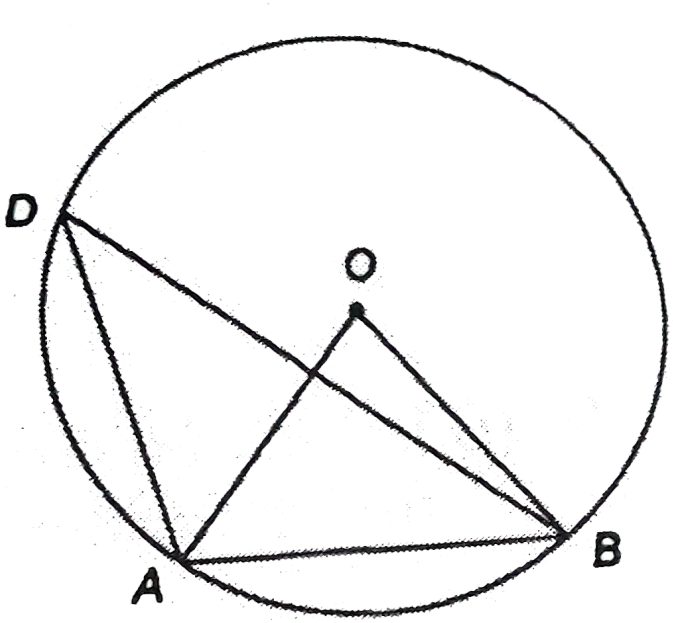
9. A rectangle in inscribed in a circle of radius 5 cm. if the breadth of the rectangle is 6 cm.

then find the length of the rectangle.

Watch Video Solution

10. In the adjoining figure, O is the centre of the circle. If the chord AB is equal to the radius

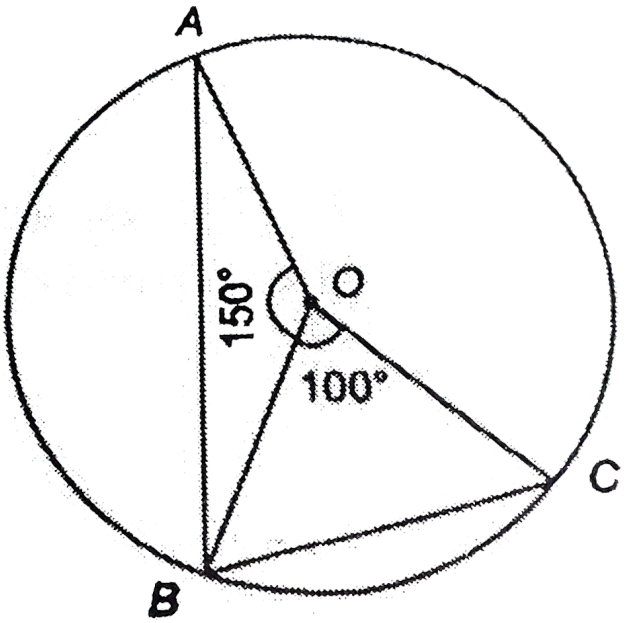
of the circle, then find the value of $\angle ADB$.



Watch Video Solution

11. In the adjoining figure, O is the centre of the circle. If $\angle AOB = 150^\circ$ and

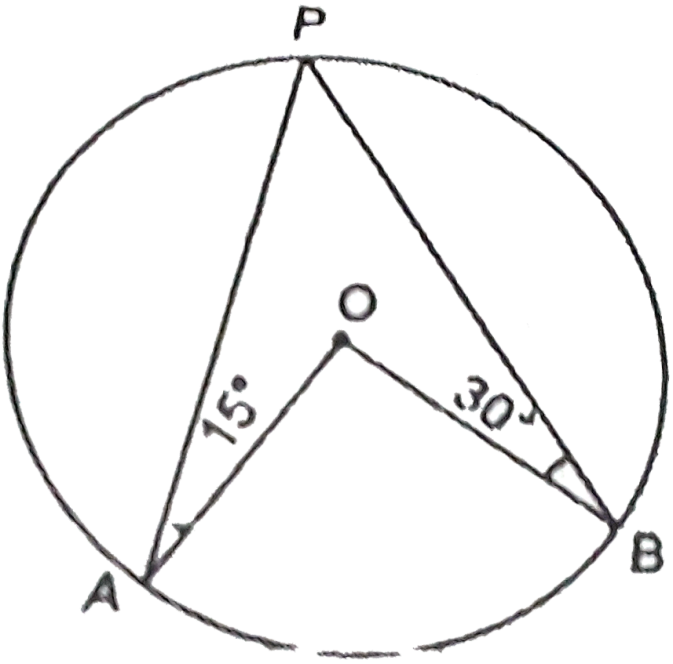
$\angle BOC = 100^\circ$, then find the value of $\angle ABC$.



Watch Video Solution

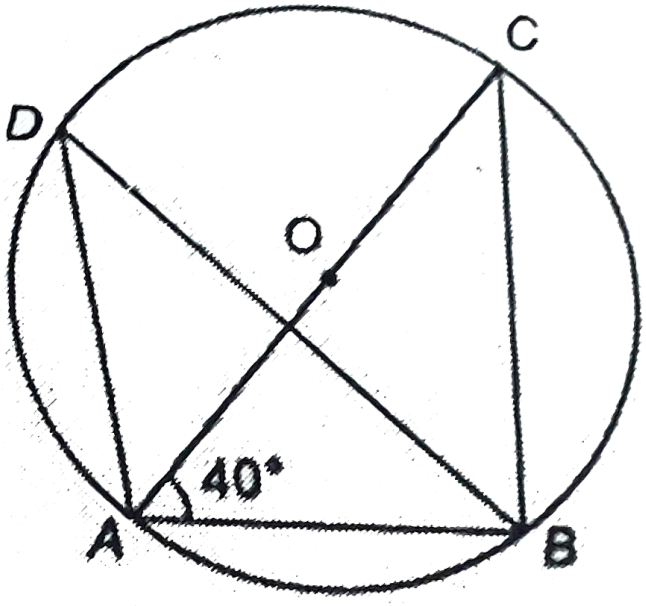
12. In the adjoining figure, O is the centre of the circle. If $\angle PAO = 15^\circ$ and $\angle PBO = 30^\circ$

, then find the value of $\angle AOB$.



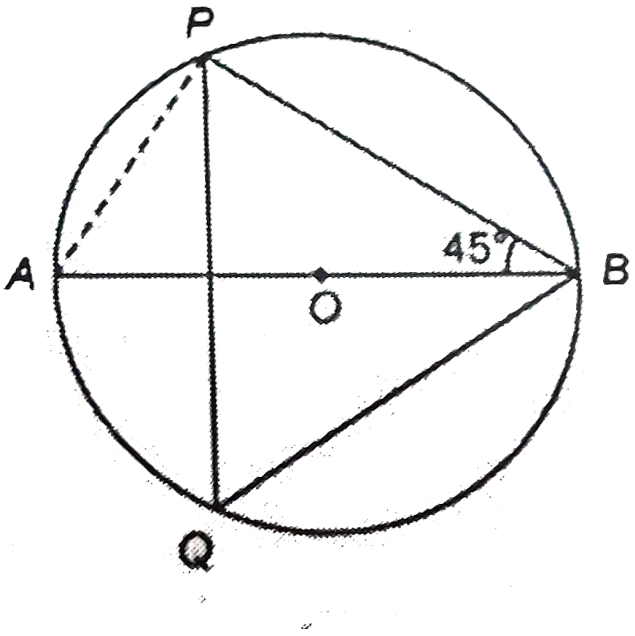
Watch Video Solution

13. In the adjoining figure, $\angle ADB$ and $\angle ACB$ are the angles in the same segment and chord AC passes through the centre O. If $\angle CAB = 40^\circ$ then find the value of $\angle ADB$.



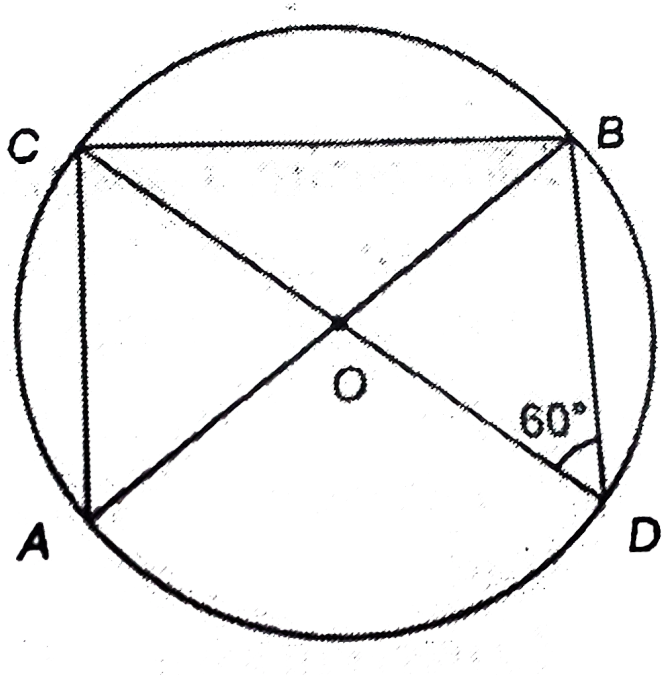
Watch Video Solution

14. In the adjoining figure, AOB is the diameter of the circle. If $\angle ABP = 45^\circ$, then find the value of $\angle PQB$.



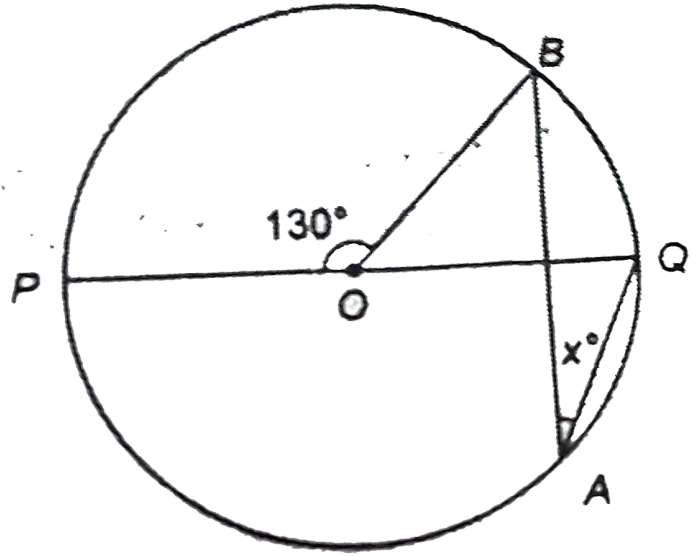
Watch Video Solution

15. In the adjoining figure, AOB is the diameter and O is the centre of the circle. If $\angle BDC = 60^\circ$, then find the value of $\angle ABC$.



Watch Video Solution

16. In the adjoining figure, O is the centre of the circle. If $\angle BOP = 130^\circ$, then find the value of x.



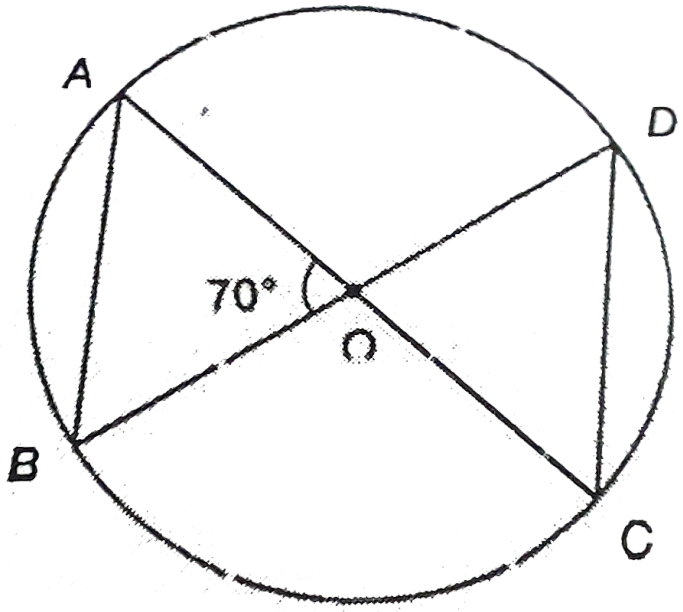
Watch Video Solution

17. Prove that the circle drawn on any one of the equal sides of an isosceles triangle as diameter bisects the base.

Watch Video Solution

18. In the adjoining figure, O is the centre of the circle. If $\angle AOB = 70^\circ$, then find the value

of $\angle OCD$.



Watch Video Solution

19. If the two diameters of a circle intersect at right angle, then show that by joining the

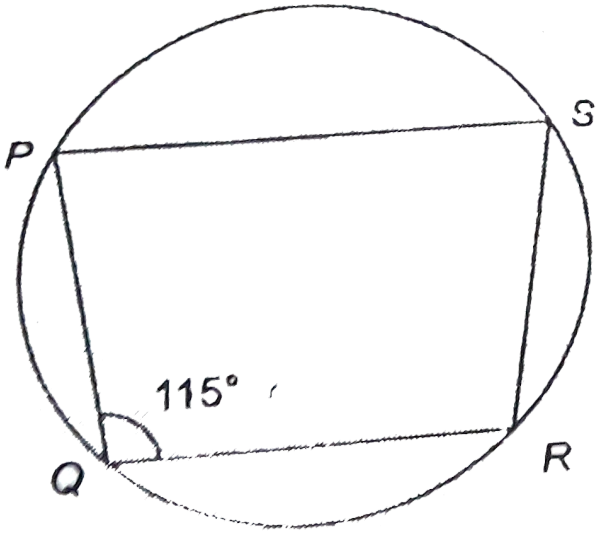
vertices of the diameters in order, a square is formed.

Watch Video Solution

Exercise 10 C

1. In the adjoining figure, $PS \| QR$ and $\angle Q = 115^\circ$, then find the values of $\angle P$,

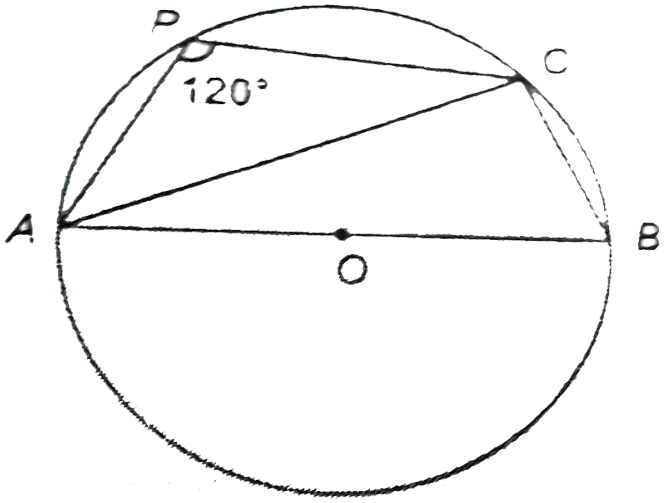
$anl \geq R$ and $\angle S$.



Watch Video Solution

2. In the adjoining figure, ABCD is a cyclic quadrilateral and AB is the diameter of the circle. If $\angle APC = 120^\circ$, then find the value of

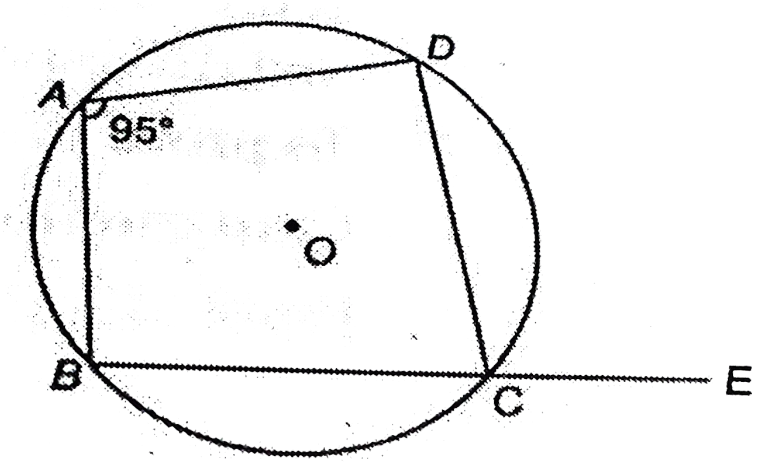
$\angle CAB$.



Watch Video Solution

3. In the adjoining figure, ABCD is a cyclic quadrilateral.If side BC is produced upto point E and $\angle DAB = 95^\circ$, then find the value of

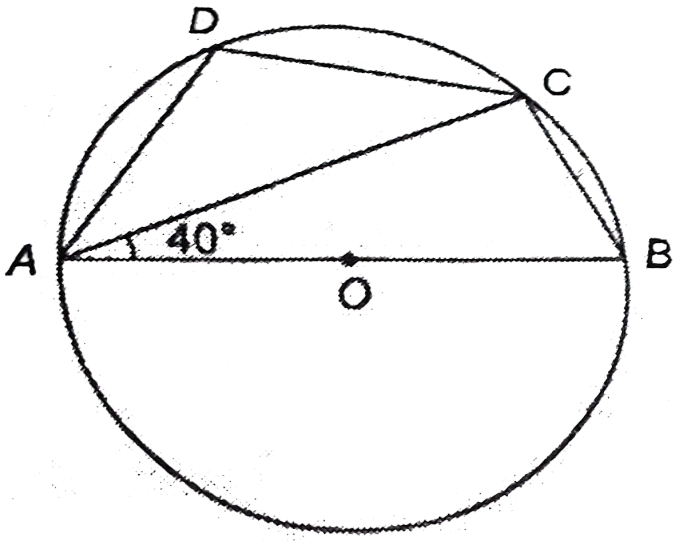
$\angle DCE$.



Watch Video Solution

4. In the adjoining figure, O is the centre of the circle.If $\angle BAC = 40^\circ$, then find the value

of $\angle ADC$.

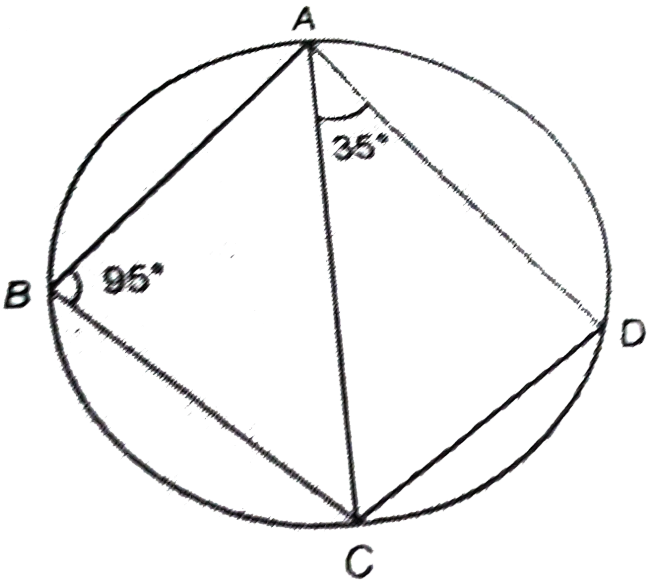


Watch Video Solution

5. ABCD is a cyclic trapezium in which, $AD||BC$ and $\angle B = 70^\circ$. Find its remaining angles,

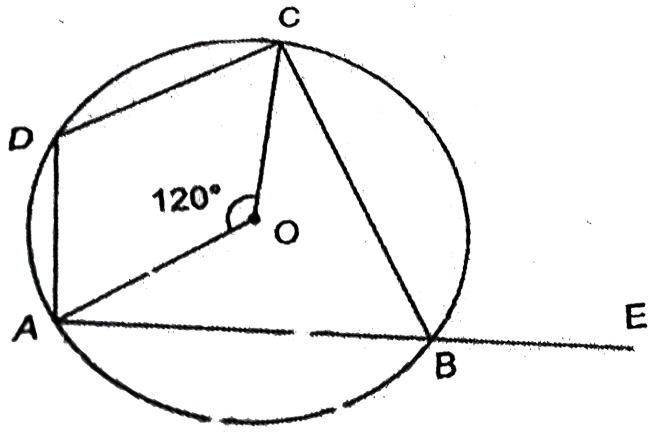
Watch Video Solution

6. In the adjoining figure, $\angle ABC = 95^\circ$ and $\angle DAC = 35^\circ$, then find the value of $\angle ACD$.



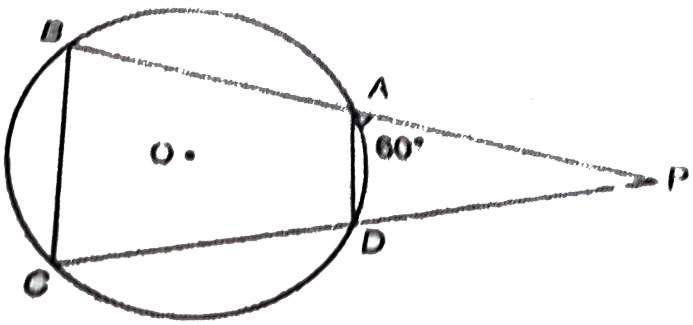
Watch Video Solution

7. (i) In the adjoining figure, find the value of $\angle CBE$.



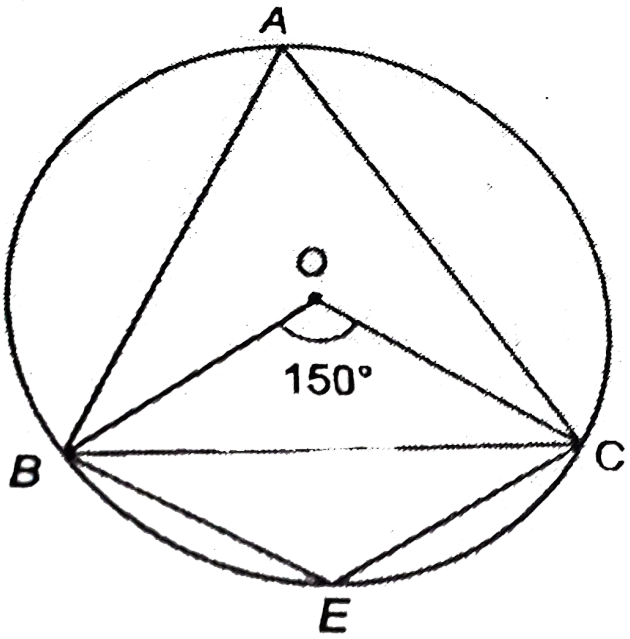
(ii) In the adjoining figure, two lines PAB and PDC cut a circle at points A,B,C and D. if

$\angle PAD = 60^\circ$,then find the value of $\angle BCD$.



Watch Video Solution

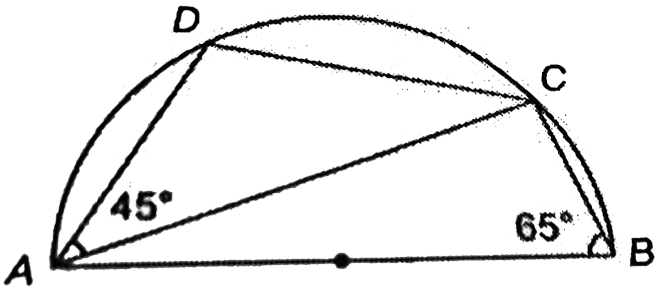
8. In the adjoining figure, O is the centre of the circle. Find the value of $\angle BEC$.



Watch Video Solution

9. In the adjoining figure, AB is the diameter of the circle and two points C and D are on the circle. If $\angle CAD = 45^\circ$ and $\angle ABC = 65^\circ$,

then find the value of $\angle DCA$.

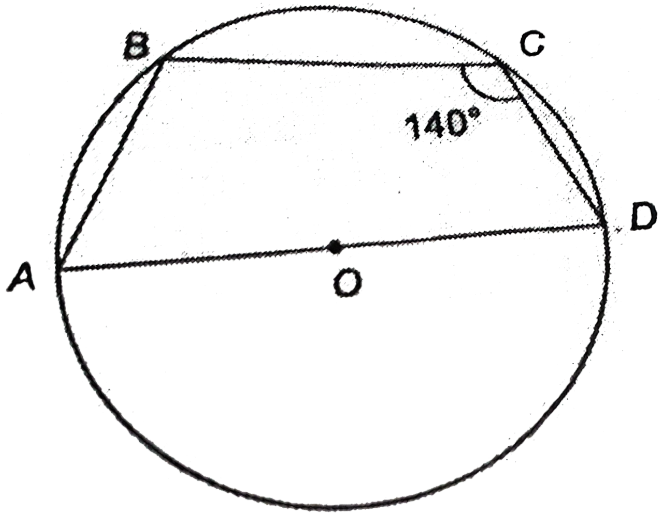


Watch Video Solution

10. In the adjoining figure,AB is the diameter of the circle of centre O & the chord CD is equal to radius. If P is an external point, then find the value of $\angle APB$.

Watch Video Solution

11. In the adjoining figure, AD is the diameter of the circle and $\angle BCD = 140^\circ$. Find the value of $\angle ADB$.



A. 50°

B. 90°

C. 40°

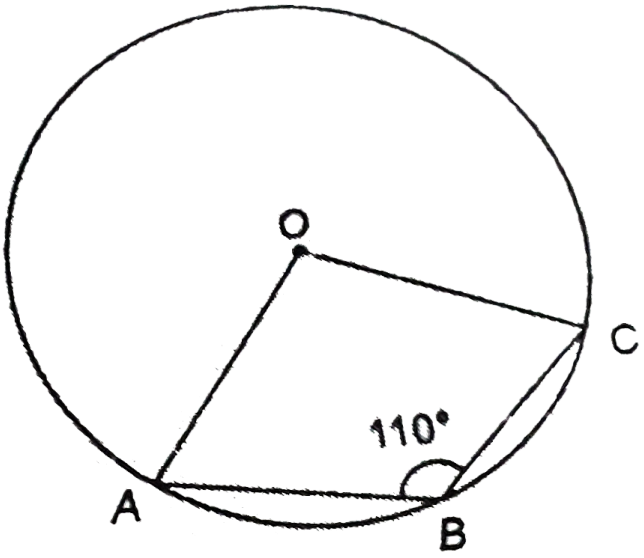
D. 60°

Answer: A

Watch Video Solution

12. In the adjoining figure,O is the centre of the circle. If $\angle ABC = 110^\circ$, then find the

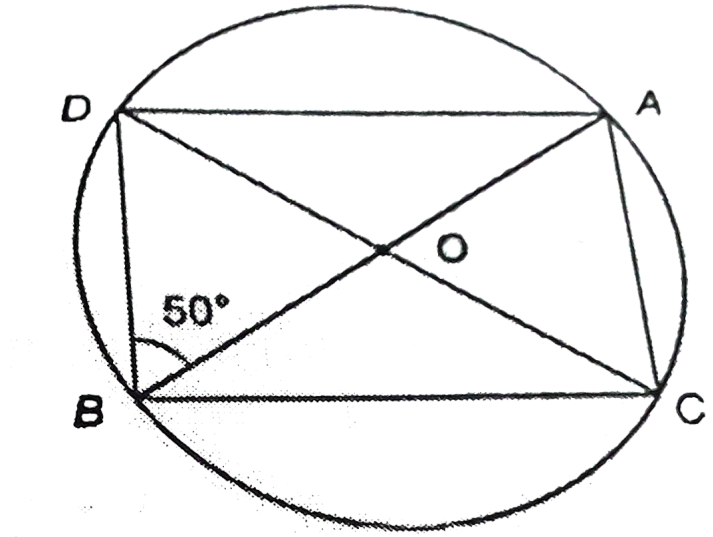
value of $\angle AOC$.



Watch Video Solution

13. In the adjoining figure, O is the centre of a circle in which AB and CD are two diameters. Prove that $AC||BD$ and $AD||BC$. If

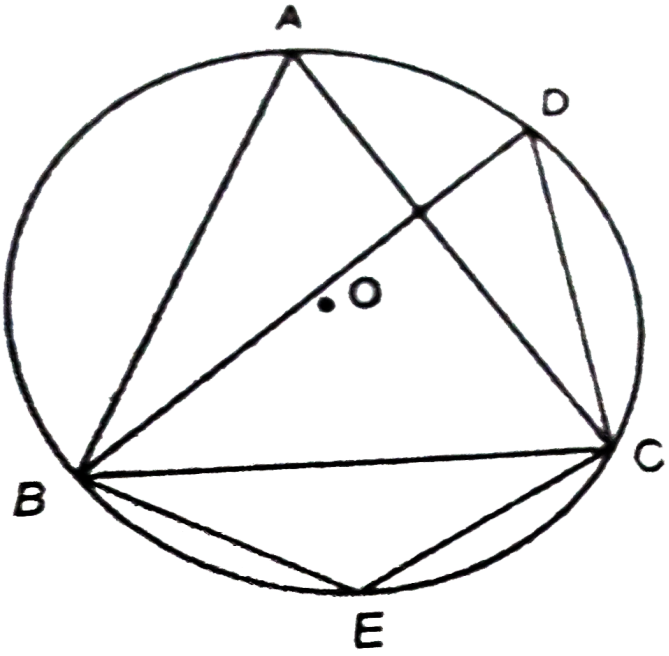
$\angle OBD = 50^\circ$, then find the value of $\angle AOC$.



Watch Video Solution

14. In the adjoining figure, ΔABC is an isosceles triangle. Find the value of $\angle BDC$

and $\angle BEC$.



Watch Video Solution

15. The quadrilateral formed by angle bisectors of a cyclic quadrilateral is also cyclic.

Watch Video Solution

16. If the exterior angle of a quadrilateral formed by producing one of its sides is equal to the interior opposite angle, prove that the quadrilateral is cyclic.

Watch Video Solution

17. An angle of a cyclic trapezium is twice the other angle. Find the value of the smaller angle.

Watch Video Solution

18. If diagonals of a cyclic quadrilateral are diameters of the circle through the vertices of the quadrilateral, prove that it is a rectangle

Watch Video Solution

19. A cyclic trapezium is isosceles and its diagonals are equal.

Watch Video Solution

20. Prove that the bisectors of the angles formed by producing the opposite sides of a cyclic quadrilateral (provided that they , are not parallel), intersect at right angles.

View Text Solution

Revision Exercise Very Short Answer Question

1. If O is the centre of a circle with radius r and AB is a chord of the circle at a distance $\frac{r}{2}$

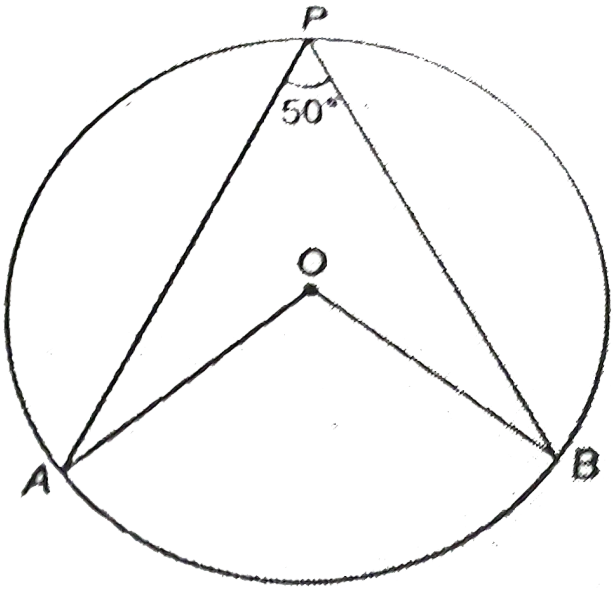
from O, then $\angle BAO =$

Watch Video Solution

2. The chord of a circle is equal to its radius, find the angle subtended by this chord at the centre.

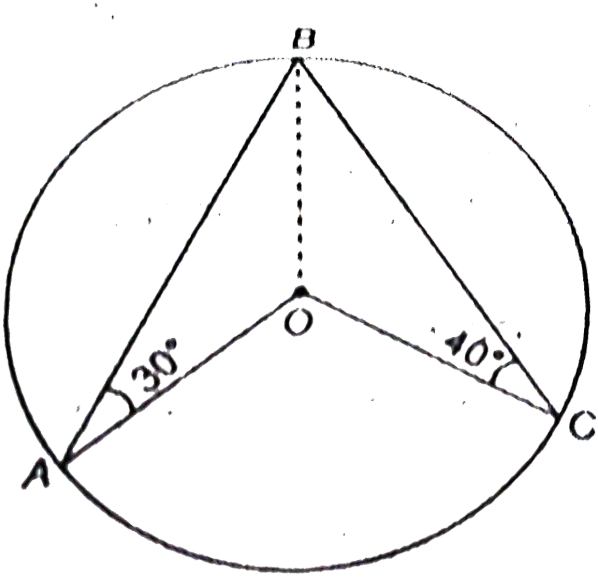
View Text Solution

3. Find $\angle AOB$ in the given figure.



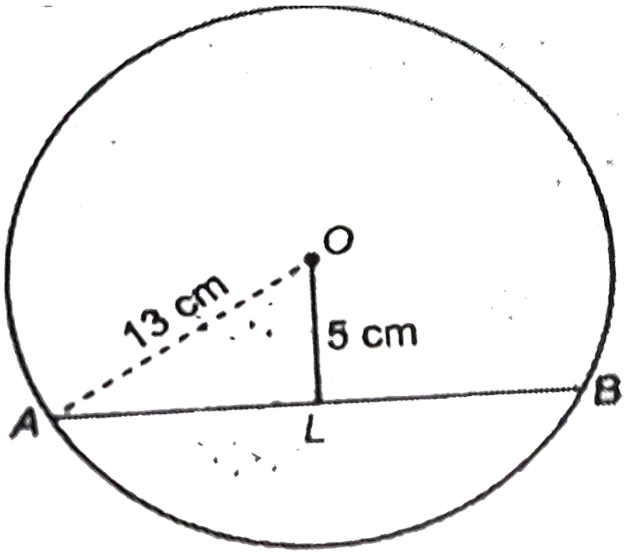
Watch Video Solution

4. In the given figure, find $\angle ABC$.



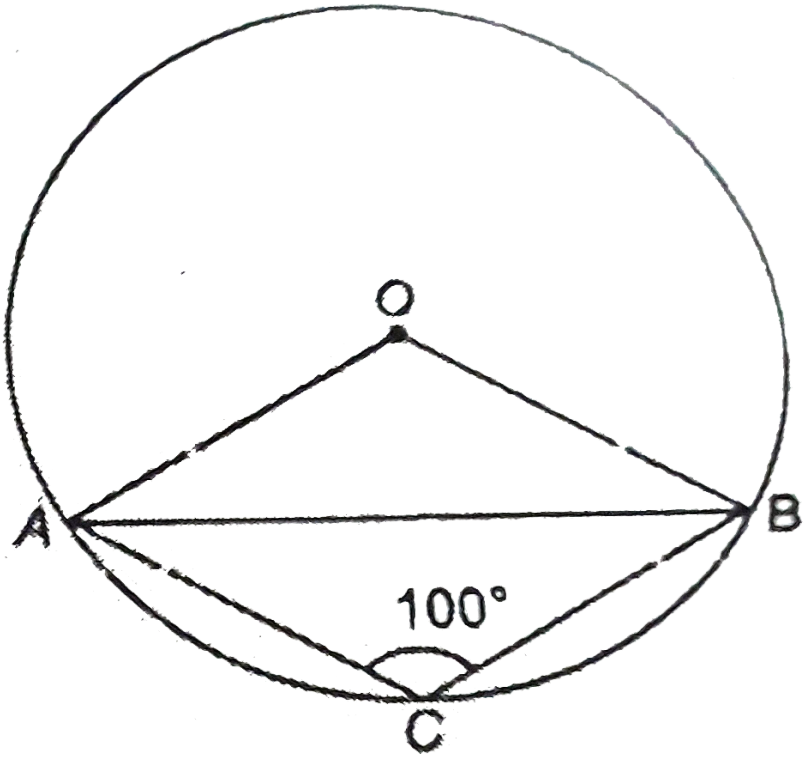
Watch Video Solution

5. In the given figure , find the length of chord AB .



Watch Video Solution

6. In the given figure, find $\angle AOB$.



A. 140°

B. 120°

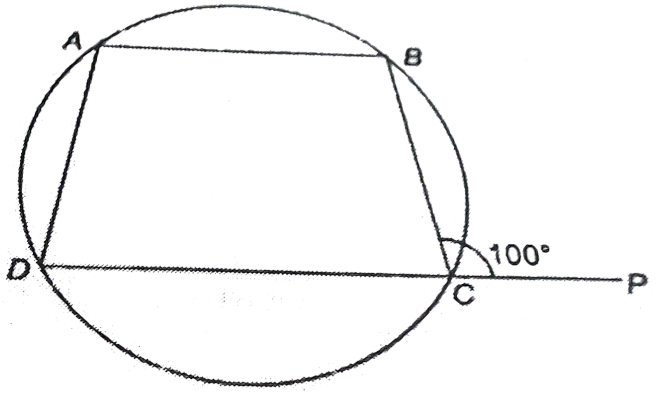
C. 150°

D. 160°

Answer: D

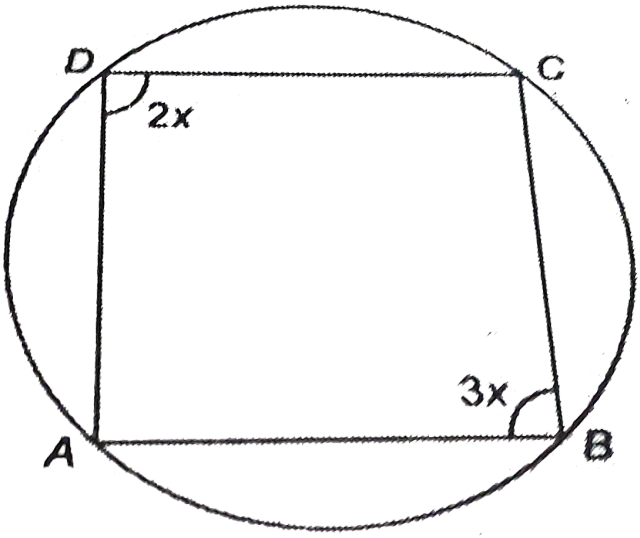
Watch Video Solution

7. Find $\angle A$ in the given figure.



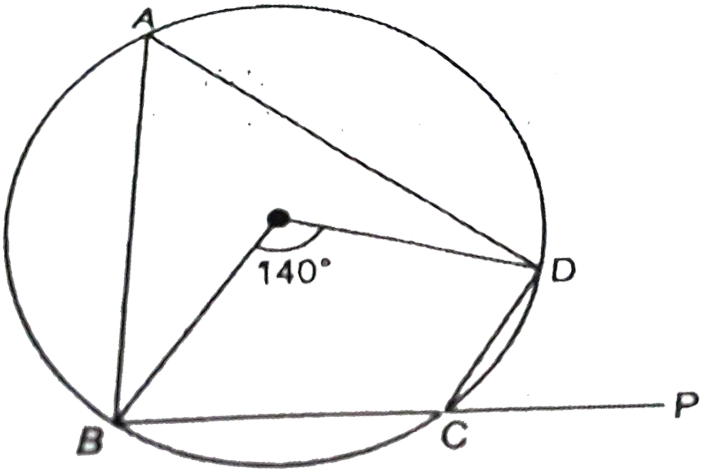
Watch Video Solution

8. In the given figure, find $\angle D$ and $\angle B$.



Watch Video Solution

9. In the given figure , find $\angle DCP$.



A. 110°

B. 40°

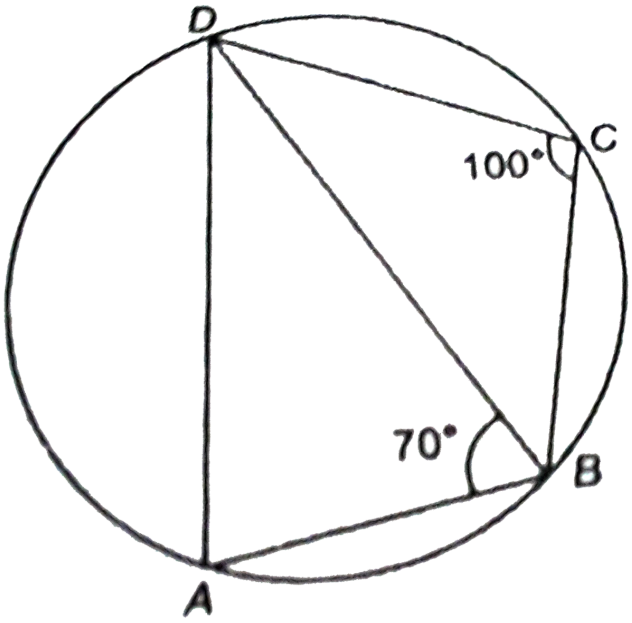
C. 70°

D. 140°

Answer: C

Watch Video Solution

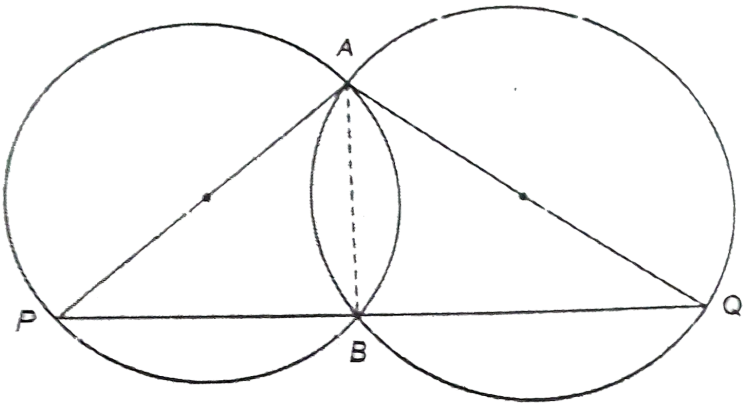
10. In the given figure, find $\angle ADB$, if $\angle DCB = 100^\circ$ and $\angle DBA = 70^\circ$.



Watch Video Solution

Revision Exercise Short Answer Questions

1. In the figure, two circles intersect each other at points A and B. AP and AQ are the diameters of these circels. Prove that PBQ is a straight line.



Watch Video Solution

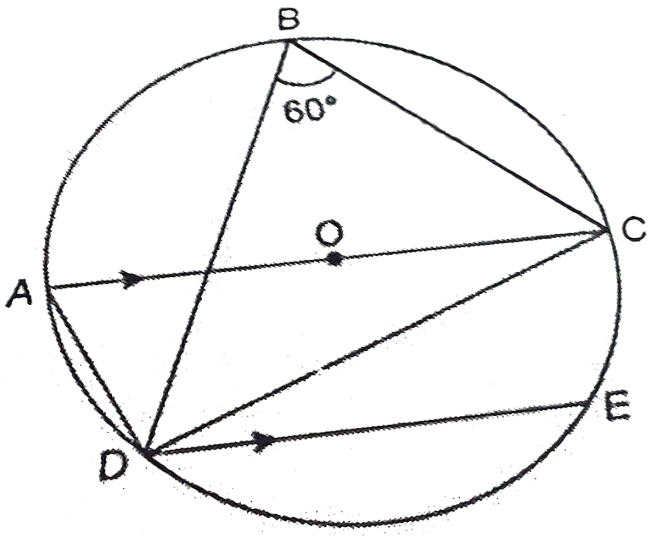
2. AB and CD are two parallel chords of a circle which are on opposite sides of the centre such that $AB = 10cm$, $CD = 24cm$ and the

distance between AB and CD is $17cm$. Find the radius of the circle.

Watch Video Solution

3. In the adjoining figure, DE is a chord parallel to diameter AC to the circle with centre. O if

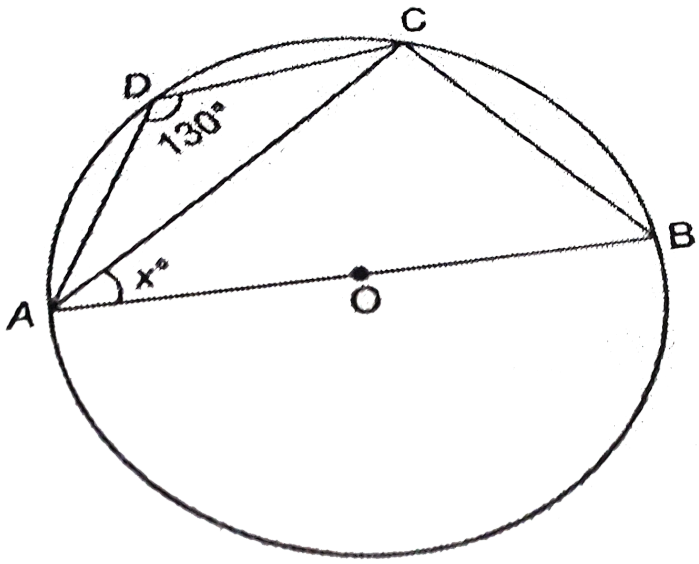
$\angle CBD = 60^\circ$. Calculate $\angle CDE$.



Watch Video Solution

4. In the given figure, O is the centre of a circle and $\angle ADC = 130^\circ$.If $\angle BAC = x^\circ$, Find the

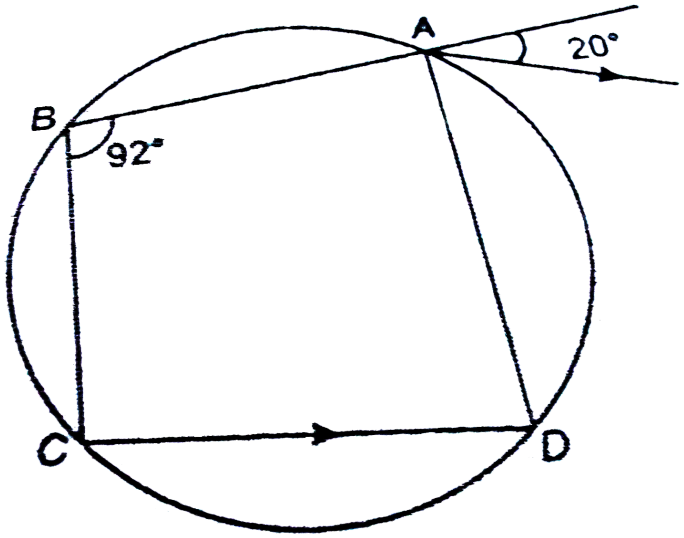
value of x.



Watch Video Solution

5. In the given figure ABCD is a cyclic quadrilateral in which AE is drawn parallel to CD and BA is produced. If $\angle ABC = 92^\circ$ and

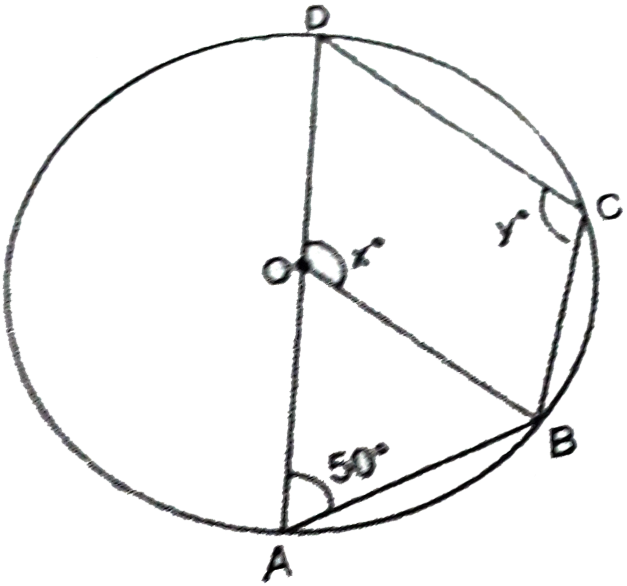
$\angle FAE = 20^\circ$, Find $\angle BCD$.



Watch Video Solution

6. In the adjoining figure, O is the centre of circle. If $\angle DAB = 50^\circ$ find the values of x and

y.



A. $x = 110^\circ, y = 70^\circ$

B. $x = 90^\circ, y = 90^\circ$

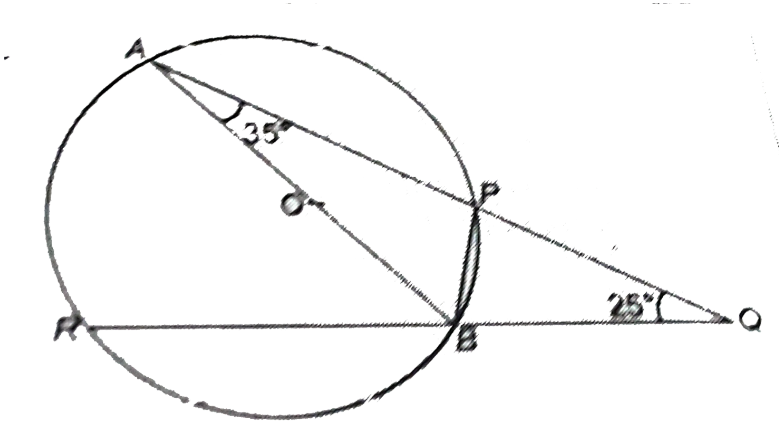
C. $x = 100^\circ, y = 80^\circ$

D. $x = 130^\circ, y = 50^\circ$

Answer: C

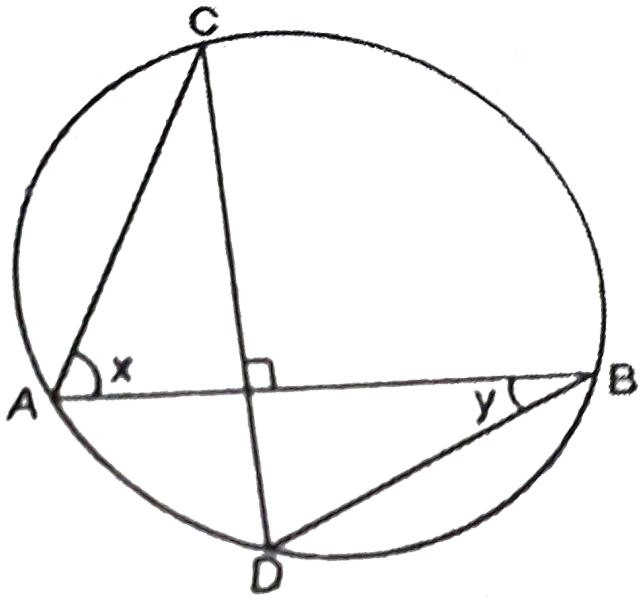
Watch Video Solution

7. In the adjoining figure, AB is a diameter of the circle such that $\angle A = 35^\circ$ and $\angle Q = 25^\circ$, find $\angle PBR$.



Watch Video Solution

8. In the adjoining figure, if chords AB and CD of the circle intesect each other at right angles, then find the value of $x + y$.



A. 45°

B. 90°

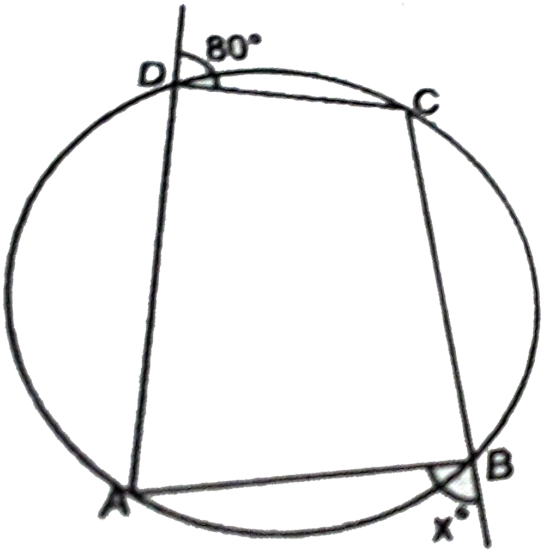
C. 120°

D. 100°

Answer: B

Watch Video Solution

9. In the adjoining figure, if ABCD is a cyclic quadrilateral, find the value of x.



A. 60°

B. 80°

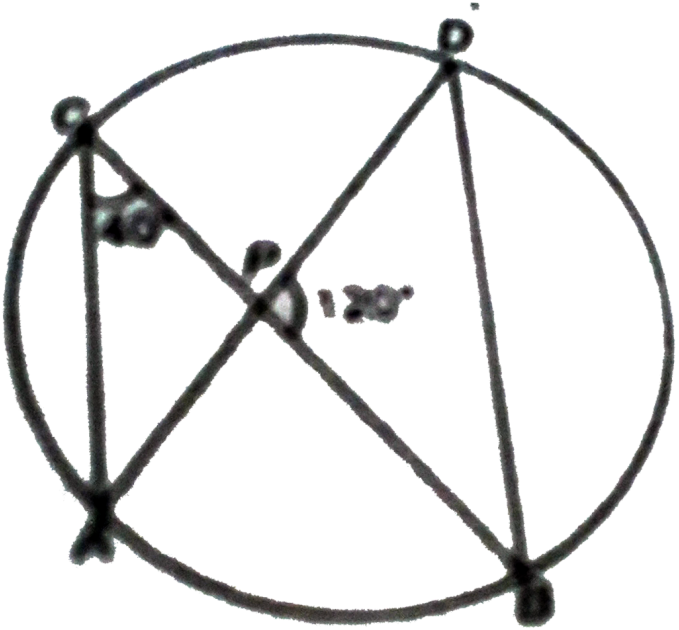
C. 100°

D. 120°

Answer: C

Watch Video Solution

10. In the adjoining figure, if $\angle ACB = 40^\circ$, $\angle DPB = 120^\circ$, then find $\angle CBD$.



Watch Video Solution

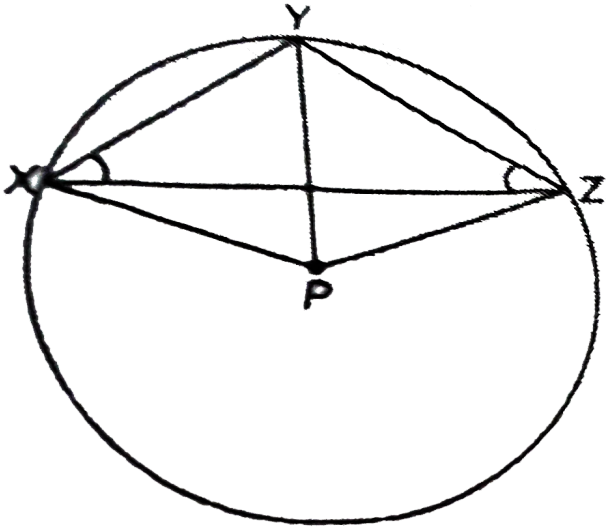
Revision Exercise Long Answer Questions

1. $AB \text{ and } CD$ are two chords of a circle such that $AB = 6\,cm,\ CD = 12\,cm \text{ and } ABCD$. If the distance between $AB \text{ and } CD$ is $3\,cm$, find the radius of the circle.

Watch Video Solution

2. In the adjoining figure, P is the centre of the circle. Prove that

$\angle XPZ = 2(\angle XZY + \angle YXZ)$.



Watch Video Solution

3. Bisectors of angles A, B *and* C of a triangle ABC intersect its circumcircle at D, E *and* F respectively. Prove that the

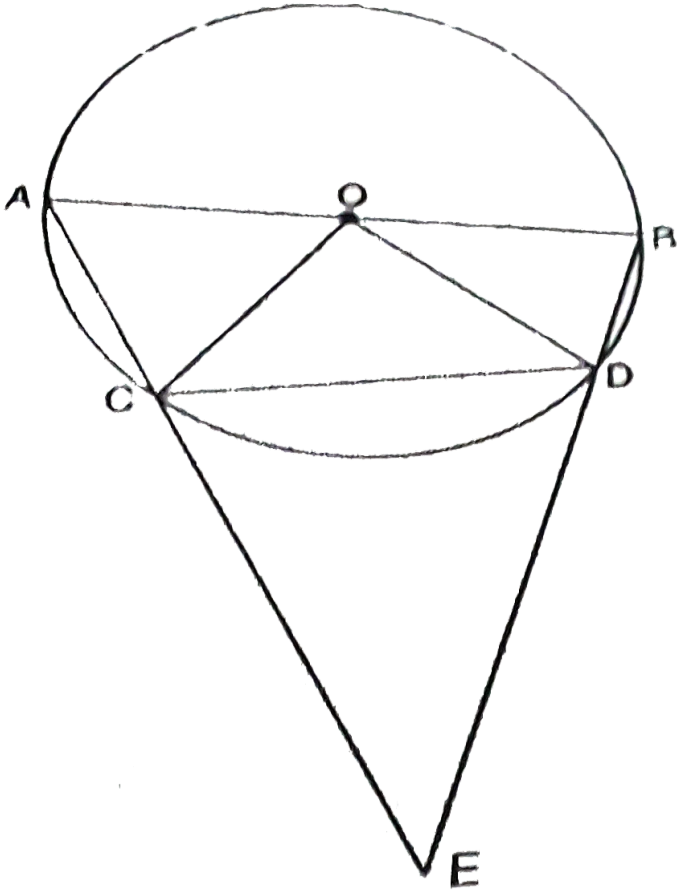
angles of DEF are

$90^0 - \frac{A}{2}, \ 90^0 - \frac{B}{2} and \ 90^0 - \frac{C}{2}$

Watch Video Solution

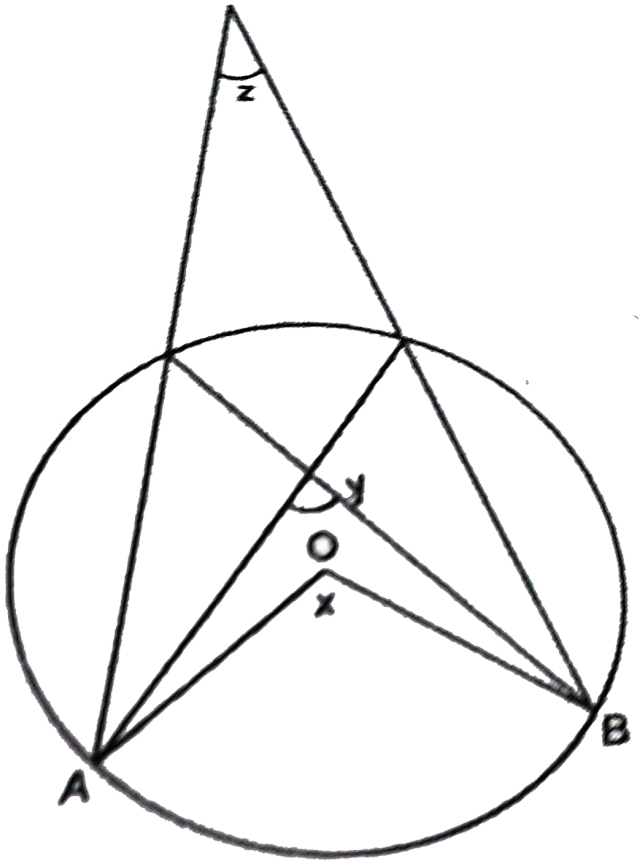
4. In the adjoinig figure, AB is a diameter of the circle, CD is a chord equal to the radius of the circle. AC and BD when extended intersect

at a point E. Prove that $\angle AEB = 60^\circ$.



Watch Video Solution

5. In the adjoining figure, O is the centre of the circle, Then $x = ?$



A. $z + y$

B. $z - y$

C. $y - z$

D. none of these

Answer: A

Watch Video Solution