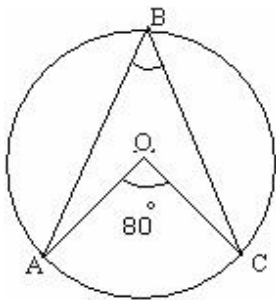


Circles

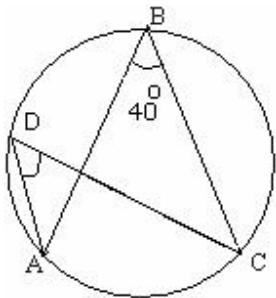
<1M>

1. It is possible to draw a circle which passes through three collinear points (T/F)
2. The perpendicular bisector of two chords intersect at centre of circle (T/F)
3. If two arcs of a circle are congruent. Then corresponding chords are unequal (T/F)
4. The line joining the mid-point of a chord to centre of circle is perpendicular to chord. (T/F)
5. If O is the center of circle of radius 5 cm OP perpendicular to AB and OQ perpendicular to CD, $AB \parallel CD$, $AB = 6\text{ cm}$ and $CD = 8\text{ cm}$. Determine PQ.
6. In the given figure what is the measurement of angle ABC



- (A) 50° (B) 40° (C) 90° (D) 75°

7. Find the angle ADC

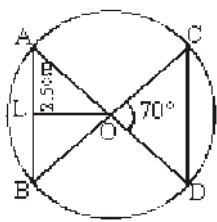


- (A) 20 degree (B) 40 degree (C) 60 degree (D) 80 degree

8. The length of the chord of a circle is 30 cm and its distance from the centre is 8 cm. Find the radius of the circle.

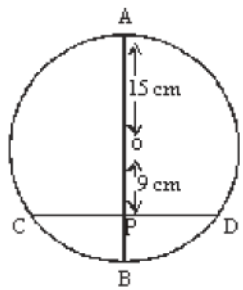
- (A) 10 cm (B) 20 cm (C) 34 cm (D) 17 cm.

9. In the given figure, chords AB and CD subtend equal angles each = 70° at the centre O of the circle. $OL \perp AB$ and $AL = 2.5$ cm find CD.



- (A) 2 cm (B) 2.5 cm (C) 7.5 cm (D) 5 cm

10. The adjoining figure, AB is the diameter of the circle with centre O. A chord CD is bisected by the diameter at P. If $OA = OB = 15$ cm and $OP = 9$ cm. Find the length of chord AD.



- (A) $12\sqrt{5}$ cm (B) 12 cm (C) 13 cm (D) $13\sqrt{5}$ cm

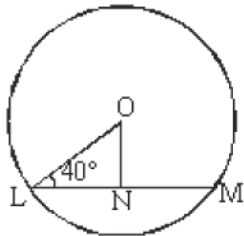
11. In a circle radius is 13 cm, a chord is drawn at a distance of 12 cm from the centre. Find the length of the chord.

- (A) 5 cm (B) 10 cm (C) 15 cm (D) 30 cm

12. Two parallel chords of a circle whose radius is 13 cm are respectively 10 cm and 24 cm. If they lie on the opposite side of the centre find the distance between them.

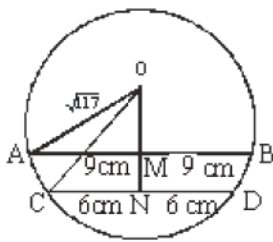
- (A) 10 cm (B) 7 cm (C) 17 cm (D) 13 cm

13. In the adjoining figure, N is the mid point of the chord LM of a circle where centre is O. If $\angle OLN = 40^\circ$, find the measure of $\angle LON$



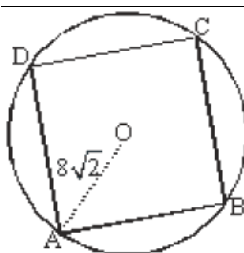
- (A) 50° (B) 120° (C) 90° (D) 75°

14. Two parallel chords of a circle whose radius is $\sqrt{17}$ cm, are 12 cm and 18 cm. Find the distance between them. Both chords are on the same side of the centre.



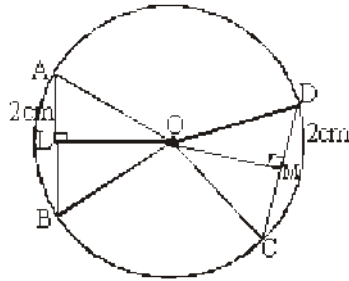
- (A) 7 cm (B) 5 cm (C) 3 cm (D) 15 cm

15. In figure, a square is inscribed in a circle of radius $8\sqrt{2}$ cm. Find the length of the square



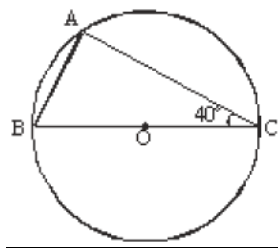
- (A) 12 cm (B) 8 cm (C) 16 cm (D) 10 cm

16. In the given figure, O is the centre of the circle, AB and CD are two chords such that OL is perpendicular to AB and OM is perpendicular to CD. $\angle AOB = 50^\circ$, $AL = DM = 2$ cm. Find the measure of $\angle COD$.



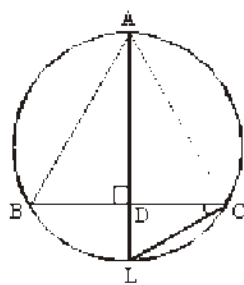
- (A) 50° (B) 70° (C) 90° (D) 130°

17. $\triangle ABC$ is inscribed in a circle with centre O. If $\angle ACB = 40^\circ$, find $\angle B$.



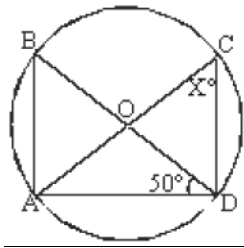
- (A) 65° (B) 90° (C) 40° (D) 50°

18. $\triangle ABC$ is inscribed in a circle and $AD \perp BC$ meets BC at D and AD produced meets the circle at L. If $\angle ABD = 35^\circ$ then find the measure of $\angle BCL$.



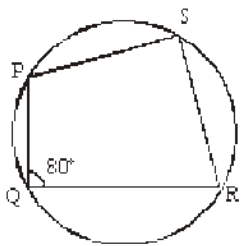
- (A) 55° (B) 60° (C) 90° (D) 35°

19. In the adjoining figure, O is the centre of the circle, find the measure of angle X.



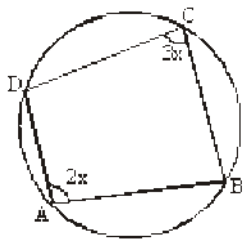
- (A) 85° (B) 110° (C) 50° (D) 35°

20. In the figure, $\angle Q = 80^\circ$ find $\angle S$



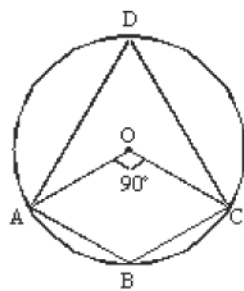
- (A) 100° (B) 80° (C) 90° (D) 110°

21. From the given figure, find the value of x



- (A) 108° (B) 72° (C) 60° (D) 36°

22. In the given figure, O is the centre of the circle. If $\angle AOC = 90^\circ$, find $\angle ABC$

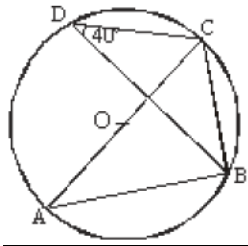


- (A) 45° (B) 90° (C) 135° (D) 75°

23. Given cyclic trapezium ABCD in which $AD \parallel BC$ and $\angle B = 60^\circ$, Determine $\angle A$.

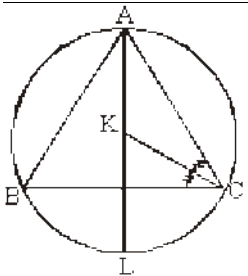
- (A) 90° (B) 120° (C) 60° (D) 30°

24. In the adjoining figure, in circle with centre O. $\angle BDC = 40^\circ$, find $\angle ACB$.



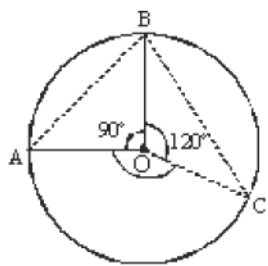
- (A) 50° (B) 45° (C) 40° (D) 90°

25. ABC is inscribed in a circle. The bisector of $\angle A$ meets the circle in L and the bisector of $\angle C$ meets AL at K. If $\angle BAC = 80^\circ$ and $\angle ACB = 60^\circ$, find $\angle LCK$



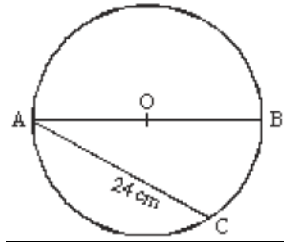
- (A) 40° (B) 30° (C) 90° (D) 70°

26. In the adjoining figure, O is the centre of the circle, $\angle AOB = 90^\circ$, $\angle BOC = 120^\circ$



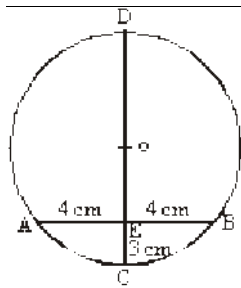
- (A) 150° (B) 75° (C) 50° (D) 120°

27. In the figure, diameter $AB = 30$ cm, chord $AC = 24$ cm. Find how far is the chord AC from the centre of the circle ?



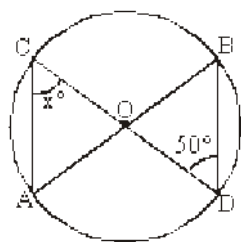
- (A) 9 cm (B) $8\sqrt{5}$ cm (C) 6 cm (D) 12 cm

28. In the adjoining figure, CD is the diameter which meets the chord AB in E such that $AE = BE = 4$ cm. If CE is 3 cm. Find the radius of the circle.



- (A) $4\frac{1}{6}$ cm (B) $2\frac{1}{7}$ cm (C) 3 cm (D) 4 cm

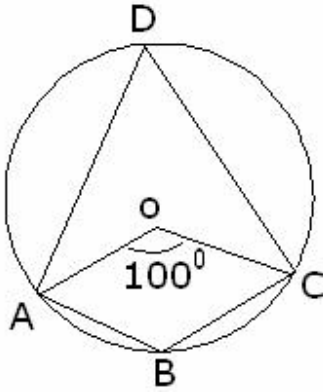
29. In the given figure AOB and COD are the two diameters of a circle with centre O . If $\angle BDO = 50^\circ$, find $\angle ACO$



- (A) 50° (B) 130° (C) 90° (D) 75°

<3M>

30. O is the centre of a circle and the measure of arc ABC is 100 degree. Determine angle ADC and Angle ABC



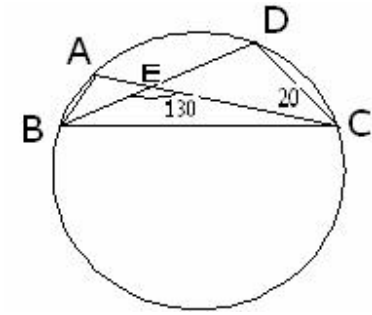
31. A line l intersecting two concentric circles having same center is O, at the point A, B, C, D. Show that $AB = CD$.

32. Prove that the line joining to the centre of circle to the mid-point of a chord, is perpendicular to the chord.

33. Prove that equal chords of a circle subtend equal angles at the centre.

34. Bisector AD of angle BAC of Triangle ABC passes through the center O of the circumcircle of triangle ABC prove that $AB = AC$.

35. A, B, C, D are the four points on a circle. AC and BD intersect at a point E such that $\angle BEC = 130$ degree and $\angle ECD = 20$ Degree. Find $\angle BAC$



<5M>

36. AB and CD are the two chord of the circle such that $AB = 6\text{ cm}$, $CD = 12\text{ cm}$ and $AB \parallel CD$, if the distance between AB and CD is 3 cm, find the radius of the circle.

37. A circular park of radius 20 m 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 to each other. Find the total length of the string.

38. Given an arc of circle how you will find its centre and complete the circle.

39. Two equal chord AB and CD of circle with center O, when produced meet at a point E, prove that $BE = DE$ and $AE = CE$

40. In a circle with centre O, Chords AB and CD intersect inside the circumference at E. Prove that $\angle AOC + \angle BOD = 2 \angle AEC$

41. If OA and OB are respectively perpendicular to chords CD and EF of a circle whose centre is O. if $OA = OB$, prove that $CD = EF$.