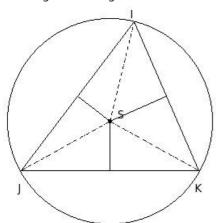
Name : Chord Properties of a Circle

Chapter: Chord Properties of a Circle

Grade: ICSE Grade X

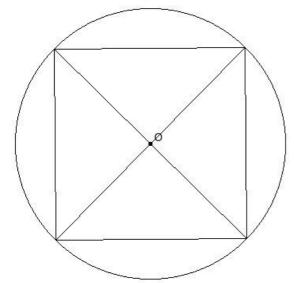
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1. In the given triangle S is the circumcentre. If SI = 12.70 cm, find the circumference of the circumcircle



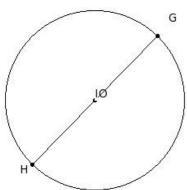
(i) 80.8 cm (ii) 79.8 cm (iii) 81.8 cm (iv) 78.8 cm (v) 77.8 cm

2. Find the side of the square in the following figure if the radius of the circle is 17.00 cm.



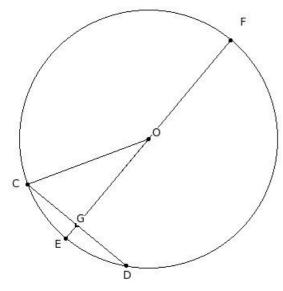
(i) 25.04 cm (ii) 26.04 cm (iii) 22.04 cm (iv) 23.04 cm (v) 24.04 cm

3. If a chord GH = 22 cm is drawn in a circle with radius OG = 11 cm, find its distance from the centre of the circle



(i) 7.00 cm (ii) 0.00 cm (iii) 1.00 cm (iv) 2.00 cm (v) 8.00 cm

The diameter EF of a circle with centre 'O' is perpendicular to the chord CD. If CD = 16.00 cm and EG = 2.12 cm, find the radius of the circle.



(i) 15.12 cm (ii) 18.12 cm (iii) 14.12 cm (iv) 17.12 cm (v) 16.12 cm

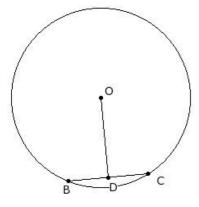
5. With the vertices of a triangle $\triangle IJK$ as centres, three circles are drawn touching each other externally. If the sides of the triangle are 10 cm , 15 cm and 13 cm , find the radii of the circles

(i) 4 cm, 6 cm & 9 cm respectively (ii) 9 cm, 11 cm & 14 cm respectively

(iii) 4 cm, 11 cm & 9 cm respectively (iv) 4 cm, 6 cm & 14 cm respectively

(v) 9 cm, 6 cm & 9 cm respectively

6. In the given figure, O is the centre of the circle. D is a point on chord BC such that BD = DC. Find ∠ODB



(i) 95° (ii) 100° (iii) 120° (iv) 105° (v) 90°

7. Which of the following statements are true?

a) All chords of a circle are diameters.

b) $\frac{22}{7}$ is a rational number.

c) A circle divides the plane into three mutually disjoint sets of points.

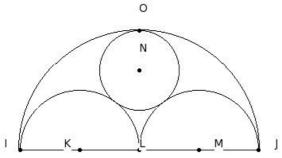
d) π is a rational number.

e) All diameters of a circle are chords.

(i) {b,c,e} (ii) {d,c} (iii) {a,b} (iv) {a,b,c} (v) {a,d,e}

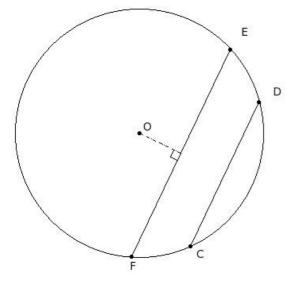
IJ is a line segment and L is its mid-point. Three semi-circles are drawn with IL , LJ and IJ as diameters. K , M and L

8. respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given IK = 8 cm



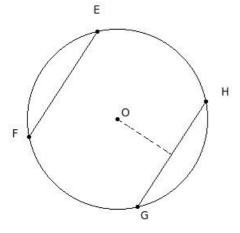
(i) 5.33 cm (ii) 3.33 cm (iii) 6.33 cm (iv) 4.33 cm (v) 7.33 cm

9. In the given figure, CD \parallel EF. Length of chords CD = 20 cm and EF = 29 cm. If the distance between the chords is 6 cm, find the radius of the circle



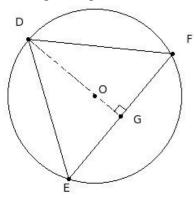
(i) 17.76 cm (ii) 13.76 cm (iii) 14.76 cm (iv) 15.76 cm (v) 16.76 cm

10. In the given figure, EF \parallel GH. Length of chords EF = 16 cm and GH = 16 cm. If the distance between the chords is 16 cm, find the radius of the circle

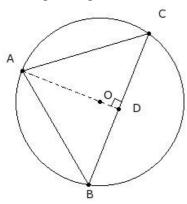


(i) 12.31 cm (ii) 10.31 cm (iii) 13.31 cm (iv) 9.31 cm (v) 11.31 cm

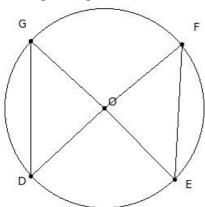
11. In the given figure, $\triangle DEF$ is inscribed in a circle. If DE = DF = 18 cm and EF = 20 cm, find the radius of the circle



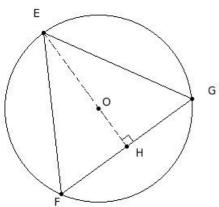
- (i) 8.82~cm (ii) 12.82~cm (iii) 11.82~cm (iv) 10.82~cm (v) 9.82~cm
- 12. In the given figure, $\triangle ABC$ is an isosceles such that AB = AC. Given AO = 10 cm, AB = AC = 16 cm, find BC



- (i) 17.20 cm (ii) 18.20 cm (iii) 20.20 cm (iv) 19.20 cm (v) 21.20 cm
- 13. In the given figure, DG & EF are two chords of equal length. Given \angle OGD = 47.5°, find \angle FOE

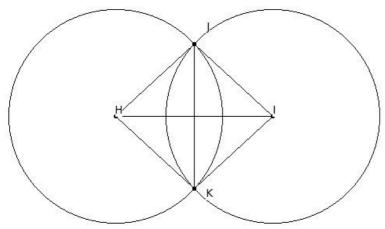


- (i) 90° (ii) 100° (iii) 95° (iv) 85° (v) 115°
- 14. In the given figure, $\triangle EFG$ is equilateral. Given EO = 12 cm, find EG

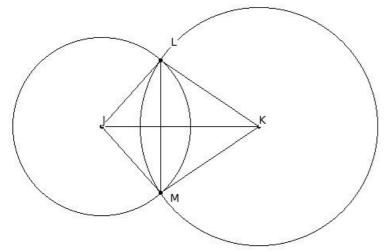


(i) 18.78 cm (ii) 22.78 cm (iii) 20.78 cm (iv) 21.78 cm (v) 19.78 cm

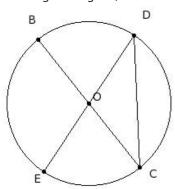
- Two concentric circles are of radii 17 cm and 14 cm. Find the length of the chord of the outer circle that touches the inner circle
 - (i) 20.29 cm (ii) 19.29 cm (iii) 17.29 cm (iv) 18.29 cm (v) 21.29 cm
- 16. In the given figure, H and I are centres of two circles with equal radii intersecting at J and K. If HI = 20 cm and JK = 18.4 cm, find the radii of the circles



- (i) 12.59 cm (ii) 14.59 cm (iii) 11.59 cm (iv) 13.59 cm (v) 15.59 cm
- In the given figure, two circles of radii JL = 11.3 cm & KL = 15.1 cm intersect at L & M. The distance between the centres JK = 20 cm, find the length of LM

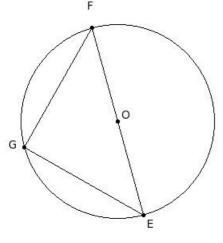


- (i) 15.92 cm (ii) 14.92 cm (iii) 16.92 cm (iv) 18.92 cm (v) 17.92 cm
- 18. In the given figure, BC & DE are diameters of the circle. If \angle BCD = 36° find, \angle COD

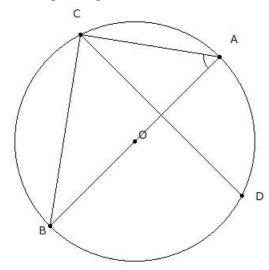


(i) 108° (ii) 138° (iii) 123° (iv) 118° (v) 113°

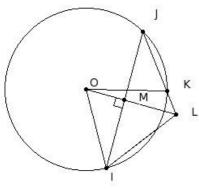
19. In the given figure EG & FG are equal length chords of the circle. Find \angle GEF



- (i) 75° (ii) 50° (iii) 45° (iv) 55° (v) 60°
- 20. In the given figure, AB is a diameter of the circle with centre O. If \angle BAC = 54.14° and BC = BD, find \angle DCA

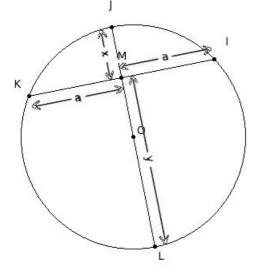


- (i) 40.86° (ii) 35.86° (iii) 45.86° (iv) 65.86° (v) 50.86°
- 21. In the given figure, O is the centre of the circle, and OM \perp IJ. If \angle IJK = 37°, find \angle OLK



(i) 68° (ii) 83° (iii) 58° (iv) 63° (v) 53°

22. In the given figure, if x = 6 cm and y = 22 cm, find a



(i) 9.49 cm (ii) 11.49 cm (iii) 10.49 cm (iv) 13.49 cm (v) 12.49 cm

		A	ssignment Key		
1) (ii)	2) (v)	3) (ii)	4) (v)	5) (i)	6) (v)
7) (i)	8) (i)	9) (iv)	10) (v)	11) (iv)	12) (iv)
13) (iv)	14) (iii)	15) (ii)	16) (iv)	17) (iii)	18) (i)
19) (iii)	20) (ii)	21) (v)	22) (ii)		

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