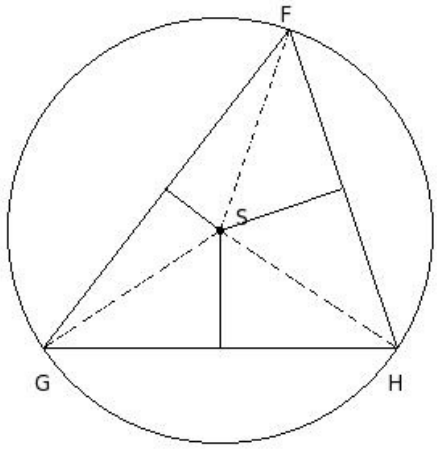
EduSahara™ Assignment

Name : Chord Properties of a Circle

Chapter : Chord Properties of a Circle

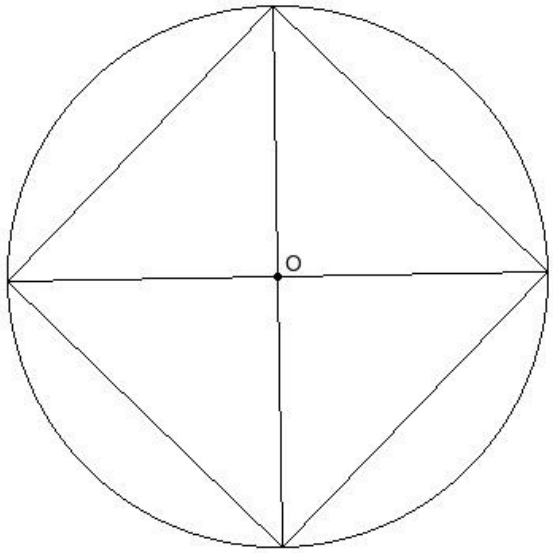
Grade : ICSE Grade X

1. In the given triangle S is the circumcentre. If SF = 13.20 cm, find the circumference of the circumcircle



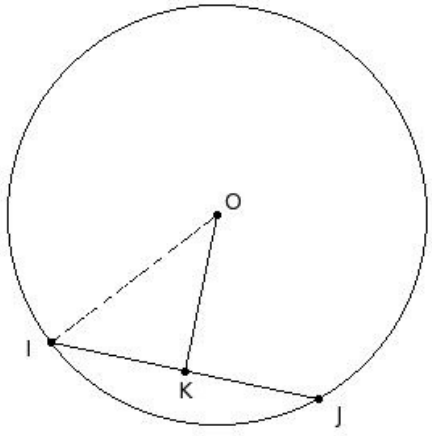
(i) 85.0 cm (ii) 84.0 cm (iii) 82.0 cm (iv) 81.0 cm (v) 83.0 cm

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



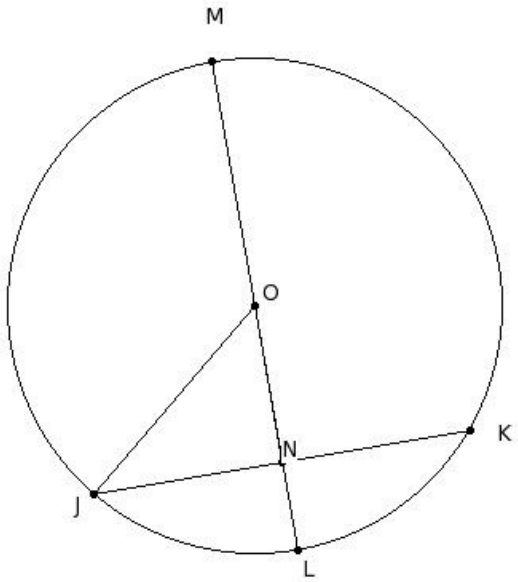
(i) 25.04 cm (ii) 24.04 cm (iii) 26.04 cm (iv) 23.04 cm (v) 22.04 cm

3. If a chord IJ = 17 cm is drawn in a circle with radius OI = 13 cm, find its distance from the centre of the circle



(i) 11.84 cm (ii) 7.84 cm (iii) 10.84 cm (iv) 9.84 cm (v) 8.84 cm

4. The diameter LM of a circle with centre 'O' is perpendicular to the chord JK. If JK = 24.00 cm and LN = 5.62 cm, find the radius of the circle.



(i) 14.62 cm (ii) 16.62 cm (iii) 15.62 cm (iv) 17.62 cm (v) 13.62 cm

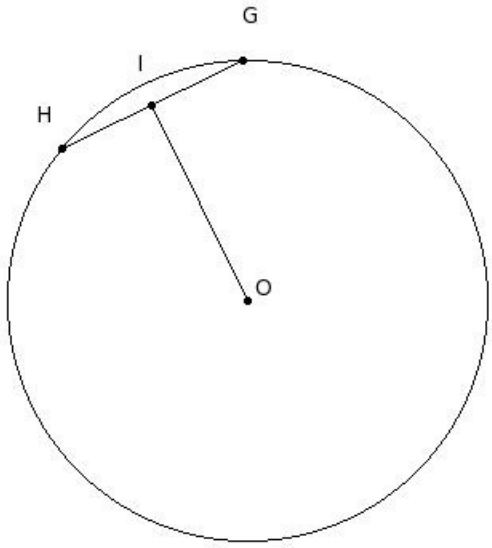
5. With the vertices of a triangle △FGH as centres, three circles are drawn touching each other externally. If the sides of the triangle are 12 cm , 17 cm and 15 cm , find the radii of the circles

(i) 10 cm , 12 cm & 15 cm respectively (ii) 5 cm , 7 cm & 15 cm respectively

(iii) 10 cm , 7 cm & 10 cm respectively (iv) 5 cm , 12 cm & 10 cm respectively

(v) 5 cm , 7 cm & 10 cm respectively

6. In the given figure, O is the centre of the circle. I is a point on chord GH such that GI = IH. Find ∠OIG



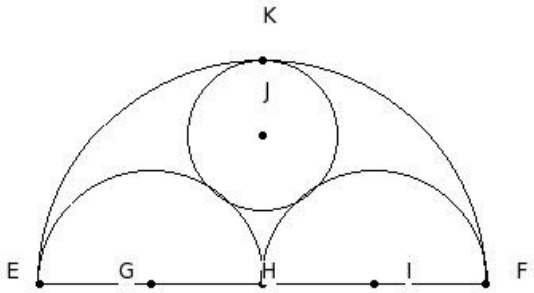
(i) 120° (ii) 100° (iii) 90° (iv) 105° (v) 95°

7. Which of the following statements are true?

a) A circle divides the plane into three mutually disjoint sets of points.
b) All diameters of a circle are chords.
c) $\frac{22}{7}$ is a rational number.
d) π is a rational number.
e) All chords of a circle are diameters.

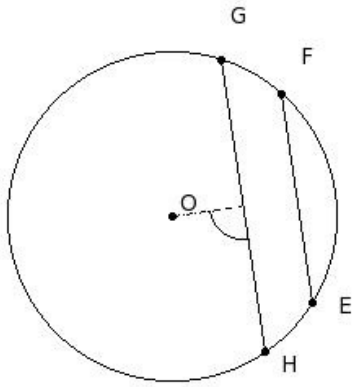
(i) {d,e,c} (ii) {d,a} (iii) {e,b} (iv) {d,a,b} (v) {a,b,c}

8. EF is a line segment and H is its mid-point. Three semi-circles are drawn with EH , HF and EF as diameters. G , I and H respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given EG = 7 cm



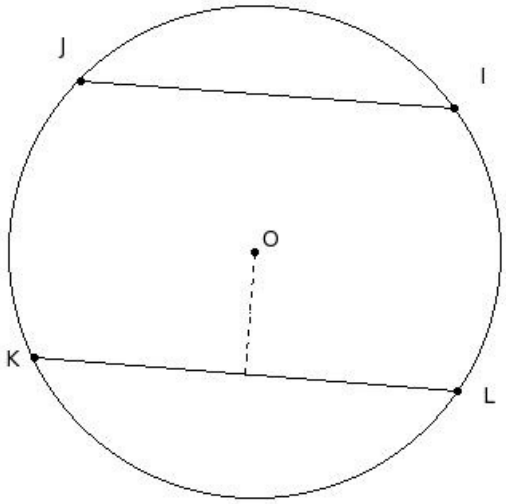
(i) 6.67 cm (ii) 3.67 cm (iii) 5.67 cm (iv) 2.67 cm (v) 4.67 cm

9. In the given figure, EF ∥ GH. Length of chords EF = 13 cm and GH = 18 cm.
If the distance between the chords is 3 cm , find the radius of the circle



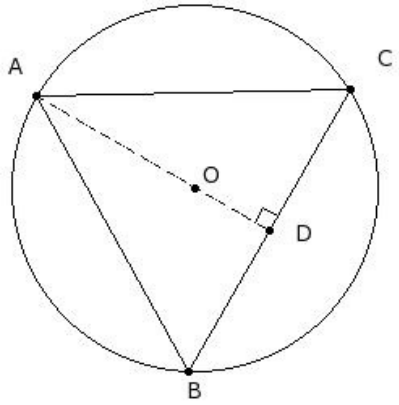
(i) 11.28 cm (ii) 12.28 cm (iii) 8.28 cm (iv) 9.28 cm (v) 10.28 cm

10. In the given figure, IJ ∥ KL. Length of chords IJ = 24 cm and KL = 27 cm.
If the distance between the chords is 18 cm , find the radius of the circle



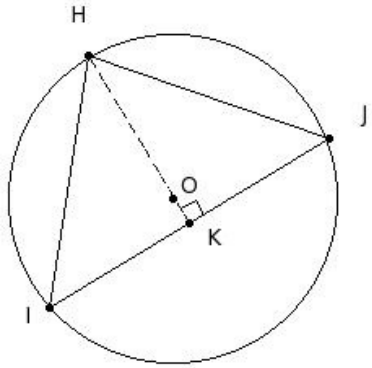
(i) 15.66 cm (ii) 14.66 cm (iii) 13.66 cm (iv) 17.66 cm (v) 16.66 cm

11. In the given figure, △ABC is inscribed in a circle. If AB = AC = 19 cm and BC = 20 cm, find the radius of the circle



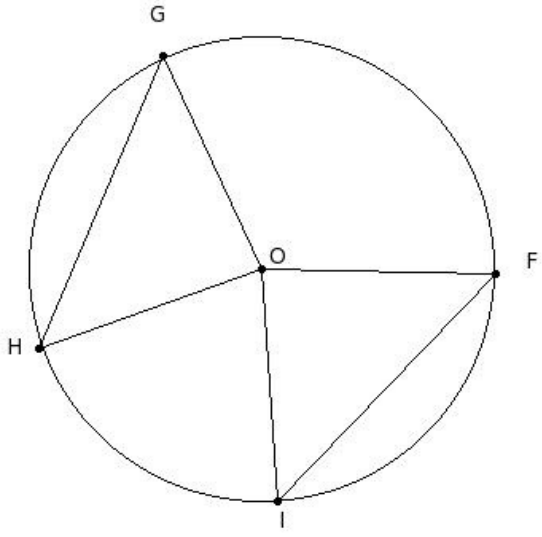
(i) 9.17 cm (ii) 11.17 cm (iii) 12.17 cm (iv) 10.17 cm (v) 13.17 cm

12. In the given figure, △HIJ is an isosceles such that HI = HJ. Given HO = 10 cm, HI = HJ = 16 cm, find IJ



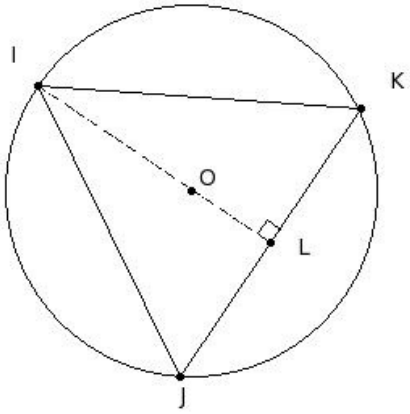
(i) 20.20 cm (ii) 18.20 cm (iii) 17.20 cm (iv) 19.20 cm (v) 21.20 cm

13. In the given figure, FI & GH are two chords of equal length. Given ∠GHO = 47.5°, find ∠FOI



(i) 95° (ii) 90° (iii) 85° (iv) 100° (v) 115°

14. In the given figure, △IJK is equilateral. Given IO = 12 cm, find IJ

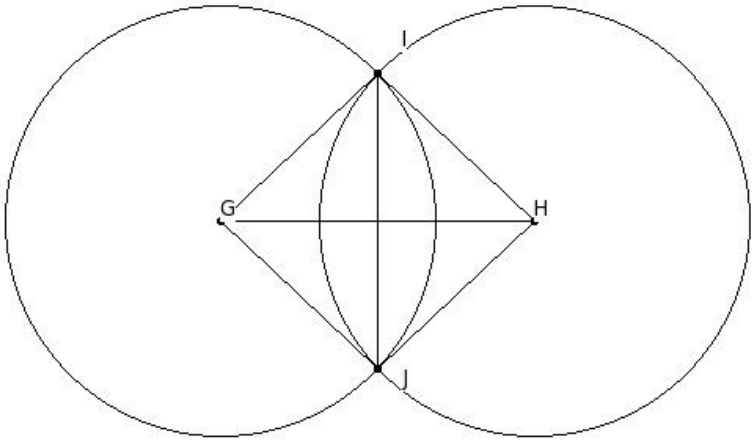


(i) 18.78 cm (ii) 22.78 cm (iii) 21.78 cm (iv) 19.78 cm (v) 20.78 cm

15. Two concentric circles are of radii 19 cm and 13 cm. Find the length of the chord of the outer circle that touches the inner circle

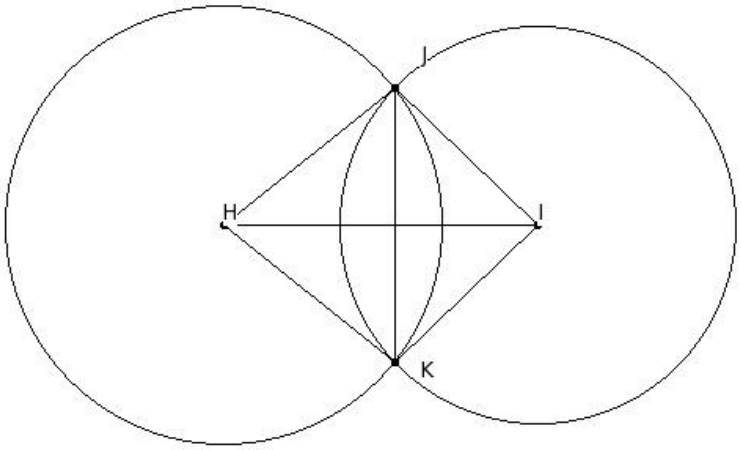
(i) 29.71 cm (ii) 28.71 cm (iii) 27.71 cm (iv) 26.71 cm (v) 25.71 cm

16. In the given figure, G and H are centres of two circles with equal radii intersecting at I and J. If GH = 20 cm and IJ = 18.8 cm, find the radii of the circles



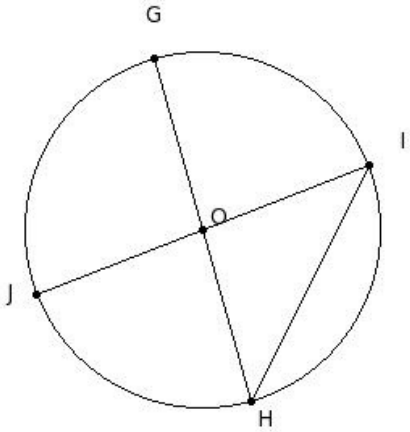
(i) 15.72 cm (ii) 14.72 cm (iii) 13.72 cm (iv) 12.72 cm (v) 11.72 cm

17. In the given figure, two circles of radii HJ = 13.9 cm & IJ = 12.6 cm intersect at J & K. The distance between the centres HI = 20 cm, find the length of JK



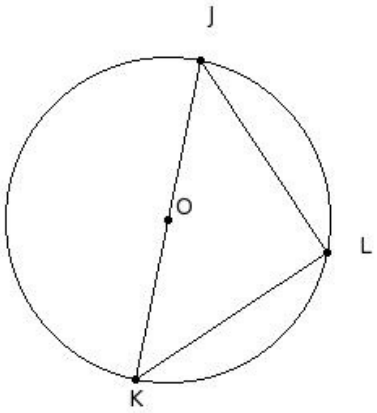
(i) 15.35 cm (ii) 17.35 cm (iii) 16.35 cm (iv) 18.35 cm (v) 19.35 cm

18. In the given figure, GH & IJ are diameters of the circle. If ∠GHI = 42.5° find, ∠HOI



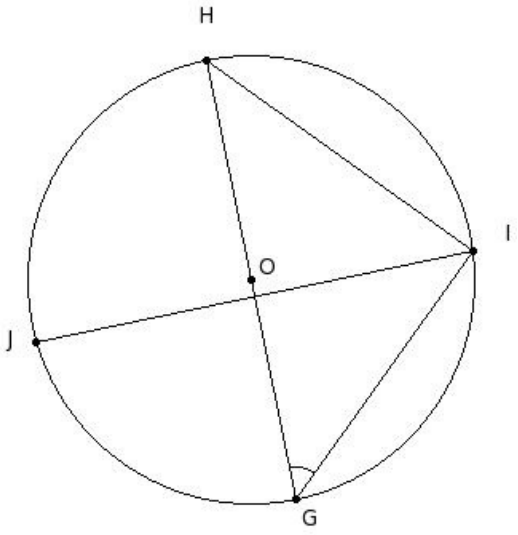
(i) 105° (ii) 100° (iii) 125° (iv) 95° (v) 110°

19. In the given figure JL & KL are equal length chords of the circle. Find ∠LJK



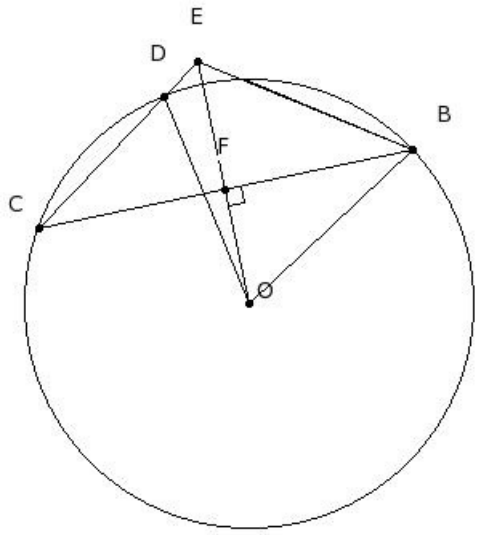
(i) 50° (ii) 75° (iii) 45° (iv) 60° (v) 55°

20. In the given figure, GH is a diameter of the circle with centre O. If ∠HGI = 47.16° and HI = HJ, find ∠JIG



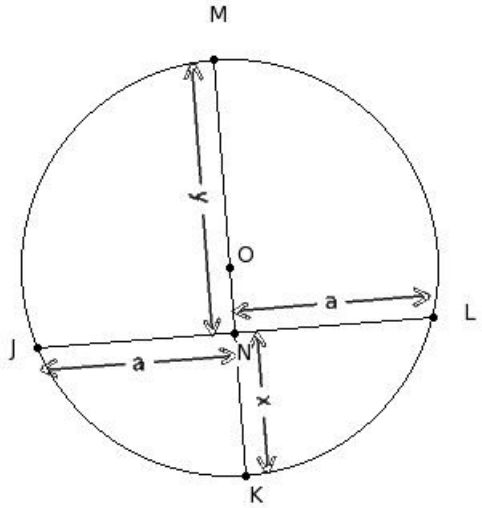
(i) 57.84° (ii) 52.84° (iii) 47.84° (iv) 42.84° (v) 72.84°

21. In the given figure, O is the centre of the circle, and OF ⊥ BC. If ∠BCD = 34.5°, find ∠OED



(i) 60.5° (ii) 55.5° (iii) 65.5° (iv) 85.5° (v) 70.5°

22. In the given figure, if x = 9 cm and y = 17 cm, find a



(i) 13.37 cm (ii) 11.37 cm (iii) 12.37 cm (iv) 14.37 cm (v) 10.37 cm

Assignment Key

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