EduSahara™ Learning Center Assignment

Grade : Class X, ICSE
Chapter : Chord Properties of a Circle
Name : Chord Properties of a Circle

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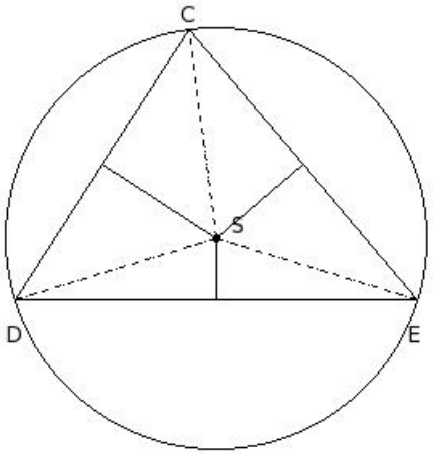
1. In the given triangle S is the circumcentre. If SC = 13.10 cm, find the circumference of the circumcircle



(i) 81.3 cm (ii) 84.3 cm (iii) 80.3 cm (iv) 82.3 cm (v) 83.3 cm

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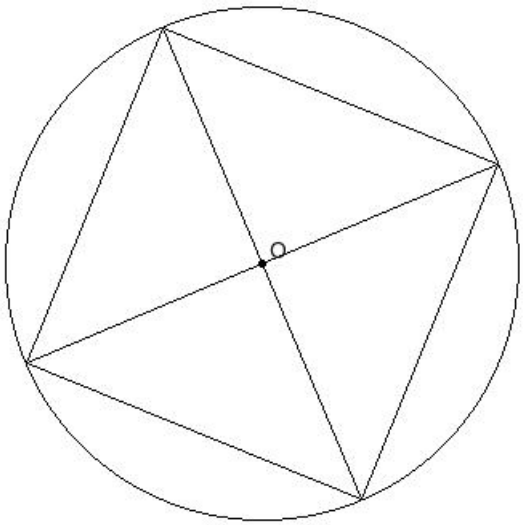
2. Find the side of the square in the following figure if the radius of the circle is 16.00 cm.



(i) 22.62 cm (ii) 21.62 cm (iii) 20.62 cm (iv) 24.62 cm (v) 23.62 cm

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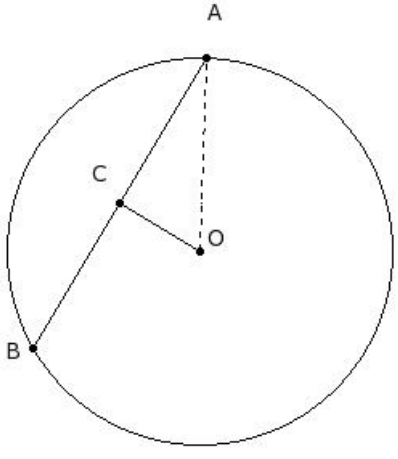
3. If a chord AB = 21 cm is drawn in a circle with radius OA = 12 cm, find its distance from the centre of the circle



(i) 7.81 cm (ii) 5.81 cm (iii) 4.81 cm (iv) 6.81 cm (v) 3.81 cm

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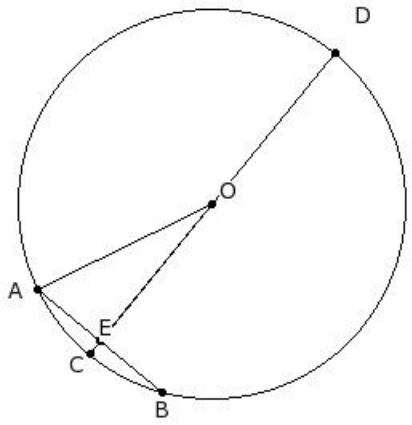
4. The diameter CD of a circle with centre 'O' is perpendicular to the chord AB. If AB = 10.00 cm and CE = 1.08 cm, find the radius of the circle.



(i) 10.08 cm (ii) 13.08 cm (iii) 12.08 cm (iv) 14.08 cm (v) 11.08 cm

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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 10 cm , 16 cm and 10 cm , find the radii of the circles

(i) 2 cm , 13 cm & 8 cm respectively

(ii) 2 cm , 8 cm & 8 cm respectively

(iii) 7 cm , 8 cm & 8 cm respectively

(iv) 2 cm , 8 cm & 13 cm respectively

(v) 7 cm , 13 cm & 13 cm respectively

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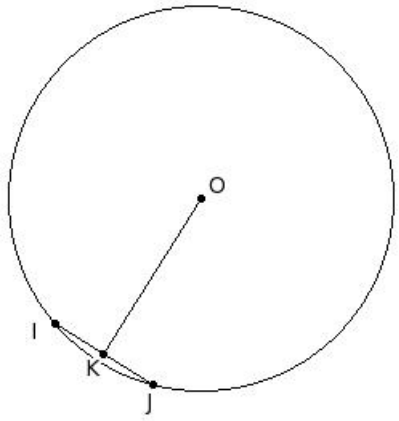
6. In the given figure, O is the centre of the circle. K is a point on chord IJ such that IK = KJ. Find ∠OKI



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

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7. Which of the following statements are true?

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

b) π is a rational number

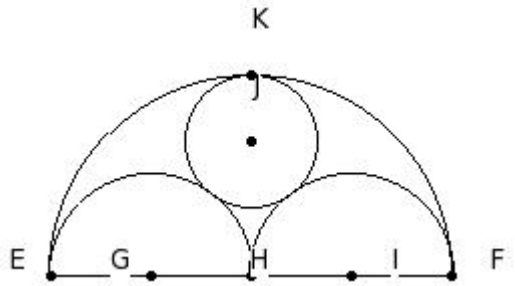
c) A circle divides the plane into three mutually disjoint sets of points

d) All chords of a circle are diameters

e) All diameters of a circle are chords

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

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 = 5 cm



(i) 3.33 cm (ii) 4.33 cm (iii) 2.33 cm (iv) 1.33 cm (v) 5.33 cm

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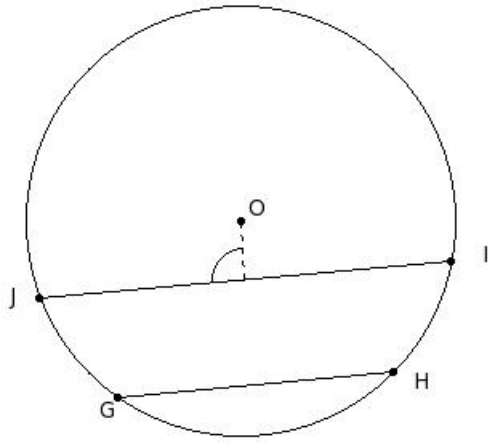
9. In the given figure, GH ‖ IJ. Length of chords GH = 17 cm and IJ = 26 cm.
If the distance between the chords is 7 cm , find the radius of the circle



(i) 14.44 cm (ii) 12.44 cm (iii) 11.44 cm (iv) 15.44 cm (v) 13.44 cm

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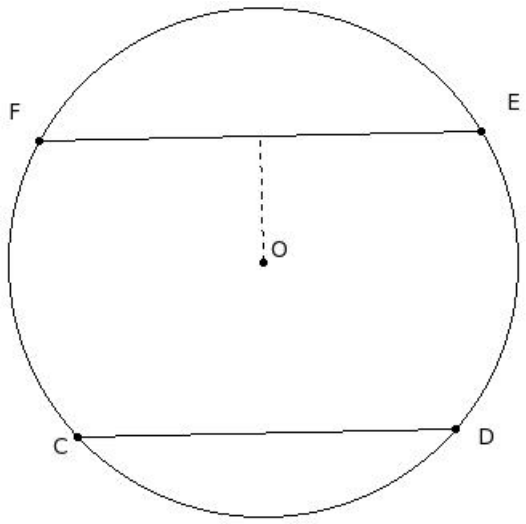
10. In the given figure, CD ‖ EF. Length of chords CD = 24 cm and EF = 28 cm.
If the distance between the chords is 19 cm , find the radius of the circle



(i) 18.19 cm (ii) 16.19 cm (iii) 17.19 cm (iv) 14.19 cm (v) 15.19 cm

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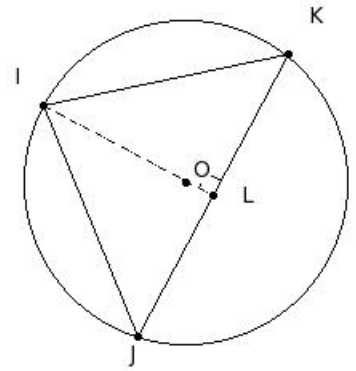
11. In the given figure, △IJK is inscribed in a circle. If IJ = IK = 16 cm and JK = 20 cm, find the radius of the circle



(i) 12.25 cm (ii) 11.25 cm (iii) 8.25 cm (iv) 10.25 cm (v) 9.25 cm

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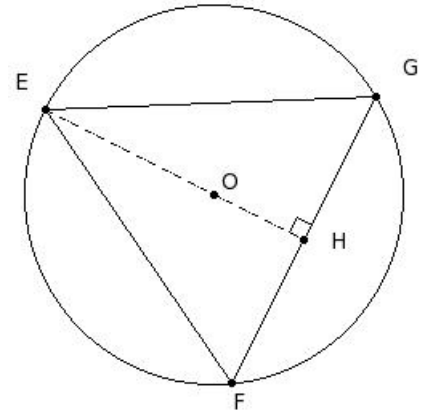
12. In the given figure, △EFG is an isosceles such that EF = EG. Given EO = 12 cm, EF = EG = 21 cm, find FG



(i) 22.33 cm (ii) 20.33 cm (iii) 19.33 cm (iv) 18.33 cm (v) 21.33 cm

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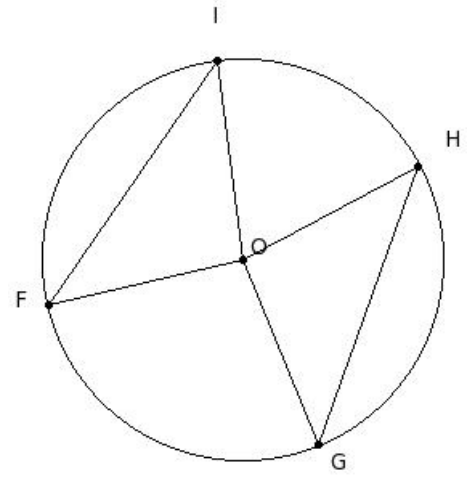
13. In the given figure, FI & GH are two chords of equal length. Given ∠IFO = 42°, find ∠HOG



(i) 96° (ii) 106° (iii) 101° (iv) 111° (v) 126°

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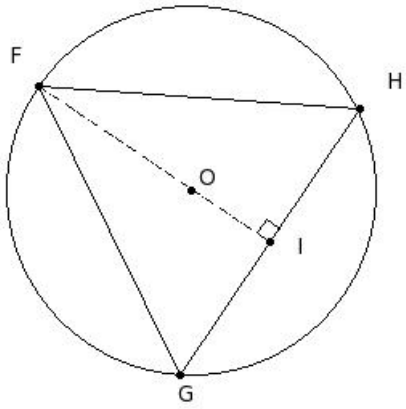
14. In the given figure, △FGH is equilateral. Given FO = 12 cm, find FG



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

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15. Two concentric circles are of radii 22 cm and 10 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 37.19 cm (ii) 39.19 cm (iii) 40.19 cm (iv) 38.19 cm (v) 41.19 cm

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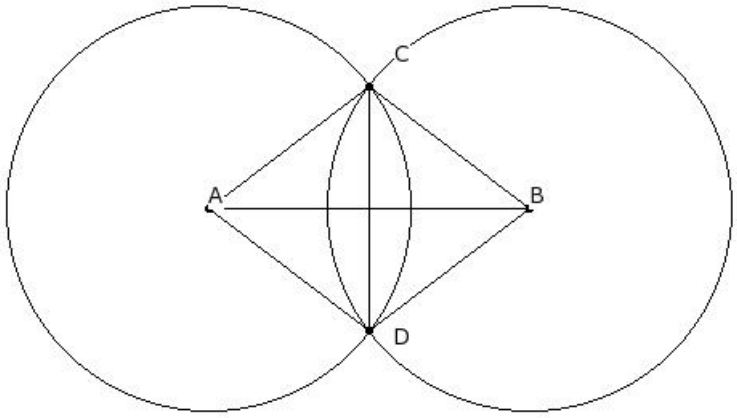
16. In the given figure, A and B are centres of two circles with equal radii intersecting at C and D. If AB = 20 cm and CD = 15.2 cm, find the radii of the circles



(i) 11.56 cm (ii) 12.56 cm (iii) 13.56 cm (iv) 14.56 cm (v) 10.56 cm

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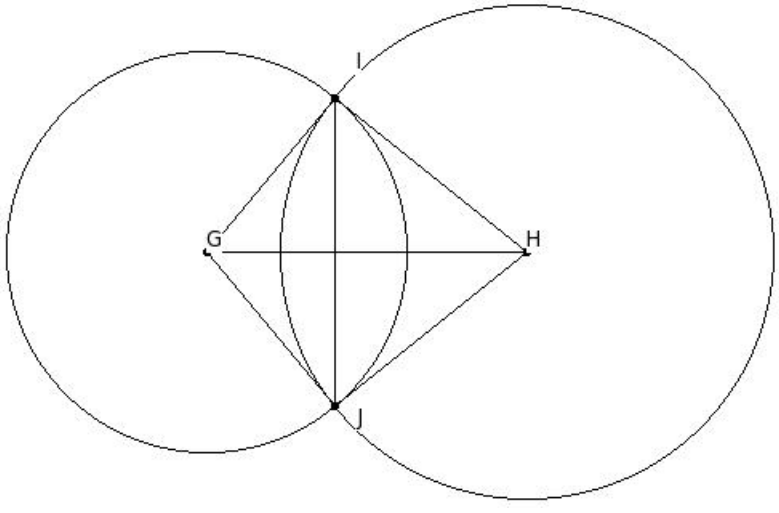
17. In the given figure, two circles of radii GI = 12.5 cm & HI = 15.4 cm intersect at I & J. The distance between the centres GH = 20 cm, find the length of IJ



(i) 19.25 cm (ii) 21.25 cm (iii) 17.25 cm (iv) 18.25 cm (v) 20.25 cm

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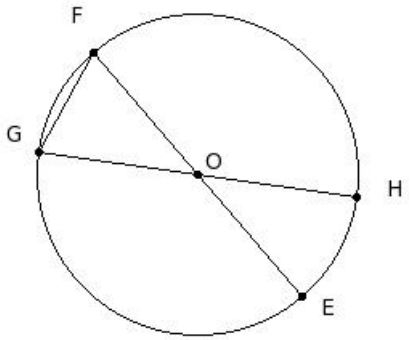
18. In the given figure, EF & GH are diameters of the circle. If ∠EFG = 69.5° find, ∠FOG



(i) 71° (ii) 41° (iii) 46° (iv) 51° (v) 56°

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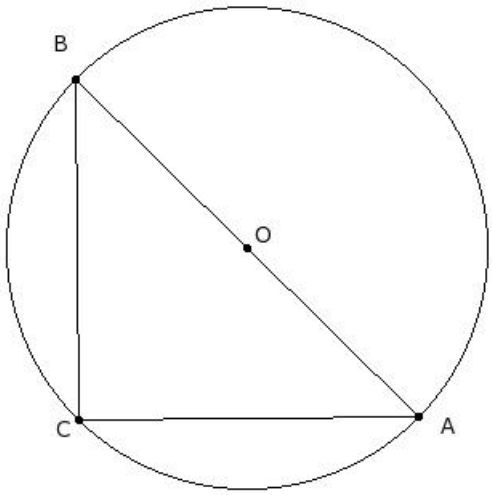
19. In the given figure AC & BC are equal length chords of the circle. Find ∠CAB



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

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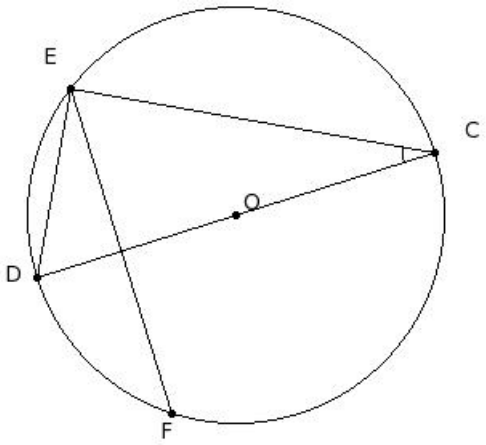
20. In the given figure, CD is a diameter of the circle with centre O. If ∠DCE = 27.45° and DE = DF, find ∠FEC



(i) 62.55° (ii) 77.55° (iii) 92.55° (iv) 67.55° (v) 72.55°

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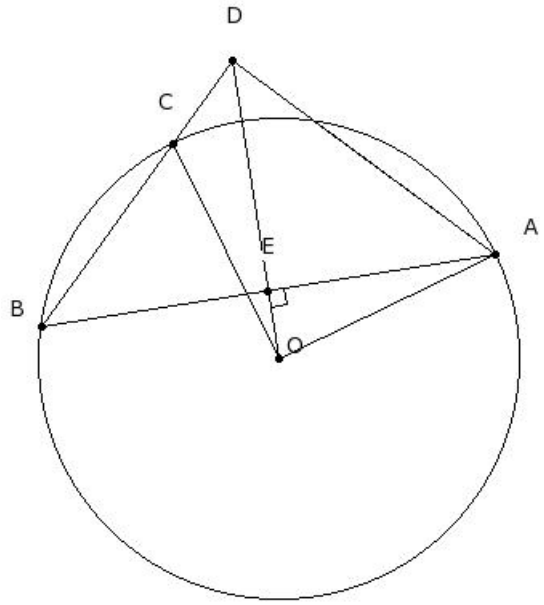
21. In the given figure, O is the centre of the circle, and OE ⊥ AB. If ∠ABC = 45.5°, find ∠ODC



(i) 59.5° (ii) 74.5° (iii) 44.5° (iv) 54.5° (v) 49.5°

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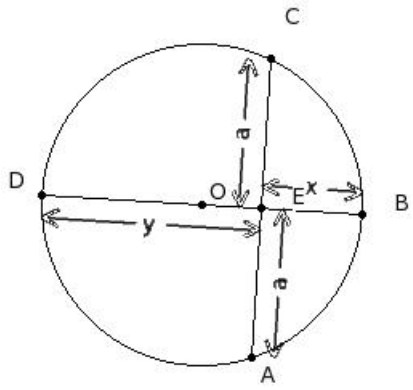
22. In the given figure, if x = 6 cm and y = 14 cm, find a



(i) 8.17 cm (ii) 11.17 cm (iii) 7.17 cm (iv) 10.17 cm (v) 9.17 cm

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Assignment Key

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