EduSahara™ Assignment

Name : Chord Properties of a Circle

Chapter : Circles

Grade : SSC Grade IX

1. A chord that passes through the centre of the circle is called

   (i) semi-circle (ii) radius (iii) diameter (iv) circumference (v) segment

2. A chord of a circle divides the whole circular region into two parts, each called a

   (i) chord (ii) major segment (iii) segment (iv) radius (v) semi-circle

3. The segment of the circle containing the centre of the circle is called

   (i) semi-circle (ii) major segment (iii) radius (iv) diameter (v) chord

4. Which of the following statements are true?

   a) Each radius of a circle is also a chord of the circle.
   b) A circle consists of an infinite number of points.
   c) Every circle has a unique diameter.
   d) A line can meet a circle atmost at two points.
   e) Every circle has a unique centre.

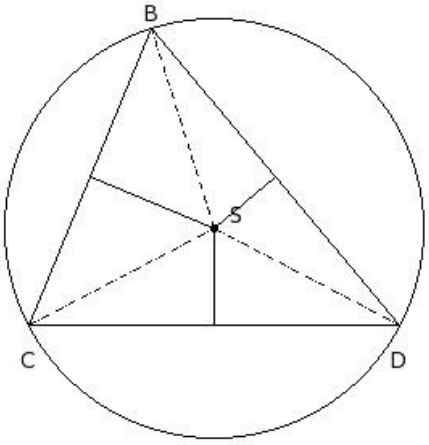
   (i) {c,d} (ii) {a,b} (iii) {b,d,e} (iv) {a,c,e} (v) {a,b,d}

5. Which of the following statements are true?

   a) Every circle has a unique diameter.
   b) One and only one tangent can be drawn to a circle from a point outside it.
   c) An infinite number of chords may be drawn for a circle.
   d) Two semi-circles of a circle together make the whole circle.
   e) An infinite number of diameters may be drawn for a circle.

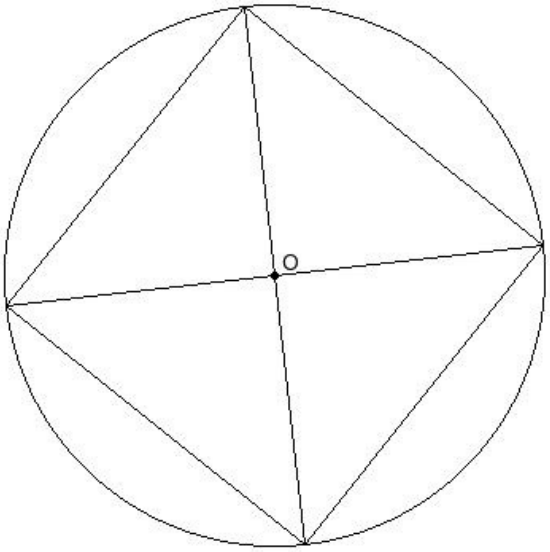
   (i) {b,d} (ii) {a,b,e} (iii) {a,c,d} (iv) {a,c} (v) {c,d,e}

6. In the given triangle S is the circumcentre. If SB = 13.00 cm, find the circumference of the circumcircle



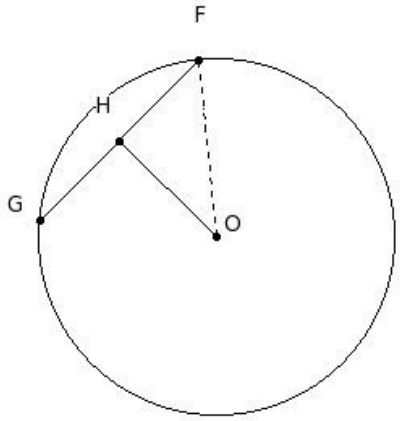
   (i) 80.7 cm (ii) 83.7 cm (iii) 82.7 cm (iv) 79.7 cm (v) 81.7 cm

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



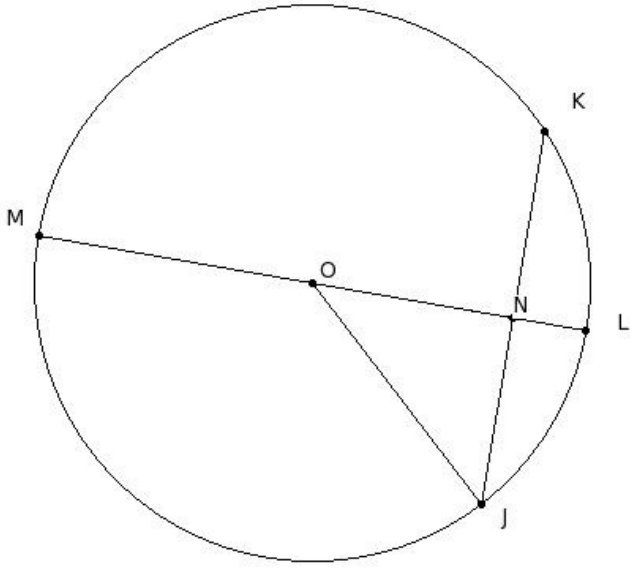
(i) 26.04 cm (ii) 22.04 cm (iii) 25.04 cm (iv) 23.04 cm (v) 24.04 cm

8. If a chord FG = 14 cm is drawn in a circle with radius OF = 11 cm, find its distance from the centre of the circle



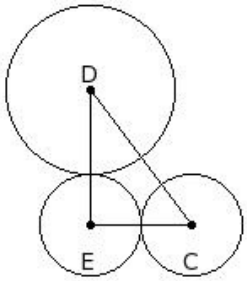
(i) 9.49 cm (ii) 6.49 cm (iii) 8.49 cm (iv) 10.49 cm (v) 7.49 cm

9. The diameter LM of a circle with centre 'O' is perpendicular to the chord JK. If JK = 24.00 cm and LN = 4.69 cm, find the radius of the circle.



(i) 15.69 cm (ii) 18.69 cm (iii) 17.69 cm (iv) 16.69 cm (v) 19.69 cm

10. 'C' and 'D' are centres of circles of radii 3 cm and 5 cm such that CD = 10 cm and 'E' is the centre of the circle of radius 'r' cm which touches the above circles externally. If ∠CED = 90°, find 'r'



(i) 1 cm (ii) 3 cm (iii) 2 cm (iv) 5 cm (v) 4 cm

11. Which of the following statements are true?

a) The diameter is the longest chord.
b) Atmost one chord can be drawn on a circle with a certain length.
c) The radius is the shortest chord.
d) A chord divides a circle into two segments.
e) A chord divides a circle into two sectors.

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

12. Which of the following statements are true?

a) Equal length chords are equidistant from the centre of the circle.
b) The longest chord of the circle passes through the centre of the circle.
c) No two chords bisects each other.
d) Equal length chords subtend equal angles at the centre of the circle.
e) The farther the chord is from the centre, the larger the angle it subtends at the centre.

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

13. Which of the following statements are true?

a) A sector is the area enclosed by two radii and a chord.
b) The diameter divides the circle into two unequal parts.
c) A circle divides the plane on which it lies into three parts.
d) The area enclosed by a chord and its minor arc is called minor segment.
e) The area enclosed by a chord and its major arc is called major segment.

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

14. Which of the following statements are true?

a) Two chords bisect each other.
b) A sector is the area enclosed by two radii and a chord.
c) The midpoint of any diameter of a circle is its centre.
d) The longest of all chords of a circle is called diameter.
e) The diameter divides the circle into two unequal parts.

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

15. Which of the following statements are true?

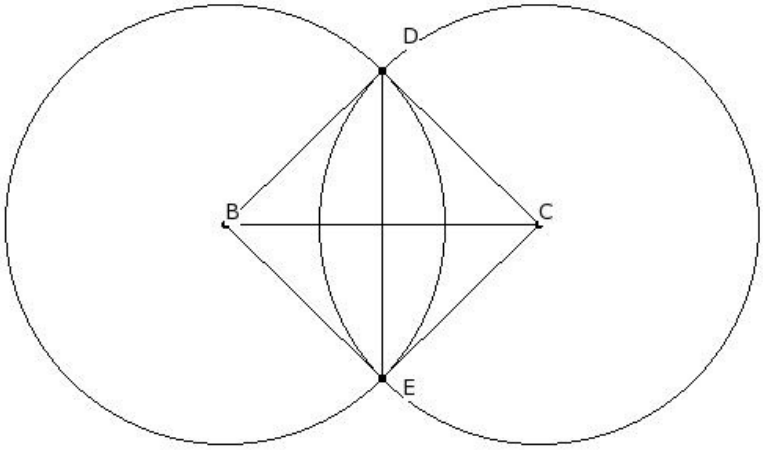
a) A secant has two end points.
b) A radius is a limiting case of a diameter.
c) A tangent is the limiting case of a secant.
d) A diameter is a limiting case of a chord.
e) A secant and a chord are same.

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

16. HI , JK , LM , NO are chords of a circle with HI = 5 cm , JK = 1 cm , LM = 7.5 cm and NO = 7.03 cm. The chord farthest from the centre of the circle is

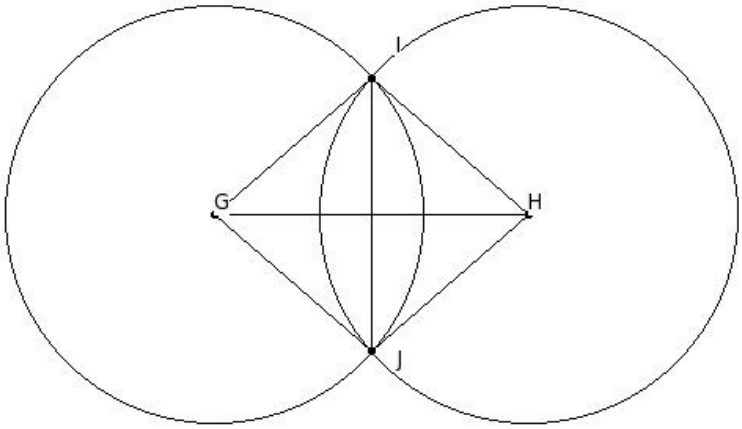
(i) HI = 5 cm (ii) NO = 7.03 cm (iii) LM = 7.5 cm (iv) JK = 1 cm

17. In the given figure, B and C are centres of two circles with equal radii intersecting at D and E. If BC = 20 cm and DE = 19.6 cm, find the radii of the circles



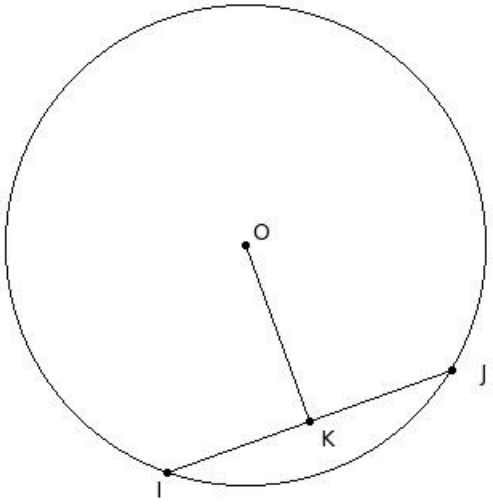
(i) 12.00 cm (ii) 15.00 cm (iii) 13.00 cm (iv) 14.00 cm (v) 16.00 cm

18. In the given figure, two circles of radii GI = 13.3 cm & HI = 13.3 cm intersect at I & J. The distance between the centres GH = 20 cm, find the length of IJ



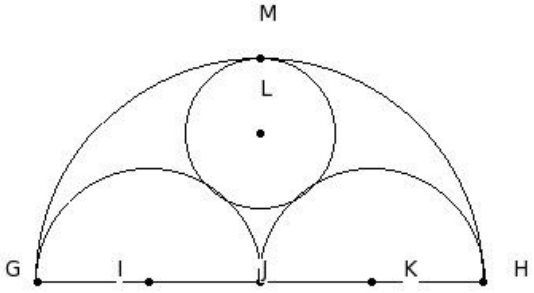
(i) 17.54 cm (ii) 16.54 cm (iii) 15.54 cm (iv) 19.54 cm (v) 18.54 cm

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



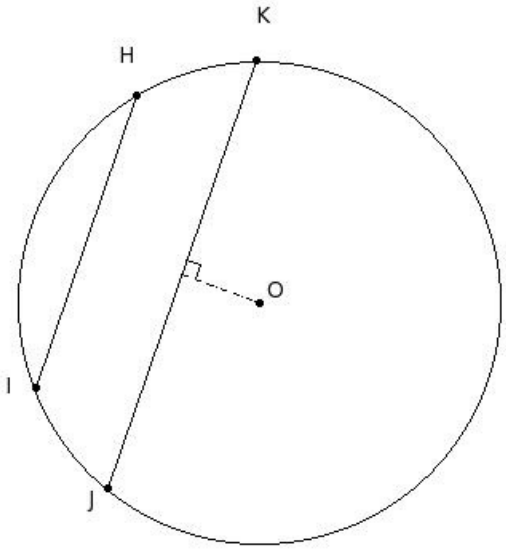
(i) 95° (ii) 105° (iii) 100° (iv) 90° (v) 120°

20. GH is a line segment and J is its mid-point. Three semi-circles are drawn with GJ , JH and GH as diameters. I , K and J respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given GI = 7 cm



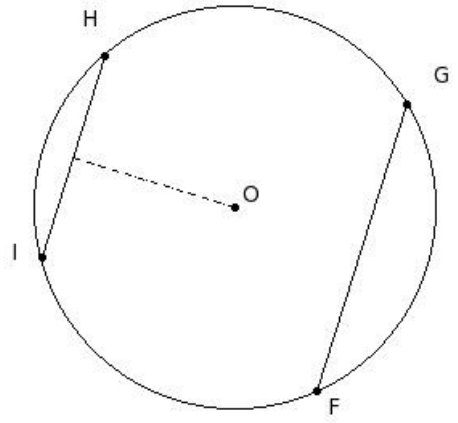
(i) 4.67 cm (ii) 5.67 cm (iii) 3.67 cm (iv) 2.67 cm (v) 6.67 cm

21. In the given figure, HI ∥ JK. Length of chords HI = 19 cm and JK = 28 cm.
If the distance between the chords is 6 cm , find the radius of the circle



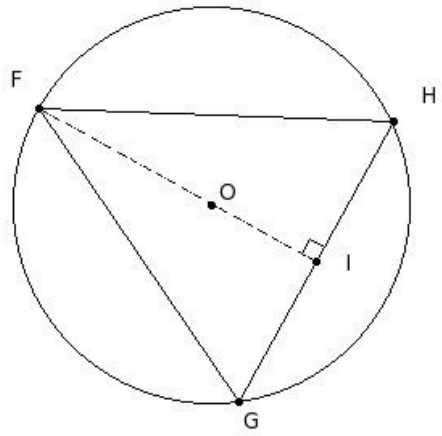
(i) 15.16 cm (ii) 14.16 cm (iii) 13.16 cm (iv) 16.16 cm (v) 17.16 cm

22. In the given figure, FG ∥ HI. Length of chords FG = 19 cm and HI = 13 cm.
If the distance between the chords is 19 cm, find the radius of the circle



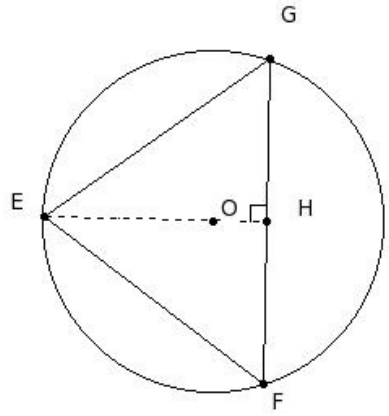
(i) 11.57 cm (ii) 12.57 cm (iii) 10.57 cm (iv) 14.57 cm (v) 13.57 cm

23. In the given figure, △FGH is inscribed in a circle. If FG = FH = 22 cm and GH = 20 cm, find the radius of the circle



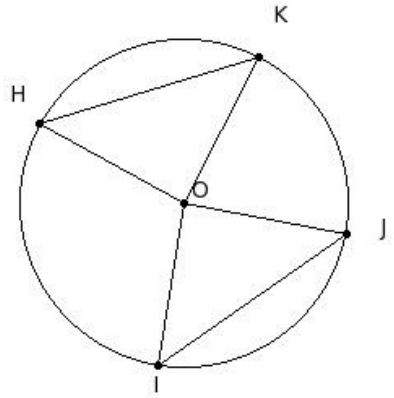
(i) 11.35 cm (ii) 12.35 cm (iii) 13.35 cm (iv) 10.35 cm (v) 14.35 cm

24. In the given figure, △EFG is an isosceles such that EF = EG. Given EO = 10 cm, EF = EG = 17 cm, find FG



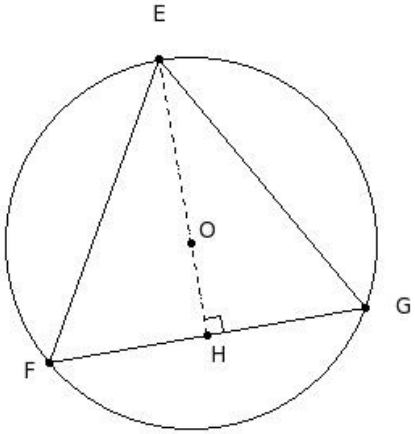
(i) 16.91 cm (ii) 18.91 cm (iii) 19.91 cm (iv) 15.91 cm (v) 17.91 cm

25. In the given figure, HK & IJ are two chords of equal length. Given ∠KHO = 46°, find ∠JOI



(i) 88° (ii) 98° (iii) 103° (iv) 93° (v) 118°

26. In the given figure, △EFG is equilateral. Given EO = 12 cm, find FG



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

27. Two concentric circles are of radii 23 cm and 10 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 42.42 cm (ii) 39.42 cm (iii) 40.42 cm (iv) 43.42 cm (v) 41.42 cm

Assignment Key

1) (iii)	2) (iii)	3) (ii)	4) (iii)	5) (v)	6) (v)
7) (v)	8) (iii)	9) (iii)	10) (ii)	11) (ii)	12) (i)
13) (iii)	14) (iv)	15) (i)	16) (iv)	17) (iv)	18) (i)
19) (iv)	20) (i)	21) (i)	22) (ii)	23) (ii)	24) (v)
25) (i)	26) (iii)	27) (v)			