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) circumference (ii) chord (iii) major segment (iv) radius (v) diameter

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

   (i) circumference (ii) segment (iii) radius (iv) centre (v) chord

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

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

4. Which of the following statements are true?

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

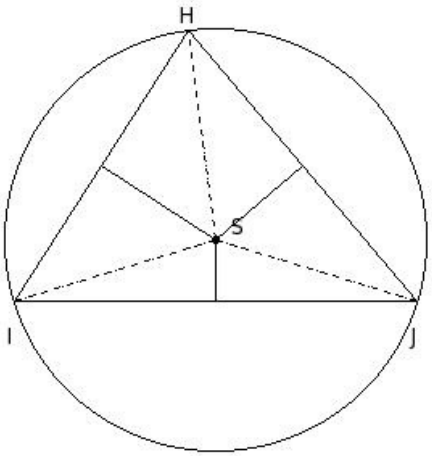
   (i) {b,a} (ii) {b,c,e} (iii) {c,d} (iv) {a,d,e} (v) {b,a,d}

5. Which of the following statements are true?

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

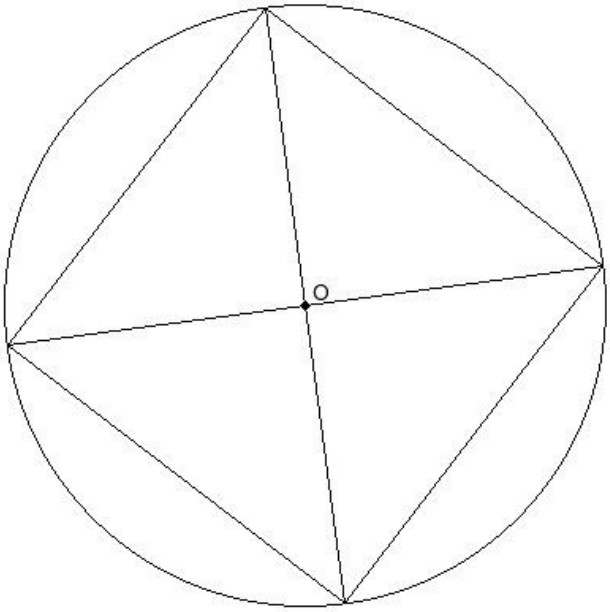
   (i) {b,e,d} (ii) {b,a,c} (iii) {a,c,d} (iv) {b,a} (v) {e,c}

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



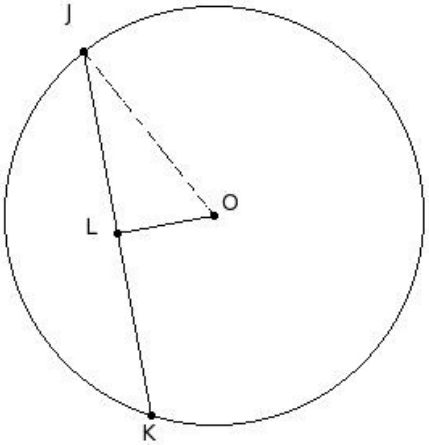
   (i) 83.3 cm (ii) 82.3 cm (iii) 80.3 cm (iv) 84.3 cm (v) 81.3 cm

7. Find the side of the square in the following figure if the radius of the circle is 19.00 cm.



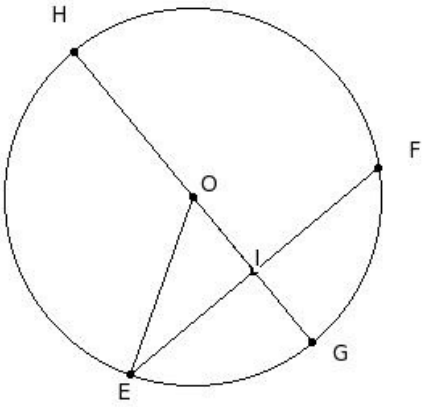
(i) 28.87 cm (ii) 24.87 cm (iii) 25.87 cm (iv) 26.87 cm (v) 27.87 cm

8. If a chord JK = 23 cm is drawn in a circle with radius OJ = 13 cm, find its distance from the centre of the circle



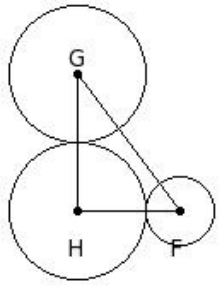
(i) 7.06 cm (ii) 8.06 cm (iii) 4.06 cm (iv) 6.06 cm (v) 5.06 cm

9. The diameter GH of a circle with centre 'O' is perpendicular to the chord EF. If EF = 20.00 cm and GI = 5.66 cm, find the radius of the circle.



(i) 13.66 cm (ii) 9.66 cm (iii) 12.66 cm (iv) 10.66 cm (v) 11.66 cm

10. 'F' and 'G' are centres of circles of radii 2 cm and 4 cm such that FG = 10 cm and 'H' is the centre of the circle of radius 'r' cm which touches the above circles externally. If ∠FHG = 90°, find 'r'



(i) 4 cm (ii) 3 cm (iii) 2 cm (iv) 6 cm (v) 5 cm

11. Which of the following statements are true?

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

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

12. Which of the following statements are true?

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

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

13. Which of the following statements are true?

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

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

14. Which of the following statements are true?

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

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

15. Which of the following statements are true?

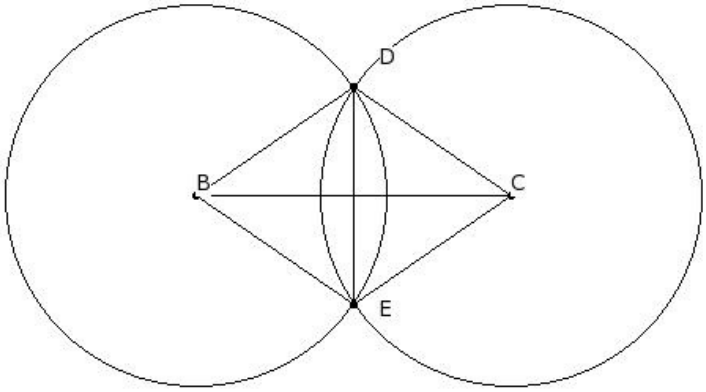
a) A tangent is the limiting case of a secant.
b) A radius is a limiting case of a diameter.
c) A secant has two end points.
d) A diameter is a limiting case of a chord.
e) A secant and a chord are same.

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

16. HI , JK , LM , NO are chords of a circle with HI = 6 cm , JK = 3 cm , LM = 5.5 cm and NO = 7.01 cm. The chord farthest from the centre of the circle is

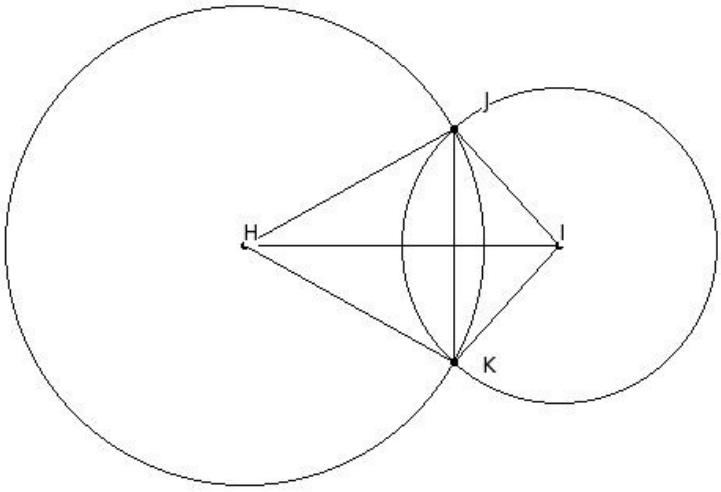
(i) LM = 5.5 cm (ii) JK = 3 cm (iii) NO = 7.01 cm (iv) HI = 6 cm

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 = 13.8 cm, find the radii of the circles



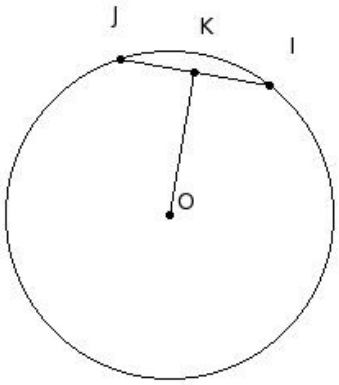
(i) 10.15 cm (ii) 14.15 cm (iii) 11.15 cm (iv) 12.15 cm (v) 13.15 cm

18. In the given figure, two circles of radii HJ = 15.2 cm & IJ = 10 cm intersect at J & K. The distance between the centres HI = 20 cm, find the length of JK



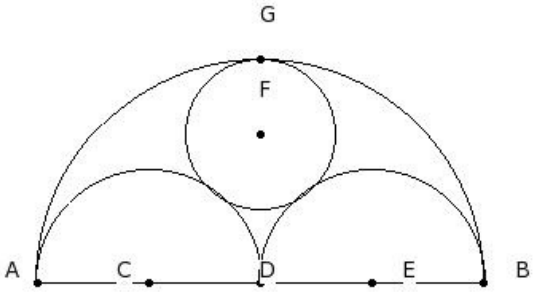
(i) 15.80 cm (ii) 14.80 cm (iii) 12.80 cm (iv) 13.80 cm (v) 16.80 cm

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



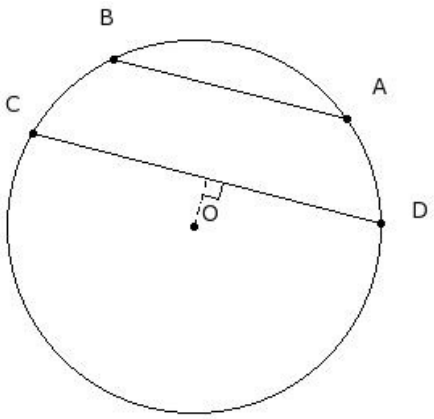
(i) 90° (ii) 105° (iii) 100° (iv) 95° (v) 120°

20. AB is a line segment and D is its mid-point. Three semi-circles are drawn with AD , DB and AB as diameters. C , E and D respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given AC = 7 cm



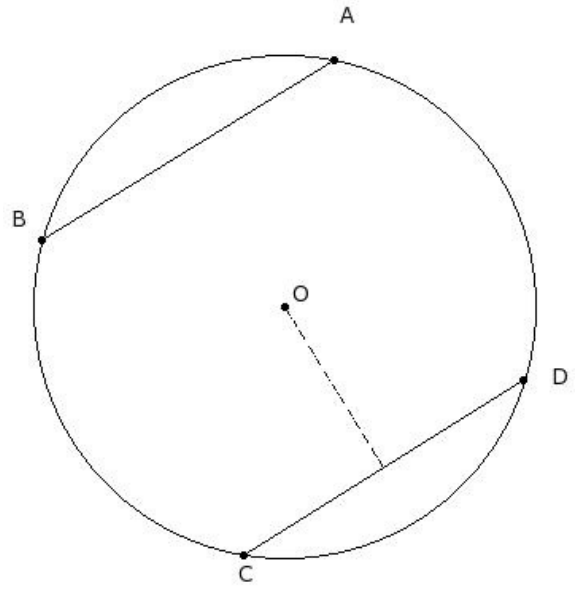
(i) 3.67 cm (ii) 6.67 cm (iii) 2.67 cm (iv) 4.67 cm (v) 5.67 cm

21. In the given figure, AB ∥ CD. Length of chords AB = 15 cm and CD = 22 cm.
If the distance between the chords is 6 cm , find the radius of the circle



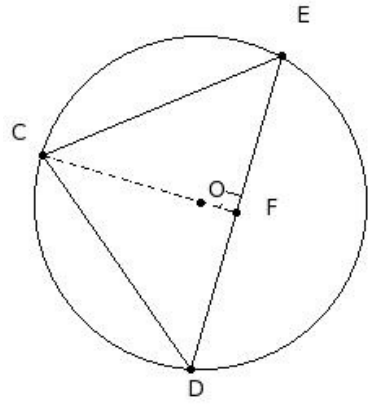
(i) 10.26 cm (ii) 9.26 cm (iii) 11.26 cm (iv) 13.26 cm (v) 12.26 cm

22. In the given figure, AB ∥ CD. Length of chords AB = 22 cm and CD = 21 cm.
If the distance between the chords is 23 cm, find the radius of the circle



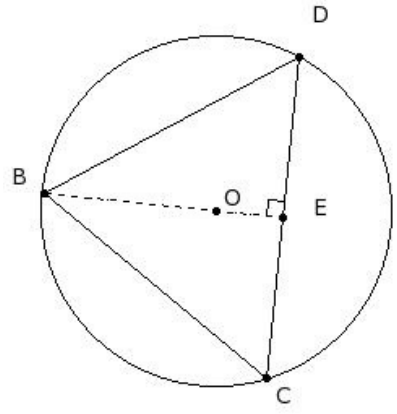
(i) 13.75 cm (ii) 15.75 cm (iii) 14.75 cm (iv) 16.75 cm (v) 17.75 cm

23. In the given figure, △CDE is inscribed in a circle. If CD = CE = 16 cm and DE = 20 cm, find the radius of the circle



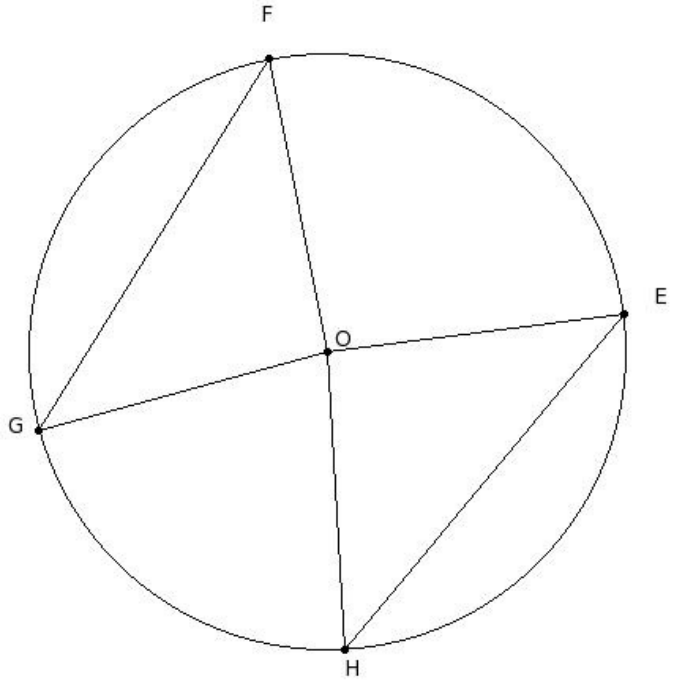
(i) 8.25 cm (ii) 11.25 cm (iii) 12.25 cm (iv) 10.25 cm (v) 9.25 cm

24. In the given figure, △BCD is an isosceles such that BC = BD. Given BO = 11 cm, BC = BD = 18 cm, find CD



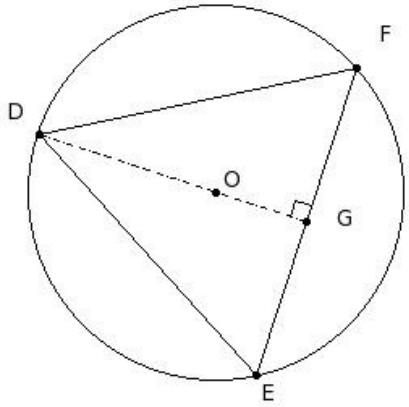
(i) 18.70 cm (ii) 22.70 cm (iii) 21.70 cm (iv) 19.70 cm (v) 20.70 cm

25. In the given figure, EH & FG are two chords of equal length. Given ∠FGO = 43°, find ∠EOH



(i) 94° (ii) 99° (iii) 124° (iv) 109° (v) 104°

26. In the given figure, △DEF is equilateral. Given DO = 12 cm, find EF



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

27. Two concentric circles are of radii 22 cm and 8 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 38.99 cm (ii) 42.99 cm (iii) 40.99 cm (iv) 39.99 cm (v) 41.99 cm

Assignment Key

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