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

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

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

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

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

4. Which of the following statements are true?

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

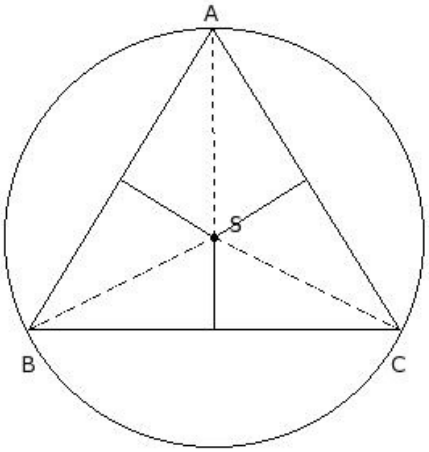
   (i) {c,a} (ii) {c,a,b} (iii) {a,b,d} (iv) {c,e,d} (v) {e,b}

5. Which of the following statements are true?

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

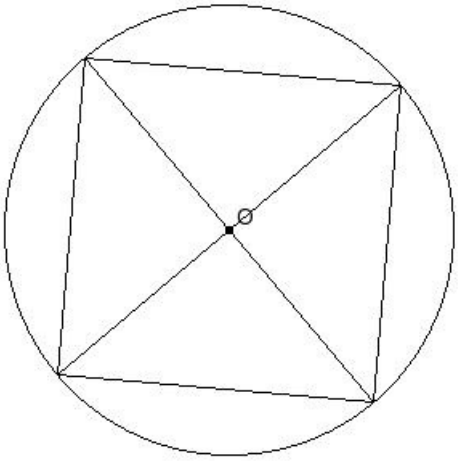
   (i) {a,b,d} (ii) {c,d} (iii) {b,d,e} (iv) {a,b} (v) {a,c,e}

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



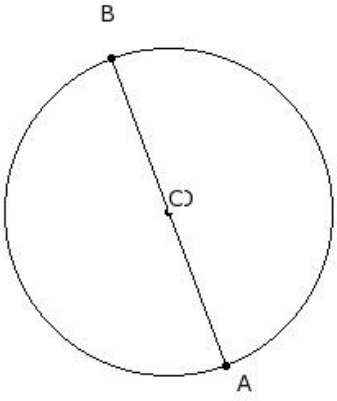
   (i) 82.7 cm (ii) 80.7 cm (iii) 81.7 cm (iv) 79.7 cm (v) 83.7 cm

7. Find the side of the square in the following figure if the radius of the circle is 14.00 cm.



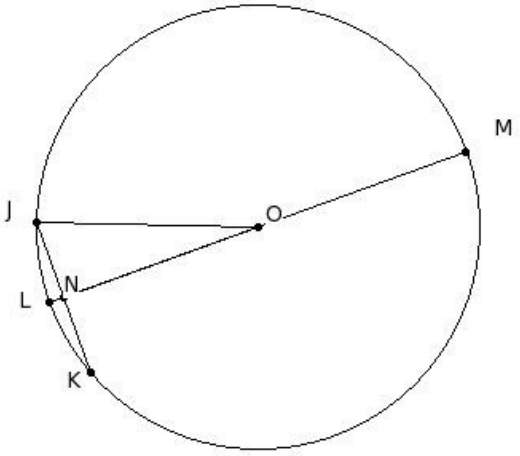
(i) 20.80 cm (ii) 19.80 cm (iii) 18.80 cm (iv) 21.80 cm (v) 17.80 cm

8. If a chord AB = 20 cm is drawn in a circle with radius OA = 10 cm, find its distance from the centre of the circle



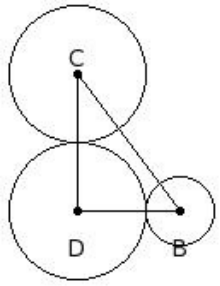
(i) 1.00 cm (ii) 0.00 cm (iii) 8.00 cm (iv) 2.00 cm (v) 7.00 cm

9. The diameter LM of a circle with centre 'O' is perpendicular to the chord JK. If JK = 10.00 cm and LN = 0.93 cm, find the radius of the circle.



(i) 13.93 cm (ii) 11.93 cm (iii) 12.93 cm (iv) 14.93 cm (v) 15.93 cm

10. 'B' and 'C' are centres of circles of radii 2 cm and 4 cm such that BC = 10 cm and 'D' is the centre of the circle of radius 'r' cm which touches the above circles externally. If ∠BDC = 90°, find 'r'



(i) 6 cm (ii) 3 cm (iii) 4 cm (iv) 2 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) The radius is the shortest chord.
c) A chord divides a circle into two segments.
d) The diameter is the longest chord.
e) A chord divides a circle into two sectors.

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

12. Which of the following statements are true?

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

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

13. Which of the following statements are true?

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

(i) {c,a} (ii) {e,b} (iii) {c,a,b} (iv) {a,b,d} (v) {c,e,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) A sector is the area enclosed by two radii and a chord.
d) Two chords bisect each other.
e) The longest of all chords of a circle is called diameter.

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

15. Which of the following statements are true?

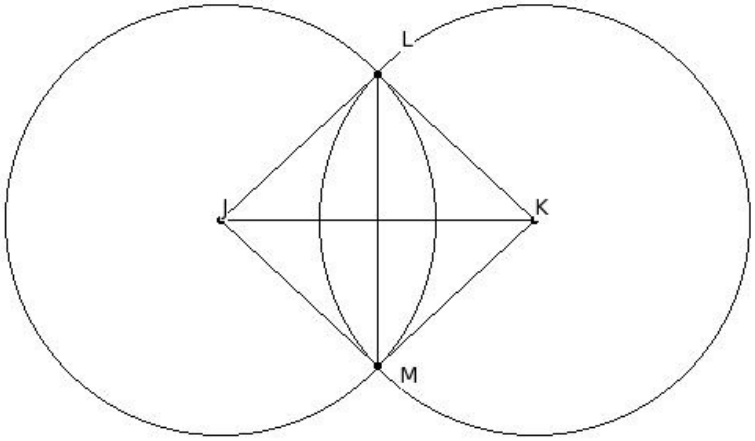
a) A diameter is a limiting case of a chord.
b) A tangent is the limiting case of a secant.
c) A radius is a limiting case of a diameter.
d) A secant and a chord are same.
e) A secant has two end points.

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

16. JK , LM , NO , PQ are chords of a circle with JK = 8 cm , LM = 3 cm , NO = 7.4 cm and PQ = 5.03 cm. The chord farthest from the centre of the circle is

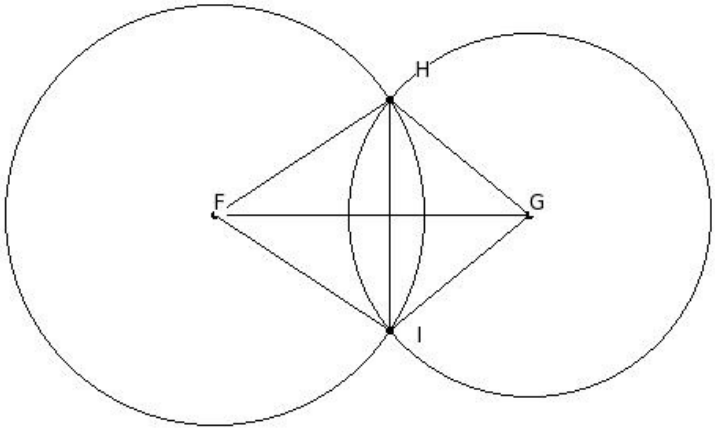
(i) LM = 3 cm (ii) PQ = 5.03 cm (iii) JK = 8 cm (iv) NO = 7.4 cm

17. In the given figure, J and K are centres of two circles with equal radii intersecting at L and M. If JK = 20 cm and LM = 18.6 cm, find the radii of the circles



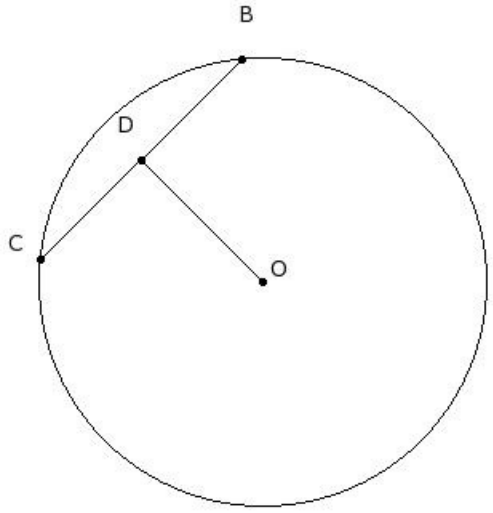
(i) 15.66 cm (ii) 14.66 cm (iii) 11.66 cm (iv) 13.66 cm (v) 12.66 cm

18. In the given figure, two circles of radii FH = 13.3 cm & GH = 11.5 cm intersect at H & I. The distance between the centres FG = 20 cm, find the length of HI



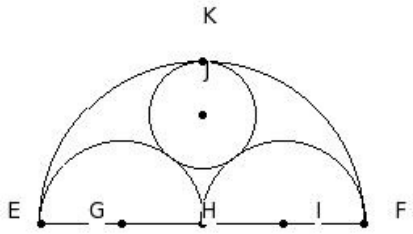
(i) 15.60 cm (ii) 14.60 cm (iii) 13.60 cm (iv) 12.60 cm (v) 16.60 cm

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



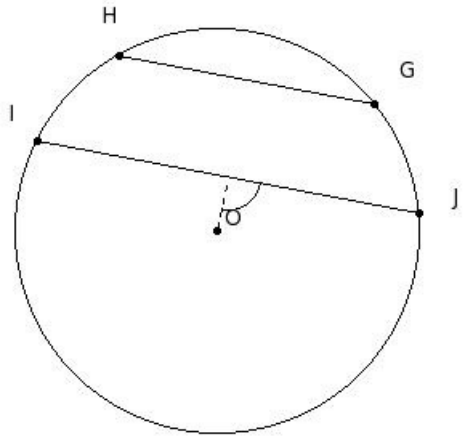
(i) 100° (ii) 105° (iii) 95° (iv) 120° (v) 90°

20. 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



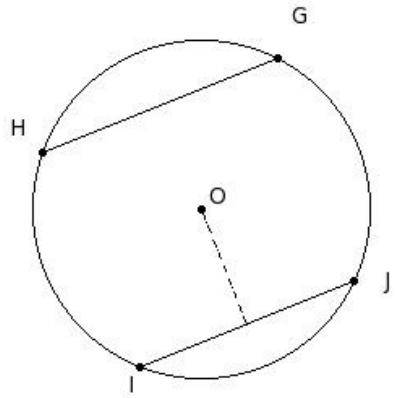
(i) 4.33 cm (ii) 2.33 cm (iii) 3.33 cm (iv) 5.33 cm (v) 1.33 cm

21. In the given figure, GH ∥ IJ. Length of chords GH = 16 cm and IJ = 24 cm.
If the distance between the chords is 6 cm , find the radius of the circle



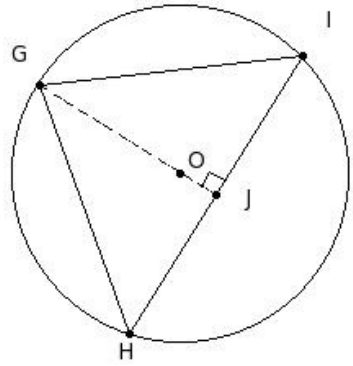
(i) 13.55 cm (ii) 14.55 cm (iii) 11.55 cm (iv) 10.55 cm (v) 12.55 cm

22. In the given figure, GH ∥ IJ. Length of chords GH = 16 cm and IJ = 14 cm.
If the distance between the chords is 15 cm, find the radius of the circle



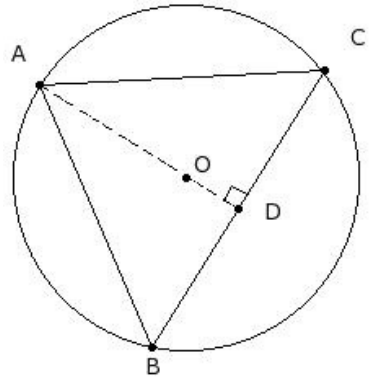
(i) 10.63 cm (ii) 11.63 cm (iii) 12.63 cm (iv) 9.63 cm (v) 8.63 cm

23. In the given figure, △GHI is inscribed in a circle. If GH = GI = 16 cm and HI = 20 cm, find the radius of the circle



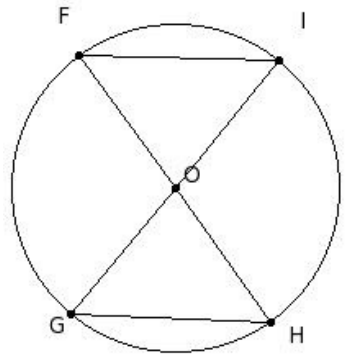
(i) 10.25 cm (ii) 9.25 cm (iii) 12.25 cm (iv) 8.25 cm (v) 11.25 cm

24. In the given figure, △ABC is an isosceles such that AB = AC. Given AO = 11 cm, AB = AC = 18 cm, find BC



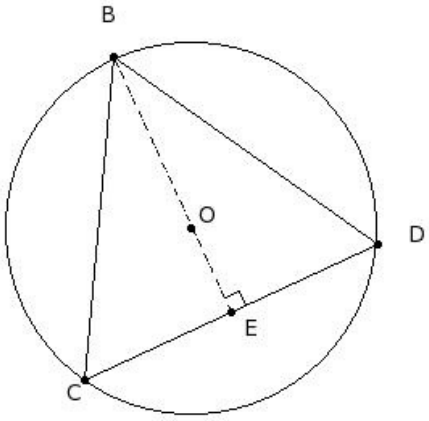
(i) 20.70 cm (ii) 19.70 cm (iii) 18.70 cm (iv) 21.70 cm (v) 22.70 cm

25. In the given figure, FI & GH are two chords of equal length. Given ∠OIF = 52.5°, find ∠HOG



(i) 90° (ii) 80° (iii) 75° (iv) 105° (v) 85°

26. In the given figure, △BCD is equilateral. Given BO = 12 cm, find BC



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

27. Two concentric circles are of radii 18 cm and 10 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 27.93 cm (ii) 30.93 cm (iii) 31.93 cm (iv) 29.93 cm (v) 28.93 cm

Assignment Key

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