EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Chord Properties of a Circle

Grade : ICSE Grade X

1. Which of the following statements are true?

a) If a kite is cyclic, it is a square.
b) If a trapezium is cyclic, it is a rectangle.
c) A cyclic quadrilateral is a regular polygon.
d) If a rhombus is cyclic, it is a square.
e) If a parallelogram is cyclic, it is a rectangle.

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

2. Which of the following figures represent a secant ?

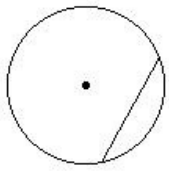


fig I

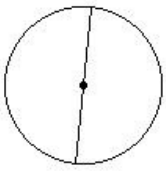


fig II

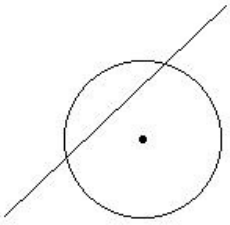


fig III

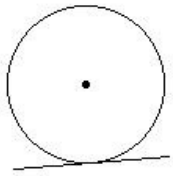


fig IV

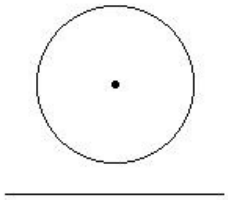


fig V

(i) fig III (ii) fig II (iii) fig IV (iv) fig I (v) fig V

3. Which of the following statements are true?

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

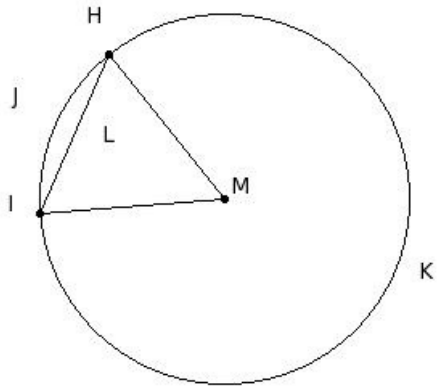
(i) {a,b} (ii) {b,d} (iii) {e,a,b} (iv) {c,d,b} (v) {c,d}

4. Which of the following statements are true?

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

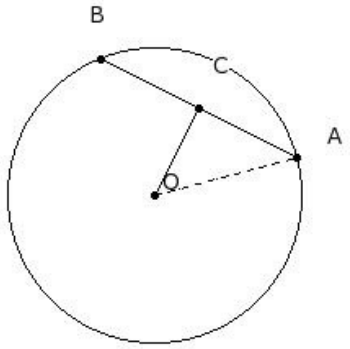
(i) {d,c} (ii) {a,d,e} (iii) {a,b,c} (iv) {b,c,e} (v) {a,b}

5. The major arc of the circle is



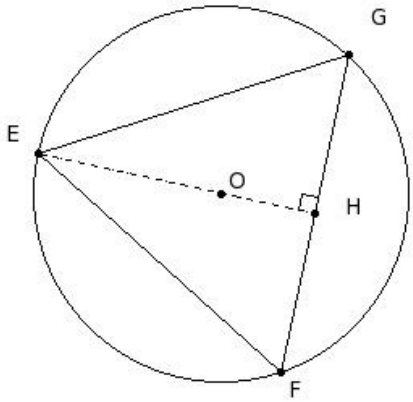
(i) HJI (ii) HKILH (iii) HKI (iv) MHKIM (v) HJILH

6. If a chord AB = 13 cm is drawn in a circle with radius OA = 9 cm, find its distance from the centre of the circle



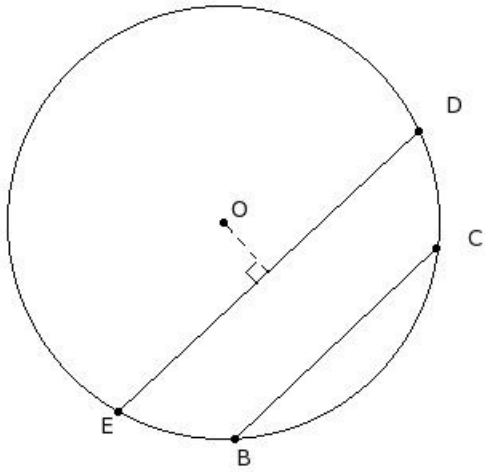
(i) 4.22 cm (ii) 8.22 cm (iii) 6.22 cm (iv) 5.22 cm (v) 7.22 cm

7. In the given figure, $\triangle EFG$ is equilateral. Given EO = 12 cm, find EF



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

8. In the given figure, BC ∥ DE. Length of chords BC = 17 cm and DE = 26 cm.
If the distance between the chords is 6 cm, find the radius of the circle



(i) 11.95 cm (ii) 12.95 cm (iii) 14.95 cm (iv) 15.95 cm (v) 13.95 cm

9. Half of a circle is called

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

10. Which of the following statements are true?

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

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

11. In triangle JKL, if a circle is drawn with KL as diameter and if it passes through J it is a

(i) obtuse angled triangle (ii) equilateral triangle (iii) acute angled triangle (iv) right angle triangle

12. If two circles are concentric, then

(i) their perimeters are same (ii) their radii are same (iii) their centres are same

(iv) their diameters are same

13. Which of the following statements are true?

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

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

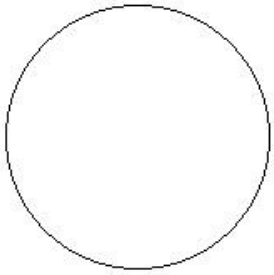
14. A line segment joining any point on the circle with its centre is called

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

15. If the two radii OP and OQ of a circle are at right angles to each other, then the sector OPQ is called a

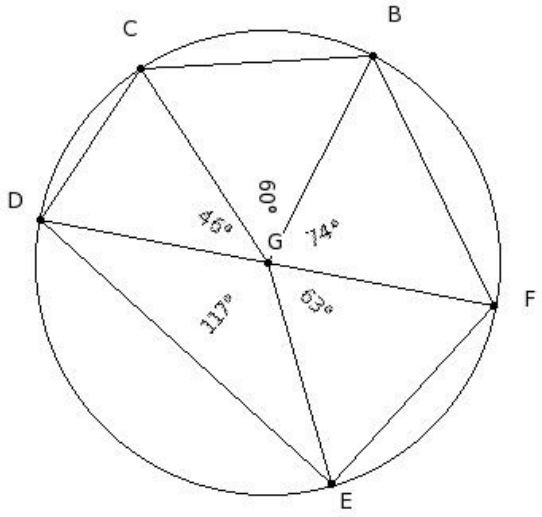
(i) chord (ii) quadrant (iii) semi-circle (iv) circumference (v) tangent

16. Identify the figure below



(i) hexagon (ii) octagon (iii) pentagon (iv) triangle (v) circle

17. The diameters of the circle are



(i) $\overline{BC}, \overline{CD}, \overline{DE}, \overline{EF}, \overline{FB}$ (ii) $\overline{GB}, \overline{GC}, \overline{GD}, \overline{GE}, \overline{GF}$ (iii) $\overline{GB}, \overline{GC}, \overline{GD}, \overline{GE}, \overline{GF}, \overline{DF}$ (iv) $\overline{BC}, \overline{CD}, \overline{DE}, \overline{EF}, \overline{FB}, \overline{DF}$

(v) $\overline{DF}$

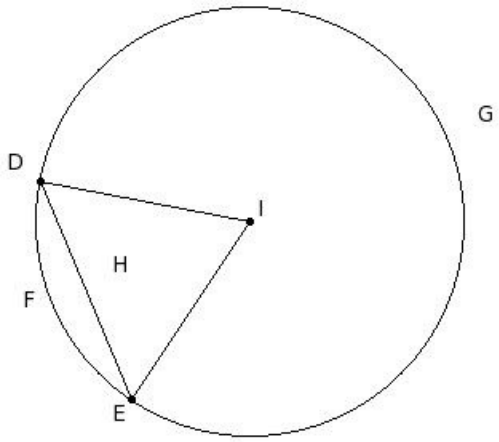
18. The angle subtended by the diameter at any point on the circle is

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

19. Circles having common centre are called

(i) congruent circles (ii) similar circles (iii) concentric circles (iv) intersecting circles

20. The minor arc of the circle is



(i) IDGEI (ii) DFEHD (iii) DGE (iv) DGEHD (v) DFE

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

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

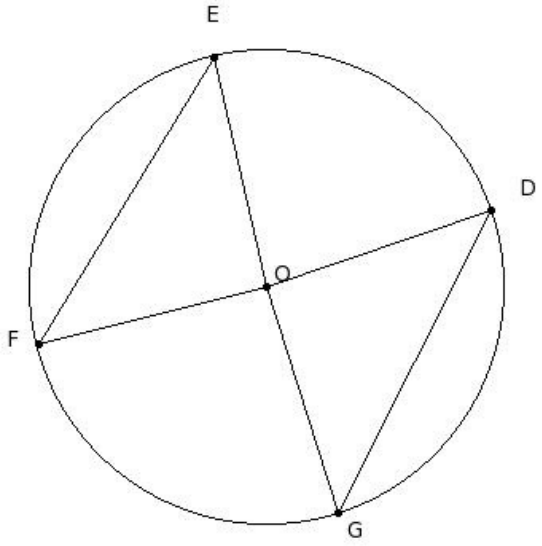
22. The point of intersection of the angular bisectors of a triangle is

(i) excentre (ii) circumcentre (iii) orthocentre (iv) incentre (v) centroid

23. Two concentric circles are of radii 24 cm and 14 cm. Find the length of the chord of the outer circle that touches the inner circle

(i) 38.99 cm (ii) 37.99 cm (iii) 39.99 cm (iv) 40.99 cm (v) 36.99 cm

24. In the given figure, DG & EF are two chords of equal length. Given ∠OEF = 44.5°, find ∠DOG



(i) 106° (ii) 101° (iii) 121° (iv) 96° (v) 91°

25. Which of the following figures represent a tangent ?

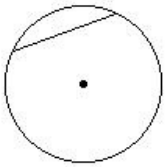


fig I

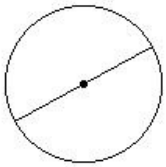


fig II

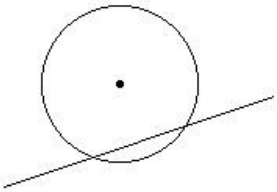


fig III

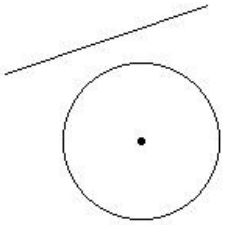


fig IV

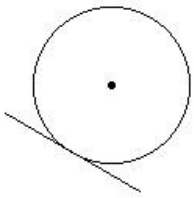


fig V

(i) fig II (ii) fig III (iii) fig I (iv) fig V (v) fig IV

Assignment Key

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