EduSahara™ Assignment

Name : Circle Basics

Chapter : Chord Properties of a Circle

Grade : ICSE Grade X



1. The mid-point of the diameter of a circle is called

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

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

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

3. A line segment having its end points on the circle is called a

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

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

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

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

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

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

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

7. Half of a circle is called

   (i) diameter (ii) centre (iii) circumference (iv) chord (v) semi-circle

8. The perimeter of a circle is called

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

9. 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 centre.
   d) Every circle has a unique diameter.
   e) A line can meet a circle atmost at two points.

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

10. Which of the following statements are true?

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

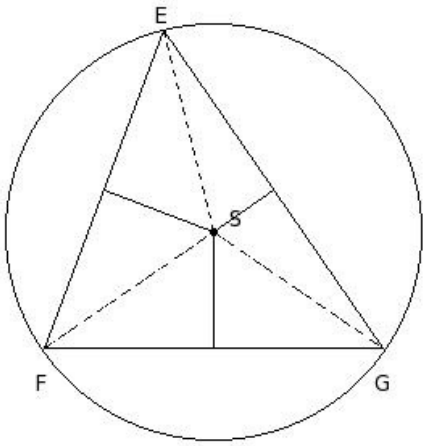
    (i) {b,d,e} (ii) {a,b} (iii) {a,b,d} (iv) {a,c,e} (v) {c,d}

11. Which of the following statements are true?

a) A secant of a circle is a segment having its end points on the circle.
b) Every circle has a unique diameter.
c) Diameter of a circle is a part of the semi-circle of the circle.
d) One and only one tangent can be drawn to a circle from a point outside it.
e) One and only one tangent can be drawn to pass through a point on a circle.

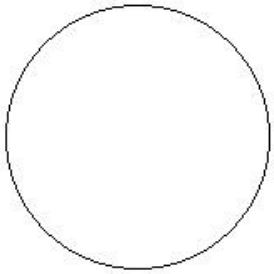
(i) {a,c} (ii) {b,e,c} (iii) {c,e} (iv) {b,e} (v) {d,a,c}

12. In the given triangle S is the circumcentre. If SE = 12.90 cm, find the circumference of the circumcircle



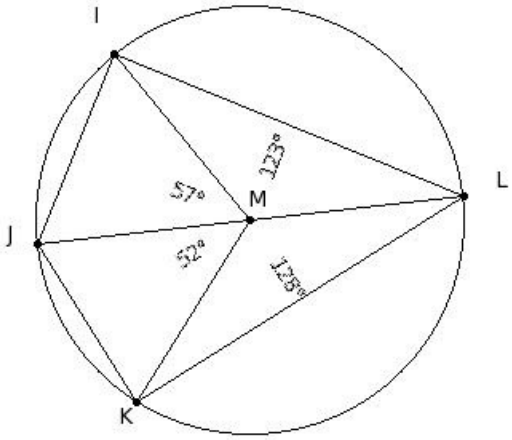

(i) 83.1 cm (ii) 79.1 cm (iii) 82.1 cm (iv) 80.1 cm (v) 81.1 cm

13. Identify the figure below



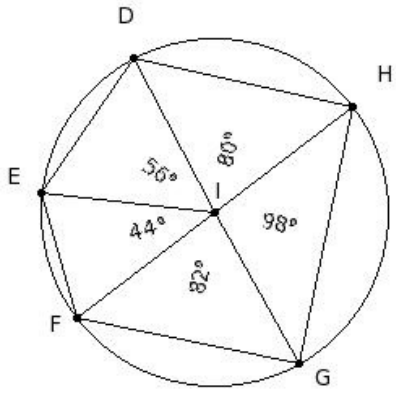
(i) octagon (ii) triangle (iii) heptagon (iv) hexagon (v) circle

14. The centre of the circle is




(i) M (ii) K (iii) J (iv) L (v) I

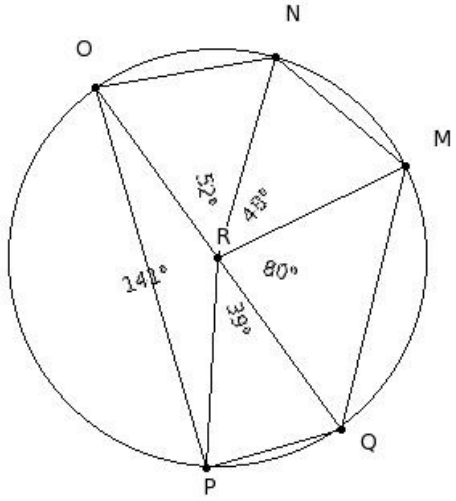
15. The chords of the circle are




(i) $\overline{EF}, \overline{FG}, \overline{GH}, \overline{HD}$ (ii) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HD}, \overline{IF}$ (iii) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HD}, \overline{FH}$ (iv) $\overline{ID}, \overline{IE}, \overline{IF}, \overline{IG}, \overline{IH}$

(v) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HD}$

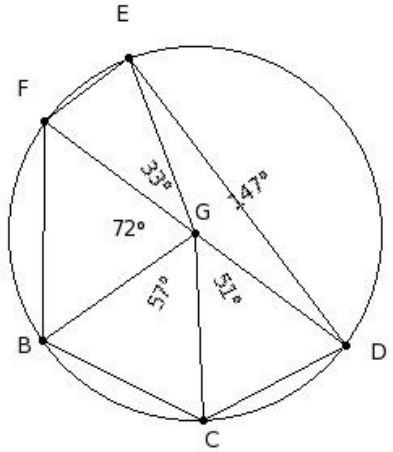
16. The diameters of the circle are




(i) $\overline{MN}, \overline{NO}, \overline{OP}, \overline{PQ}, \overline{QM}$ (ii) $\overline{RM}, \overline{RN}, \overline{RO}, \overline{RP}, \overline{RQ}, \overline{OQ}$ (iii) $\overline{OQ}$ (iv) $\overline{MN}, \overline{NO}, \overline{OP}, \overline{PQ}, \overline{QM}, \overline{OQ}$

(v) $\overline{RM}, \overline{RN}, \overline{RO}, \overline{RP}, \overline{RQ}$

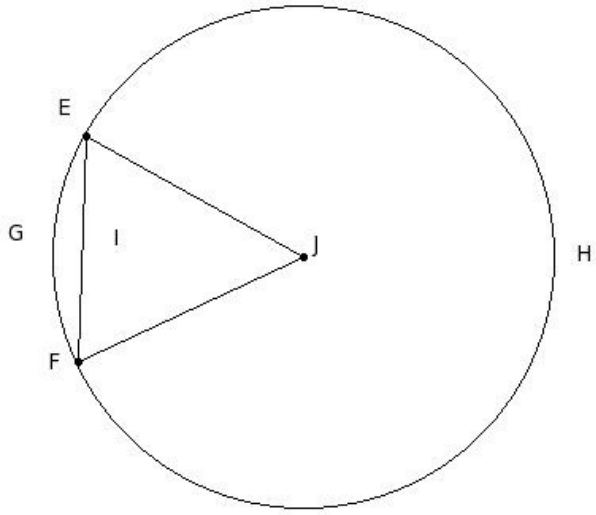
17. The radii of the circle are




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

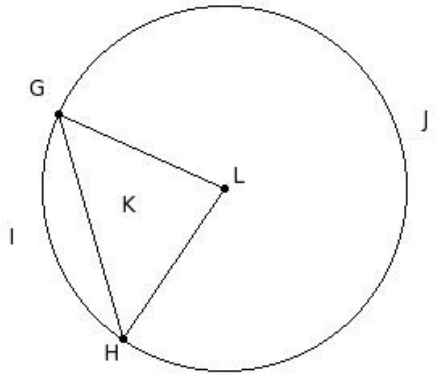
(v) $\overline{BC}, \overline{CD}, \overline{DE}, \overline{EF}, \overline{FB}$

18. The minor sector of the circle is



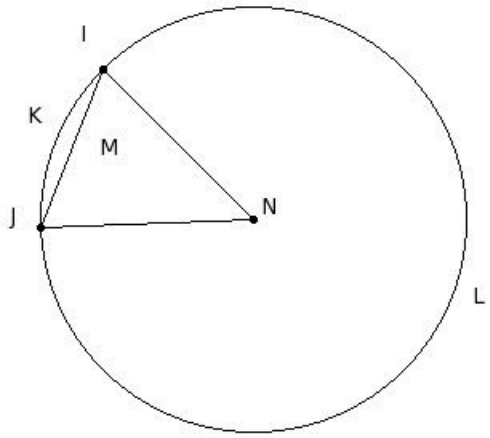

(i) JEHFJ (ii) EHFIE (iii) EGF (iv) EGFIE (v) JEGFJ

19. The major sector of the circle is



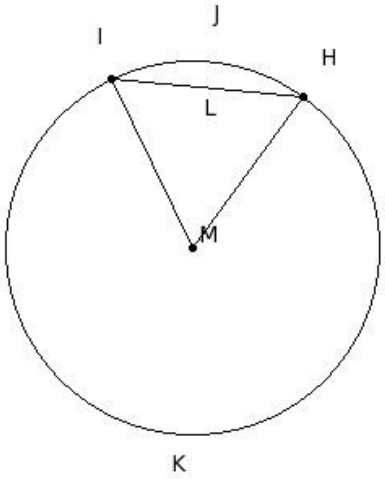

(i) LGIHL (ii) GIHKG (iii) GJH (iv) GJHKG (v) LGJHL

20. The minor arc of the circle is



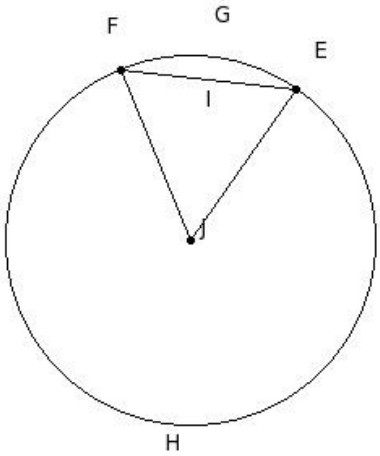

(i) NIKJN (ii) IKJMI (iii) IKJ (iv) ILJMI (v) ILJ

21. The major arc of the circle is



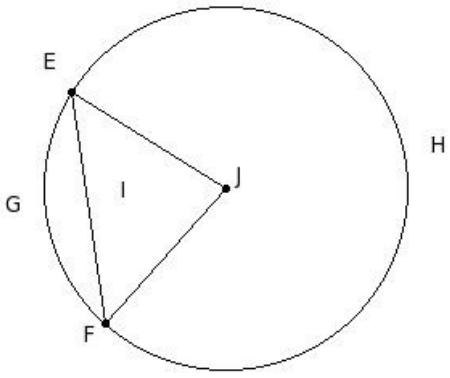

(i) MHKIM (ii) MHJIM (iii) HKILH (iv) HJI (v) HKI

22. The minor segment of the circle is




(i) JEGFJ (ii) EGFIE (iii) EGF (iv) JEHFJ (v) EHF

23. The major segment of the circle is




(i) EHFIE (ii) EGFIE (iii) EHF (iv) JEGFJ (v) EGF

24. The distance around the circle is called

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

25. A line which intersects the circle at two distinct points is called a

(i) quadrant (ii) secant (iii) segment (iv) circumference (v) tangent

26. A line which touches a circle at only one point is called a

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

27. 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) circumference (ii) quadrant (iii) segment (iv) semi-circle (v) chord

28. Which of the following statements are true?

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

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

29. Which of the following statements are true?

a) Equal length chords are equidistant from the centre of the circle.
b) No two chords bisects each other.
c) The longest chord of the circle passes through the centre of the circle.
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) {b,a} (ii) {e,c} (iii) {b,e,d} (iv) {a,c,d} (v) {b,a,c}

30. Which of the following statements are true?

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

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

31. Which of the following statements are true?

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

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

32. Which of the following statements are true?

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

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

33. Which of the following statements are true?

a) Exactly two tangents can be drawn parallel to a secant.
b) Only one circle can be drawn passing through two points.
c) Infinite circles can be drawn passing through three collinear points.
d) Only one circle can be drawn with a centre.
e) Atmost one circle can be drawn passing through three non-collinear points.

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

34. 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 diameter is a limiting case of a chord.
d) A secant has two end points.
e) A radius is a limiting case of a diameter.

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

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

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

36. FG , HI , JK , LM are chords of a circle with FG = 6 cm , HI = 2 cm , JK = 6.2 cm and LM = 6.02 cm. The chord farthest from the centre of the circle is

(i) LM = 6.02 cm (ii) HI = 2 cm (iii) FG = 6 cm (iv) JK = 6.2 cm

37. Circles having common centre are called

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

38. If two circles are concentric, then

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

(iv) their perimeters are same

39. Which of the following figures represent a chord ?

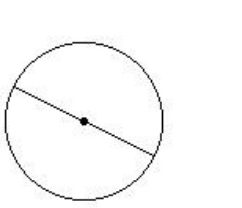


fig I

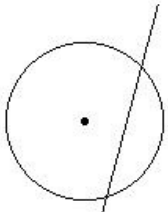


fig II

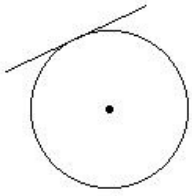


fig III

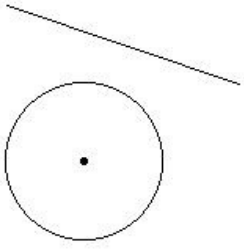


fig IV

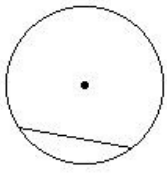


fig V

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

40. Which of the following figures represent a diameter ?

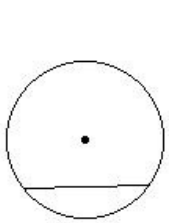


fig I

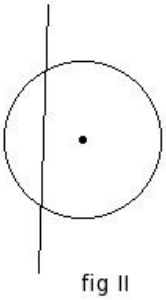


fig II

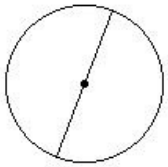


fig III

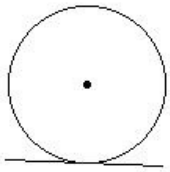


fig IV

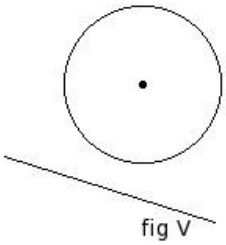


fig V

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

41. Which of the following figures represent a secant ?

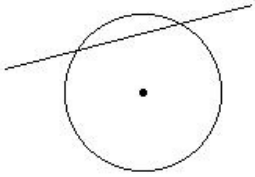


fig I

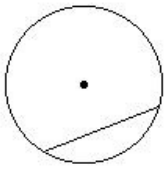


fig II

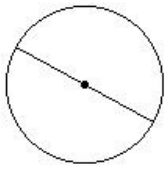


fig III

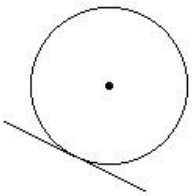


fig IV

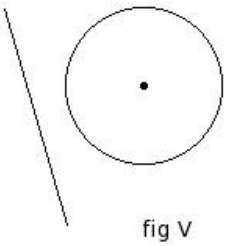


fig V

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

42. Which of the following figures represent a tangent ?

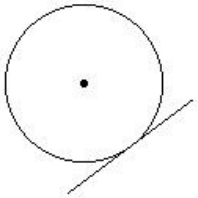


fig I

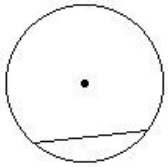


fig II

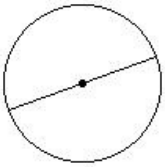


fig III

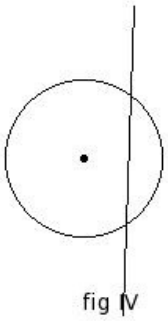


fig IV

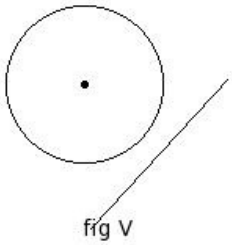


fig V

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

43. Which of the following statements are true?

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

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

44. Points which lie on the circumference of the circle are called

(i) Concyclic points (ii) Coincident points (iii) Similar points (iv) Cyclic points (v) Concurrent points

45. The angle subtended by the semicircle at the centre is

(i) 195° (ii) 190° (iii) 210° (iv) 185° (v) 180°

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

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

47. If the radius of the circumcircle is half the length of a side of the triangle, then the triangle is

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

48. Which of the following statements are true?

a) The angle subtended in a semicircle is a right angle.
b) Angle subtended by the major arc at the centre is acute.
c) If two chords are equal, then they are equidistant from the centre of the circle.
d) Angle subtended in the major segment is obtuse.
e) Angle subtended by the major arc in its alternate segment is obtuse.

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

49. In triangle ABC, if a circle is drawn with BC as diameter and if it passes through A it is a

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

## Assignment Key

| | | | | | |
|---|---|---|---|---|---|
| 1) (iii) | 2) (v) | 3) (iii) | 4) (iii) | 5) (iv) | 6) (iv) |
| 7) (v) | 8) (iv) | 9) (v) | 10) (i) | 11) (iii) | 12) (v) |
| 13) (v) | 14) (i) | 15) (v) | 16) (iii) | 17) (iii) | 18) (v) |
| 19) (v) | 20) (iii) | 21) (v) | 22) (ii) | 23) (i) | 24) (ii) |
| 25) (ii) | 26) (iii) | 27) (ii) | 28) (iii) | 29) (iv) | 30) (ii) |
| 31) (ii) | 32) (ii) | 33) (ii) | 34) (i) | 35) (iv) | 36) (ii) |
| 37) (ii) | 38) (ii) | 39) (ii) | 40) (i) | 41) (v) | 42) (iv) |
| 43) (i) | 44) (i) | 45) (v) | 46) (v) | 47) (iv) | 48) (v) |
| 49) (i) | | | | | |