EduSahara™ Assignment

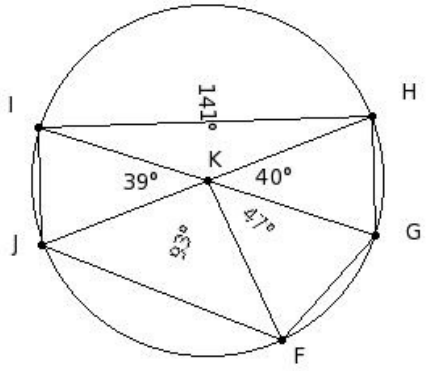
Name : Circle Concepts

Chapter : Tangents and Secants to a Circle

Grade : SSC Grade X

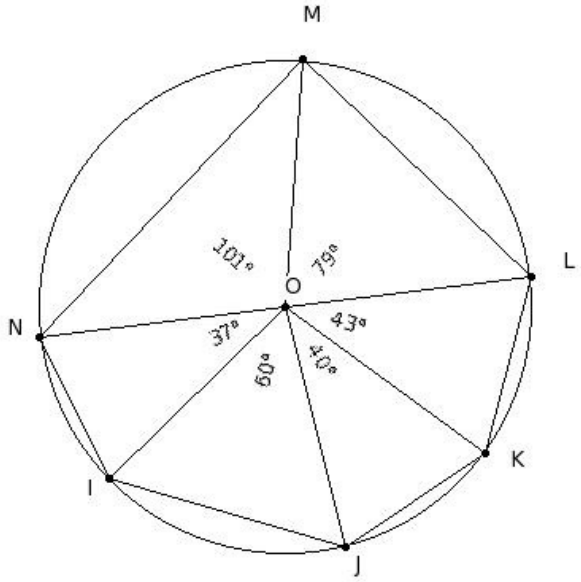
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1. The centre of the circle is



(i) F (ii) K (iii) H (iv) I (v) G

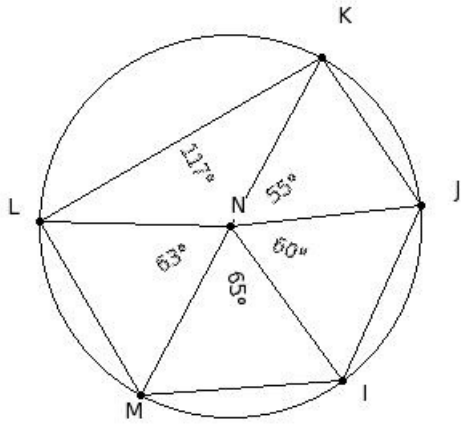
2. The chords of the circle are



(i) $\overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NI}$ (ii) $\overline{OI}, \overline{OJ}, \overline{OK}, \overline{OL}, \overline{OM}, \overline{ON}$ (iii) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NI}, \overline{LN}$ (iv) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NI}$

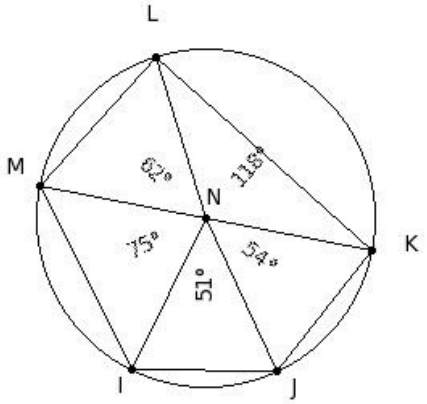
(v) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NI}, \overline{OK}$

3. The diameters of the circle are



(i) $\overline{KM}$ (ii) $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}$ (iii) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}, \overline{KM}$ (iv) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}$ (v) $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}, \overline{KM}$

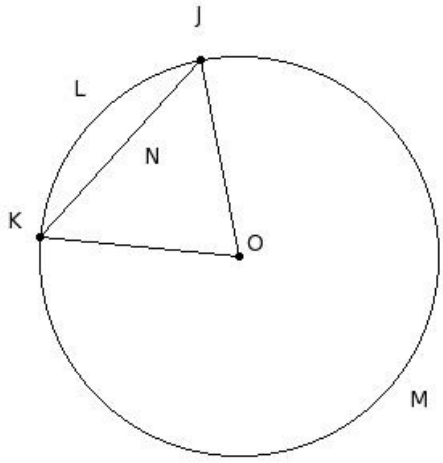
4. The radii of the circle are



(i) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}$ (ii) $\overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}$ (iii) $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}$ (iv) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}, \overline{NK}$

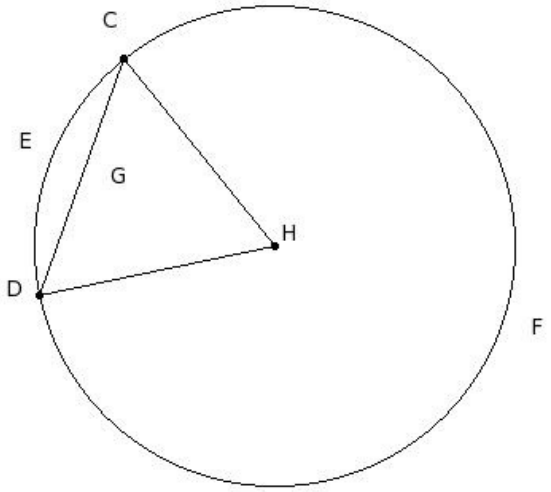
(v) $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}, \overline{KM}$

5. The minor sector of the circle is



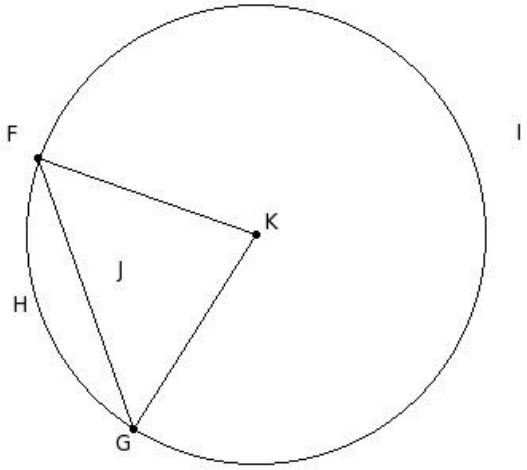
(i) JLKNJ (ii) OJMKO (iii) OJLKO (iv) JMK (v) JMKNJ

6. The major sector of the circle is



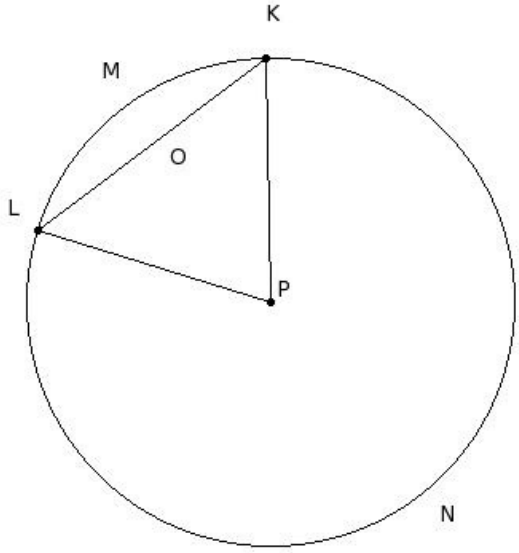
(i) HCEDH (ii) CEDGC (iii) CFDGC (iv) HCFDH (v) CFD

7. The minor arc of the circle is



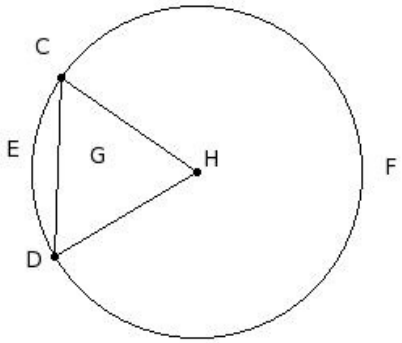
(i) FHG (ii) FIG (iii) FHGJF (iv) KFHGK (v) KFIGK

8. The major arc of the circle is



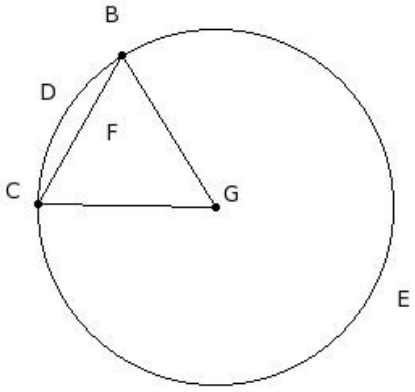
(i) KNLOK (ii) PKMLP (iii) KML (iv) KNL (v) KMLOK

9. The minor segment of the circle is



(i) CFD (ii) CFDGC (iii) HCFDH (iv) HCEDH (v) CEDGC

10. The major segment of the circle is

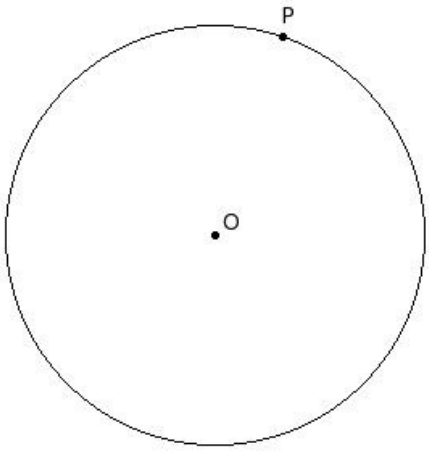


(i) GBDCG (ii) GBECG (iii) BDCFB (iv) BECFB (v) BDC

11. The distance around the circle is called

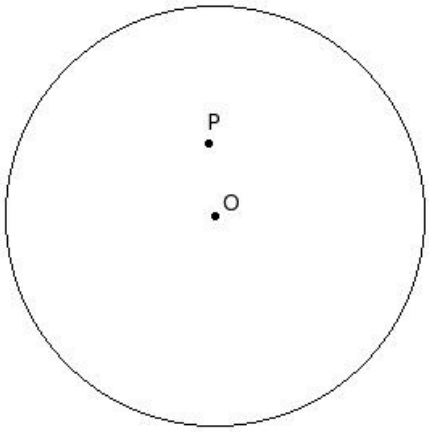
(i) diameter (ii) arc (iii) radius (iv) circumference (v) chord

12. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If $\overline{OP}$ = r ,then P is



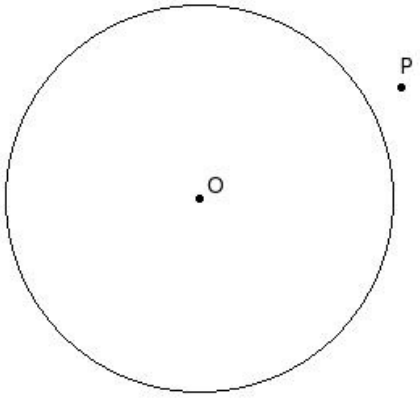
(i) outside the circle (ii) on the circle (iii) inside the circle

13. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If $\overline{OP} < r$, then P is



(i) on the circle (ii) inside the circle (iii) outside the circle

14. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If $\overline{OP} > r$, then P is



(i) inside the circle (ii) outside the circle (iii) on the circle

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

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

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

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

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

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

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

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

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

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

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

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

21. Half of a circle is called

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

22. The perimeter of a circle is called

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

23. Which of the following statements are true?

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

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

24. Which of the following statements are true?

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

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

25. Which of the following statements are true?

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

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

26. If the diameter of a circle is 112 cm, what is its radius?

(i) 54 cm (ii) 57 cm (iii) 56 cm (iv) 55 cm (v) 58 cm

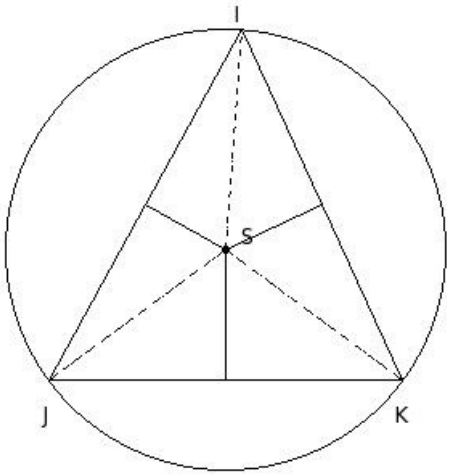
27. If the radius of a circle is 21 cm, what is its diameter?

(i) 40 cm (ii) 42 cm (iii) 44 cm (iv) 43 cm (v) 41 cm

28. If the radius of a circle is 42 cm, what is its circumference?

(i) 266 cm (ii) 263 cm (iii) 262 cm (iv) 265 cm (v) 264 cm

29. In the given triangle S is the circumcentre. If SI = 13.70 cm, find the circumference of the circumcircle



(i) 87.1 cm (ii) 85.1 cm (iii) 88.1 cm (iv) 86.1 cm (v) 84.1 cm

30. Two circles with equal radii are

(i) concentric (ii) only similar but not congruent (iii) congruent (iv) not similar

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

(i) radius (ii) tangent (iii) secant (iv) centre (v) semi-circle

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

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

33. 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) tangent (ii) radius (iii) diameter (iv) quadrant (v) major segment

34. Which of the following statements are true?

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

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

35. Which of the following statements are true?

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

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

36. Which of the following statements are true?

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

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

37. Which of the following statements are true?

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

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

38. Which of the following statements are true?

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

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

39. Which of the following statements are true?

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

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

40. Which of the following statements are true?

a) Only two tangents can be drawn from a point outside the circle.
b) Two tangents to a circle always intersect.
c) Only one tangent can be drawn through a point on a circle.
d) Atmost one tangent can be drawn through a point inside the circle.
e) The sides of a triangle can be tangents to a circle.

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

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

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

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

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

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

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

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

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

45. Circles having common centre are called

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

46. If two circles are concentric, then

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

(iv) their centres are same

47. Which of the following figures represent a chord ?

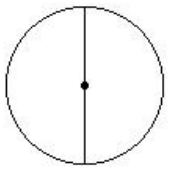


fig I

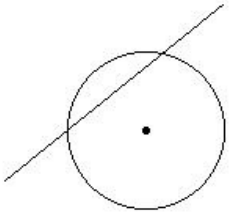


fig II

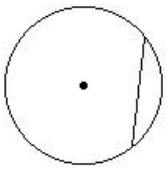


fig III

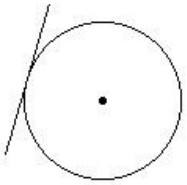


fig IV

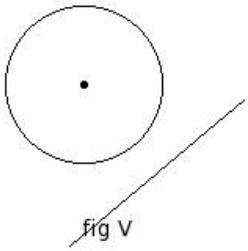


fig V

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

48. Which of the following figures represent a diameter ?

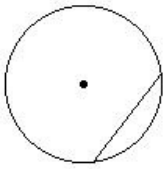


fig I

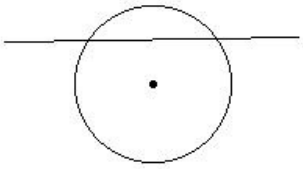


fig II

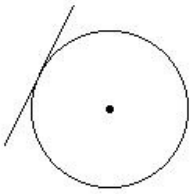


fig III

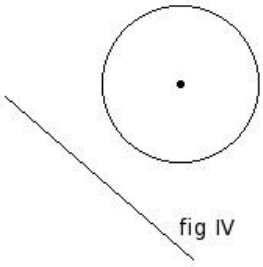


fig IV

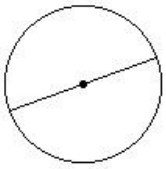


fig V

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

49. Which of the following figures represent a secant ?

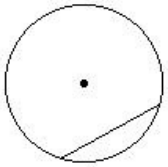


fig I

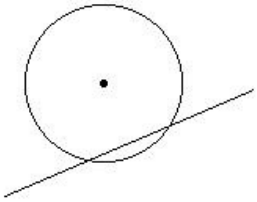


fig II

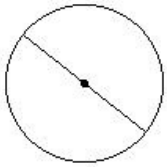


fig III

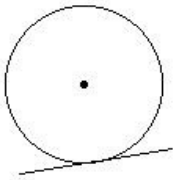


fig IV

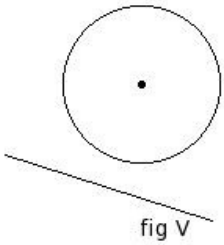


fig V

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

50. Which of the following figures represent a tangent ?

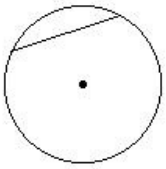


fig I

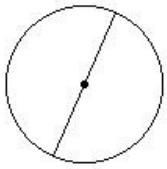


fig II

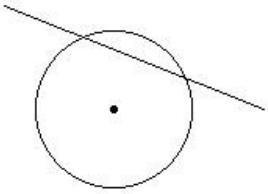


fig III

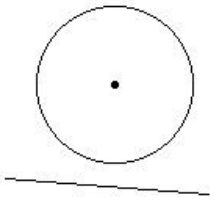


fig IV

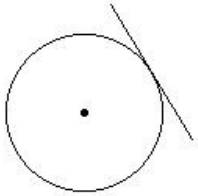


fig V

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

51. Which of the following statements are true?

a) $\frac{22}{7}$ is a rational number.

b) π is a rational number.

c) All chords of a circle are diameters.

d) All diameters of a circle are chords.

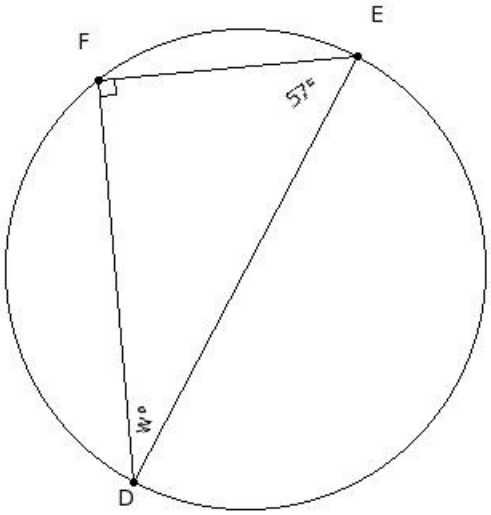
e) A circle divides the plane into three mutually disjoint sets of points.

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

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

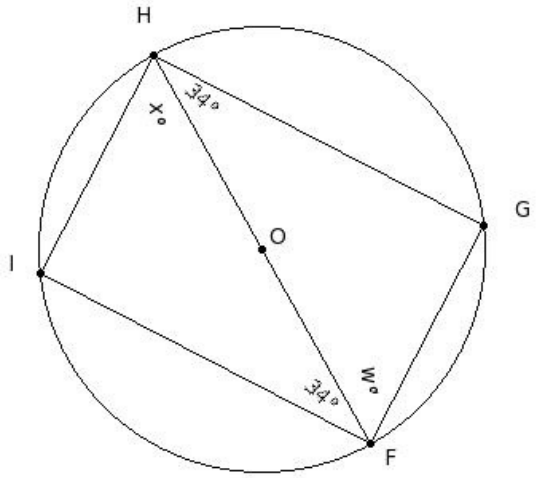
(i) Concurrent points (ii) Similar points (iii) Concyclic points (iv) Coincident points (v) Cyclic points

53. Find the missing angle in the following figure?



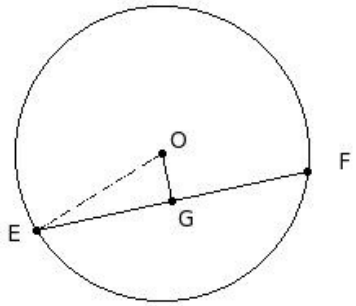
(i) 63° (ii) 43° (iii) 33° (iv) 48° (v) 38°

54. O is the centre of the circle. If ∠FHG = 34° and ∠HFI = 34°, find w°, x°



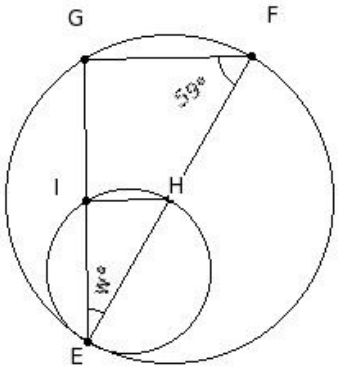
(i) 46°, 56° (ii) 66°, 66° (iii) 56°, 56° (iv) 86°, 76°

55. If a chord EF = 17 cm is drawn in a circle with radius OE = 9 cm, find its distance from the centre of the circle



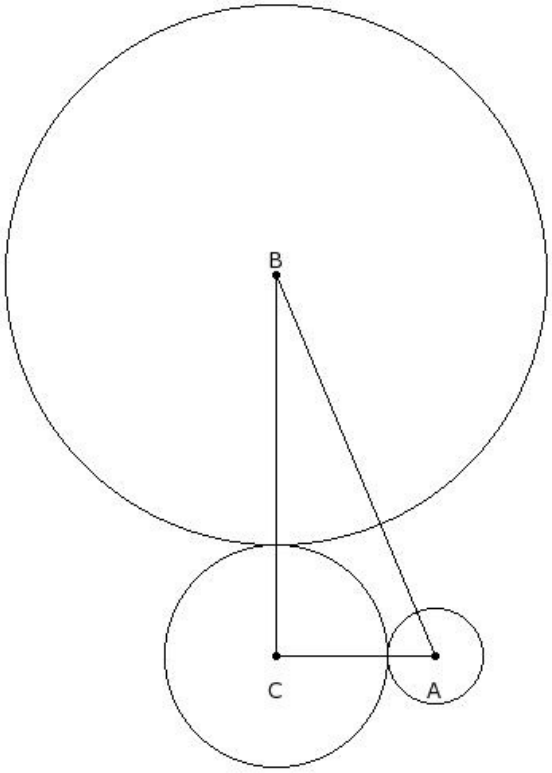
(i) 4.96 cm (ii) 0.96 cm (iii) 2.96 cm (iv) 1.96 cm (v) 3.96 cm

56. Two circles touch internally. H is the centre of the bigger circle and lies on the smaller circle. If ∠EFG = 59°, find ∠E



(i) 31° (ii) 36° (iii) 41° (iv) 46° (v) 61°

57. 'A' and 'B' are centres of circles of radii 3 cm and 17 cm such that AB = 26 cm and 'C' is the centre of the circle of radius 'r' cm which touches the above circles externally. If ∠ACB = 90°, find 'r'



(i) 6 cm (ii) 8 cm (iii) 5 cm (iv) 9 cm (v) 7 cm

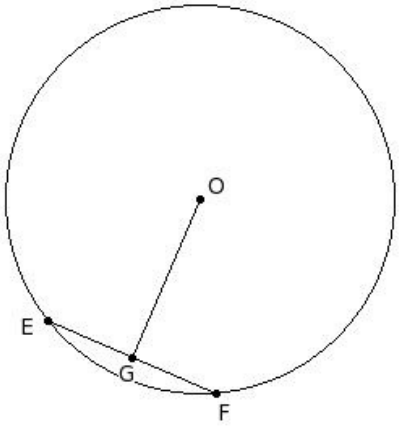
58. With the vertices of a triangle △DEF as centres, three circles are drawn touching each other externally. If the sides of the triangle are 11 cm , 14 cm and 13 cm , find the radii of the circles

(i) 5 cm , 6 cm & 8 cm respectively (ii) 10 cm , 11 cm & 13 cm respectively

(iii) 5 cm , 11 cm & 8 cm respectively (iv) 5 cm , 6 cm & 13 cm respectively

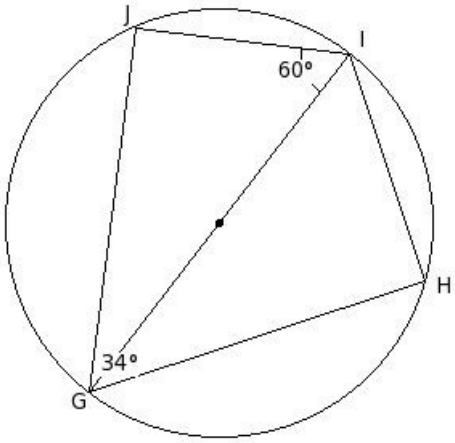
(v) 10 cm , 6 cm & 8 cm respectively

59. In the given figure, O is the centre of the circle. G is a point on chord EF such that EG = GF. Find ∠OGE



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

60. In the given figure, find the angles of the quadrilateral.



(i) $G=64°, H=90°, I=116°, J=90°$ (ii) $G=62°, H=90°, I=118°, J=90°$ (iii) $G=65°, H=90°, I=115°, J=90°$

(iv) $G=63°, H=90°, I=117°, J=90°$ (v) $G=66°, H=90°, I=114°, J=90°$

Assignment Key

1) (ii)	2) (iv)	3) (i)	4) (iii)	5) (iii)	6) (iv)
7) (i)	8) (iv)	9) (v)	10) (iv)	11) (iv)	12) (ii)
13) (ii)	14) (ii)	15) (i)	16) (v)	17) (v)	18) (iv)
19) (iii)	20) (v)	21) (iii)	22) (i)	23) (i)	24) (i)
25) (ii)	26) (iii)	27) (ii)	28) (v)	29) (iv)	30) (iii)
31) (iii)	32) (iv)	33) (iv)	34) (ii)	35) (iv)	36) (v)
37) (iv)	38) (i)	39) (ii)	40) (iii)	41) (iv)	42) (iii)
43) (iii)	44) (i)	45) (ii)	46) (iv)	47) (v)	48) (iii)
49) (iv)	50) (v)	51) (iv)	52) (iii)	53) (iii)	54) (iii)
55) (iii)	56) (i)	57) (v)	58) (i)	59) (iv)	60) (i)

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