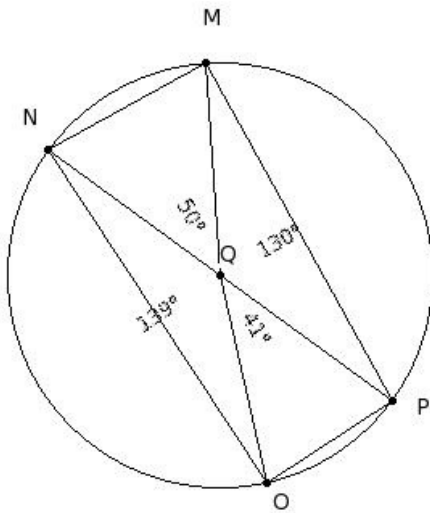


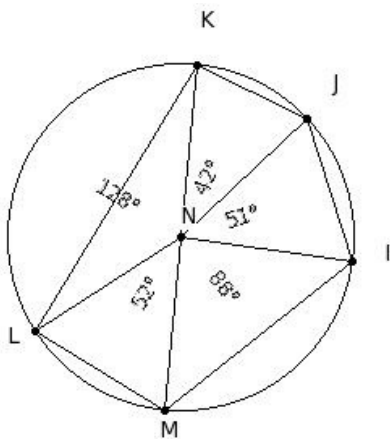


1. The centre of the circle is



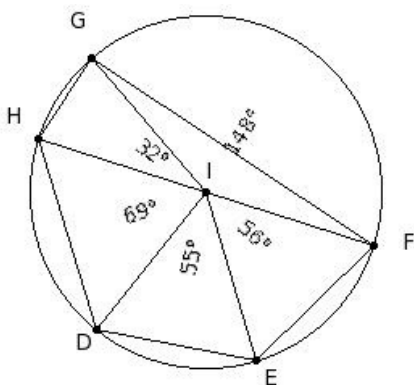
- (i) O (ii) N (iii) M (iv) P (v) Q

2. The chords of the circle are



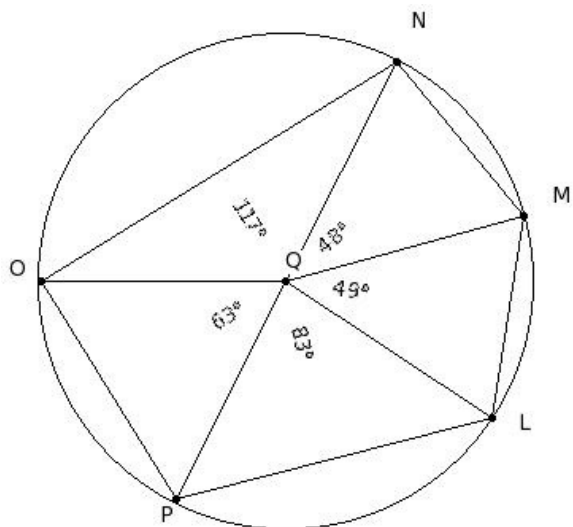
- (i)  $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}, \overline{KM}$  (ii)  $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}$  (iii)  $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}$  (iv)  $\overline{IJ}, \overline{JK},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

3. The diameters of the circle are



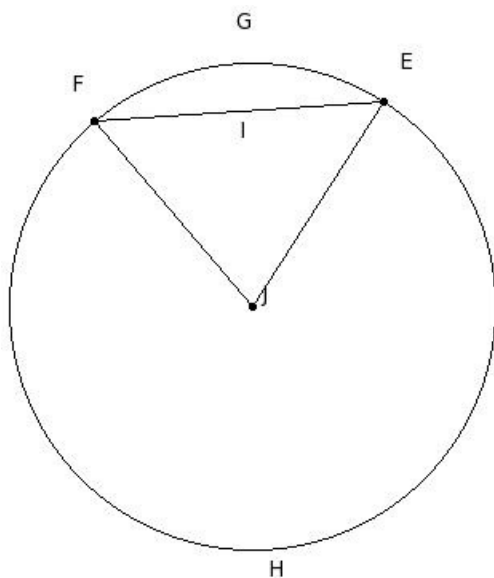
- (i)  $\overline{FH}$  (ii)  $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HD}, \overline{FH}$  (iii)  $\overline{ID}, \overline{IE}, \overline{IF}, \overline{IG}, \overline{IH}$  (iv)  $\overline{ID}, \overline{IE}, \overline{IF}, \overline{IG}, \overline{IH}, \overline{FH}$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

4. The radii of the circle are



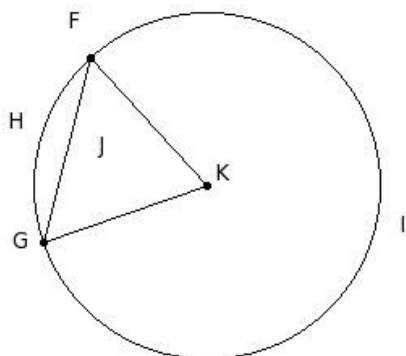
- (i)  $\overline{LM}, \overline{MN}, \overline{NO}, \overline{OP}, \overline{PL}, \overline{NP}$  (ii)  $\overline{MN}, \overline{NO}, \overline{OP}, \overline{PL}$  (iii)  $\overline{QL}, \overline{QM}, \overline{QN}, \overline{QO}, \overline{QP}$  (iv)  $\overline{LM}, \overline{MN}, \overline{NO}, \overline{OP}, \overline{PL}$   
 (v)  $\overline{LM}, \overline{MN}, \overline{NO}, \overline{OP}, \overline{PL}, \overline{QM}$

5. The minor sector of the circle is



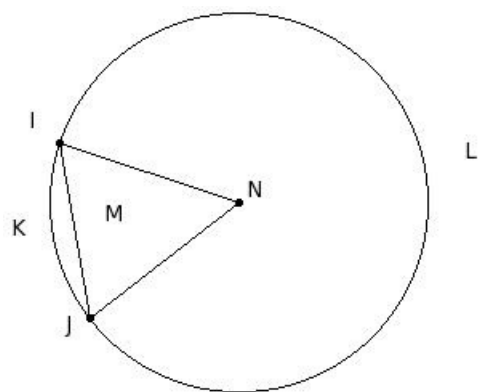
- (i) EHFIE (ii) JEHFJ (iii) JEGFJ (iv) EHF (v) EGFIE

6. The major sector of the circle is



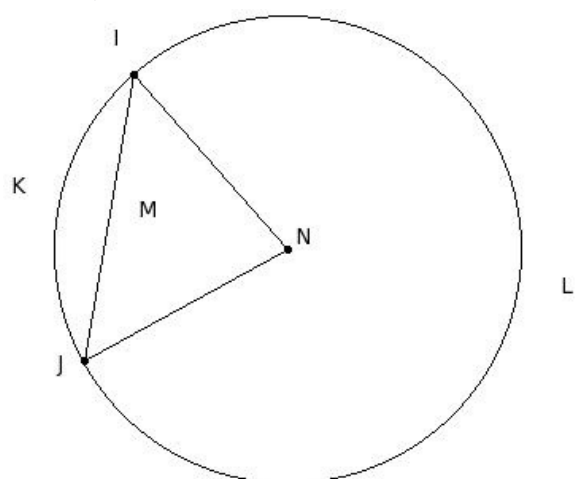
- (i) KFHGK (ii) FHG (iii) FHGJF (iv) KFIGK (v) FIGJF

7. The minor arc of the circle is



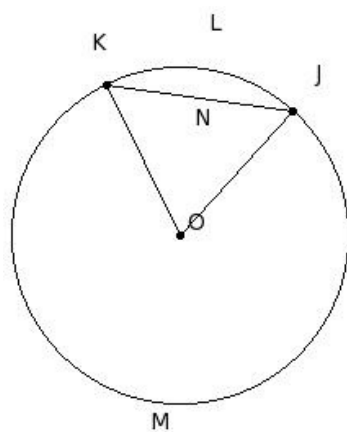
- (i) ILJMI (ii) IKJMI (iii) IKJ (iv) NIKJN (v) NILJN

8. The major arc of the circle is



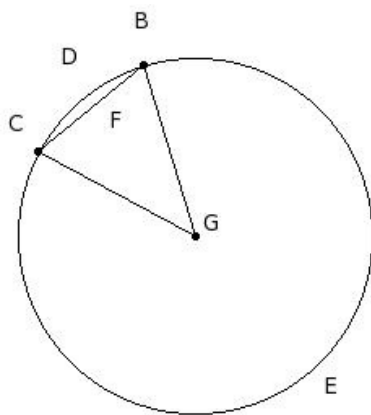
- (i) IKJ (ii) ILJ (iii) IKJMI (iv) ILJMI (v) NIKJN

9. The minor segment of the circle is



- (i) JMK (ii) JLKNJ (iii) JLK (iv) OJLKO (v) JMKNJ

10. The major segment of the circle is

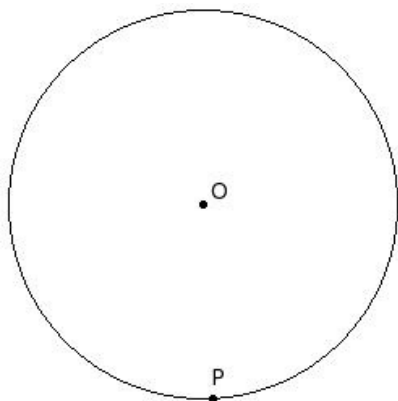


- (i) BECFB (ii) GBECG (iii) BDC (iv) BEC (v) BDCFB

11. The distance around the circle is called

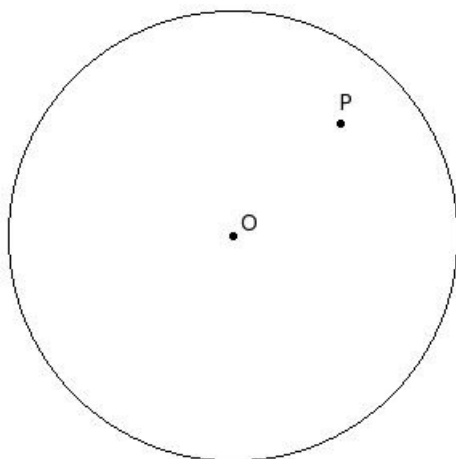
- (i) circumference (ii) diameter (iii) radius (iv) chord (v) arc

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



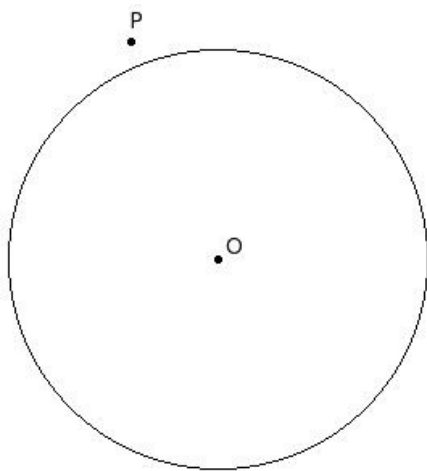
- (i) outside the circle (ii) on the circle (iii) inside the circle

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

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

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

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

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

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

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

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

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

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

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

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

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

21. Half of a circle is called

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

22. The perimeter of a circle is called

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

23. Which of the following statements are true?

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

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

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

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

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

26. If the diameter of a circle is 28 cm, what is its radius?

(i) 15 cm (ii) 14 cm (iii) 13 cm (iv) 16 cm (v) 12 cm

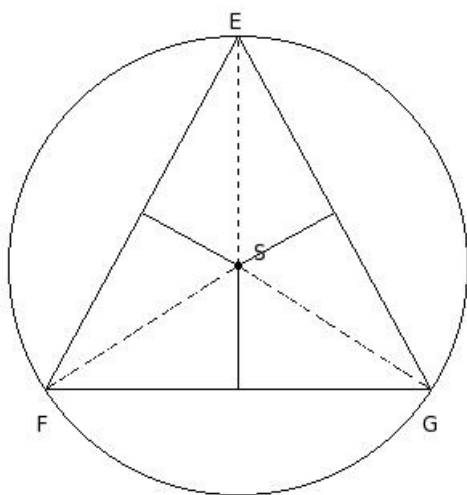
27. If the radius of a circle is 14 cm, what is its diameter?

(i) 28 cm (ii) 26 cm (iii) 30 cm (iv) 29 cm (v) 27 cm

28. If the radius of a circle is 49 cm, what is its circumference?

(i) 307 cm (ii) 308 cm (iii) 309 cm (iv) 306 cm (v) 310 cm

29. In the given triangle S is the circumcentre. If  $SE = 14.30$  cm, find the circumference of the circumcircle



(i) 90.9 cm (ii) 88.9 cm (iii) 87.9 cm (iv) 89.9 cm (v) 91.9 cm

30. Two circles with equal radii are

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

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

(i) secant (ii) segment (iii) centre (iv) quadrant (v) chord

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

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

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) chord (ii) diameter (iii) quadrant (iv) major segment (v) secant

34. Which of the following statements are true?

- a) The radius is the shortest 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 diameter is the longest chord.

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

35. Which of the following statements are true?

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

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

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

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

37. Which of the following statements are true?

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

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

38. Which of the following statements are true?

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

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

39. Which of the following statements are true?

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

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

40. Which of the following statements are true?

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

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

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

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

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

(i)  $210^\circ$  (ii)  $180^\circ$  (iii)  $185^\circ$  (iv)  $195^\circ$  (v)  $190^\circ$

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

(i)  $120^\circ$  (ii)  $95^\circ$  (iii)  $105^\circ$  (iv)  $90^\circ$  (v)  $100^\circ$

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

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

45. Circles having common centre are called

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

46. If two circles are concentric, then

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



47. Which of the following figures represent a chord ?

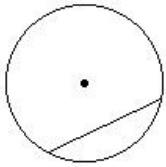


fig I

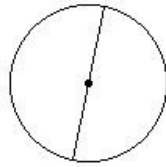


fig II

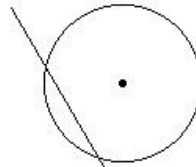


fig III

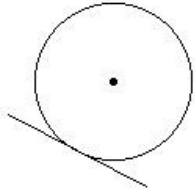


fig IV

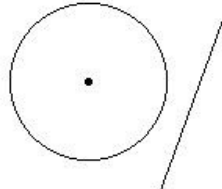


fig V

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

48. Which of the following figures represent a diameter ?

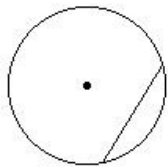


fig I

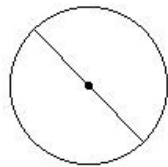


fig II

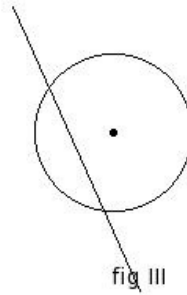


fig III

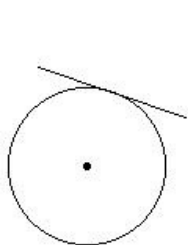


fig IV

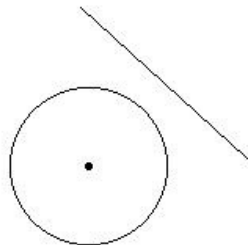


fig V

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

49. Which of the following figures represent a secant ?

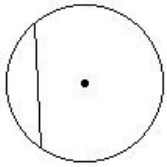


fig I

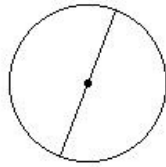


fig II

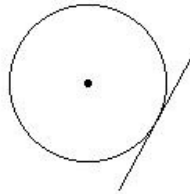


fig III

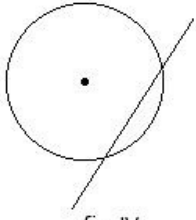


fig IV

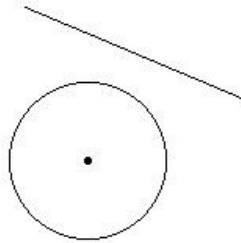


fig V

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

50. Which of the following figures represent a tangent ?

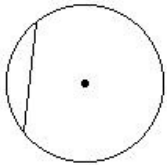


fig I

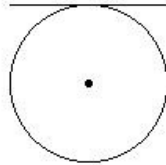


fig II

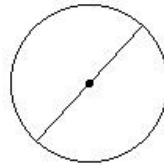


fig III

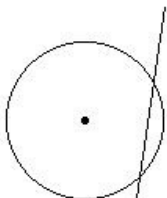


fig IV

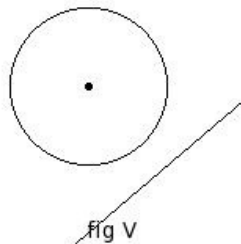


fig V

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

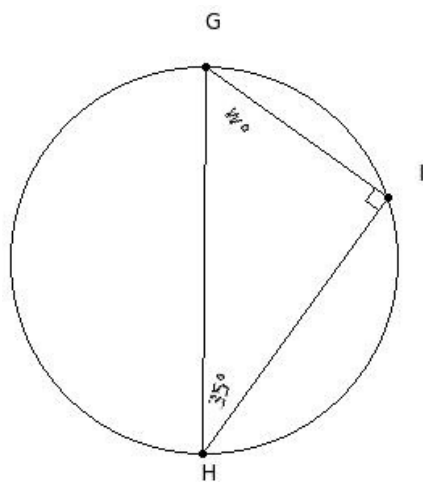
51. Which of the following statements are true?

- a)  $\frac{22}{7}$  is a rational number.
  - b) All chords of a circle are diameters.
  - c)  $\pi$  is a rational number.
  - 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,a} (iii) {c,d} (iv) {b,c,e} (v) {a,d,e}

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

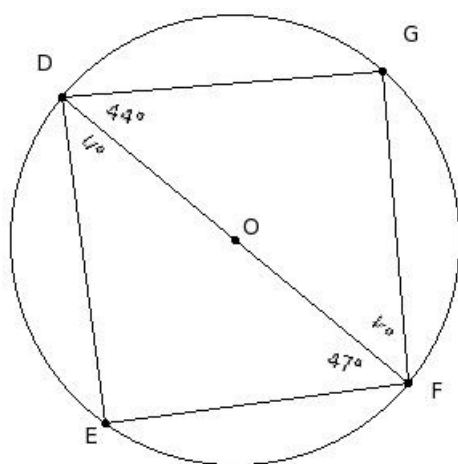
- (i) Cyclic points (ii) Concurrent points (iii) Similar points (iv) Coincident points (v) Concyclic points

53. Find the missing angle in the following figure?



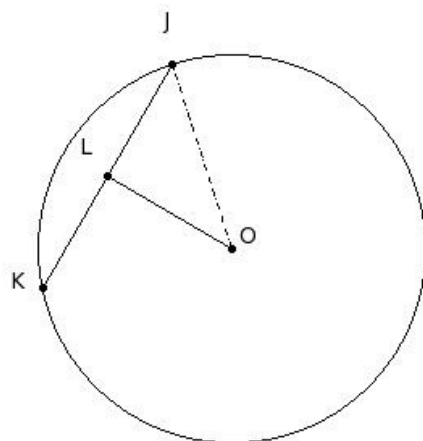
- (i)  $60^\circ$  (ii)  $85^\circ$  (iii)  $70^\circ$  (iv)  $65^\circ$  (v)  $55^\circ$

54. O is the centre of the circle. If  $\angle DFE = 47^\circ$  and  $\angle FDG = 44^\circ$ , find  $u^\circ$ ,  $v^\circ$



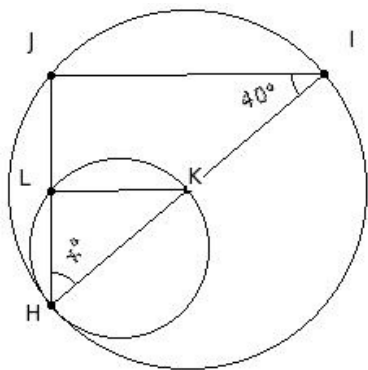
- (i)  $36^\circ, 43^\circ$  (ii)  $76^\circ, 63^\circ$  (iii)  $56^\circ, 53^\circ$  (iv)  $46^\circ, 43^\circ$  (v)  $43^\circ, 46^\circ$

55. If a chord JK = 16 cm is drawn in a circle with radius OJ = 12 cm, find its distance from the centre of the circle



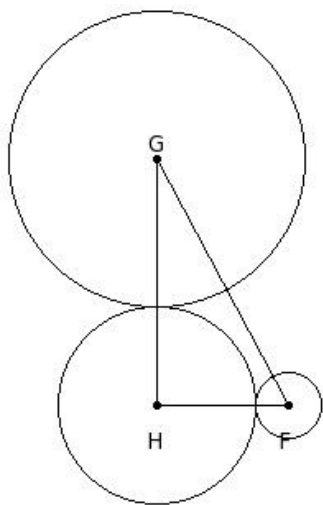
- (i) 9.94 cm (ii) 8.94 cm (iii) 6.94 cm (iv) 10.94 cm (v) 7.94 cm

56. Two circles touch internally. K is the centre of the bigger circle and lies on the smaller circle. If  $\angle HIJ = 40^\circ$ , find  $\angle H$



- (i)  $80^\circ$  (ii)  $50^\circ$  (iii)  $65^\circ$  (iv)  $60^\circ$  (v)  $55^\circ$

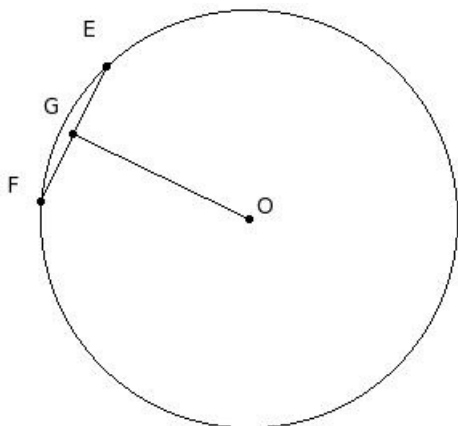
57. 'F' and 'G' are centres of circles of radii 2 cm and 9 cm such that  $FG = 17$  cm and 'H' is the centre of the circle of radius 'r' cm which touches the above circles externally. If  $\angle FHG = 90^\circ$ , find 'r'



- (i) 6 cm (ii) 5 cm (iii) 7 cm (iv) 4 cm (v) 8 cm

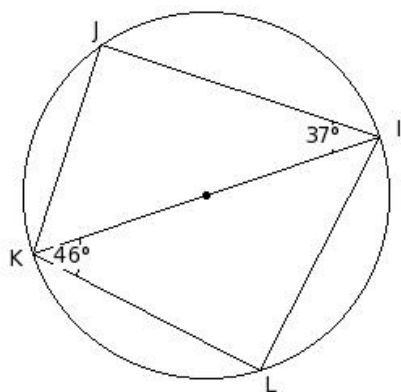
58. With the vertices of a triangle  $\triangle BCD$  as centres, three circles are drawn touching each other externally. If the sides of the triangle are 8 cm, 15 cm and 11 cm, find the radii of the circles
- (i) 7 cm, 6 cm & 9 cm respectively (ii) 2 cm, 6 cm & 9 cm respectively
- (iii) 7 cm, 11 cm & 14 cm respectively (iv) 2 cm, 6 cm & 14 cm respectively
- (v) 2 cm, 11 cm & 9 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  $\angle OGE$



- (i)  $100^\circ$  (ii)  $105^\circ$  (iii)  $95^\circ$  (iv)  $120^\circ$  (v)  $90^\circ$

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



- (i)  $I = 80^\circ, J = 90^\circ, K = 100^\circ, L = 90^\circ$  (ii)  $I = 79^\circ, J = 90^\circ, K = 101^\circ, L = 90^\circ$  (iii)  $I = 82^\circ, J = 90^\circ, K = 98^\circ, L = 90^\circ$   
(iv)  $I = 83^\circ, J = 90^\circ, K = 97^\circ, L = 90^\circ$  (v)  $I = 81^\circ, J = 90^\circ, K = 99^\circ, L = 90^\circ$

## Assignment Key

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