EduSahara™ Assignment

Name : Circle Basics

Chapter : Circles

Grade : CBSE Grade IX

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

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

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

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

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

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

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

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

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

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

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

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

7. Half of a circle is called

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

8. The perimeter of a circle is called

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

9. Which of the following statements are true?

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

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

10. 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) One and only one tangent can be drawn to a circle from a point outside it.
    e) Every circle has a unique diameter.

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

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

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

12. If the diameter of a circle is 70 cm, what is its radius?

(i) 33 cm (ii) 36 cm (iii) 34 cm (iv) 37 cm (v) 35 cm

13. If the radius of a circle is 91 cm, what is its diameter?

(i) 183 cm (ii) 182 cm (iii) 180 cm (iv) 181 cm (v) 184 cm

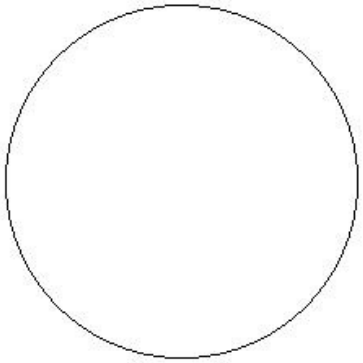
14. If the radius of a circle is 35 cm, what is its circumference?

(i) 221 cm (ii) 222 cm (iii) 218 cm (iv) 220 cm (v) 219 cm

15. Two circles with equal radii are

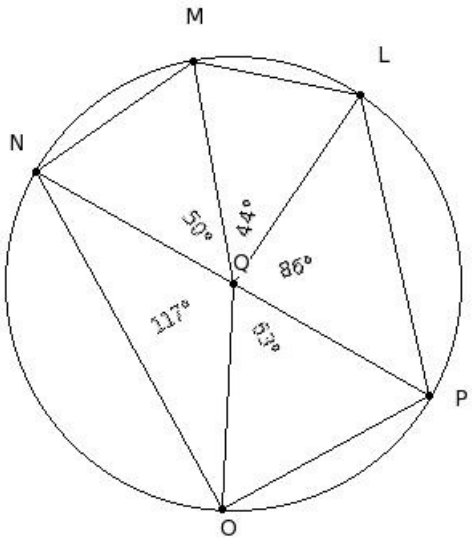
(i) congruent (ii) concentric (iii) only similar but not congruent (iv) not similar

16. Identify the figure below



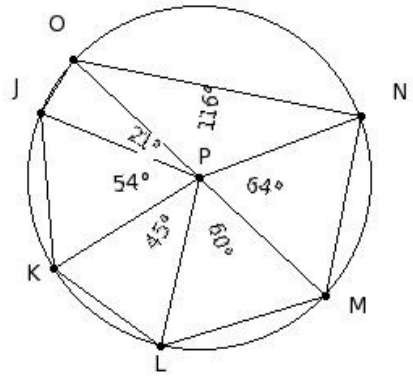
(i) circle (ii) heptagon (iii) hexagon (iv) decagon (v) triangle

17. The centre of the circle is



(i) N (ii) L (iii) Q (iv) O (v) M

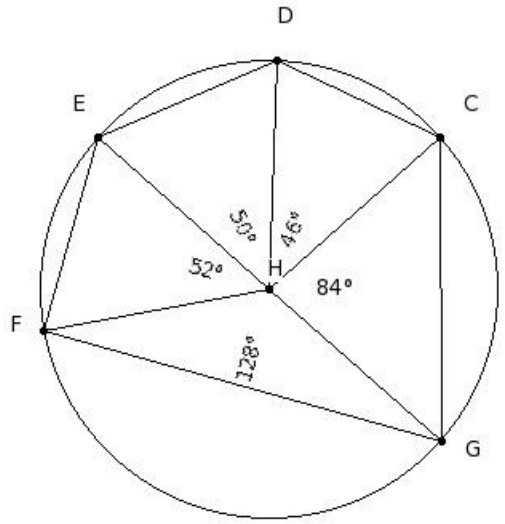
18. The chords of the circle are



(i) $\overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NO}, \overline{OJ}$ (ii) $\overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NO}, \overline{OJ}, \overline{PO}$ (iii) $\overline{KL}, \overline{LM}, \overline{MN}, \overline{NO}, \overline{OJ}$

(iv) $\overline{PJ}, \overline{PK}, \overline{PL}, \overline{PM}, \overline{PN}, \overline{PO}$ (v) $\overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NO}, \overline{OJ}, \overline{MO}$

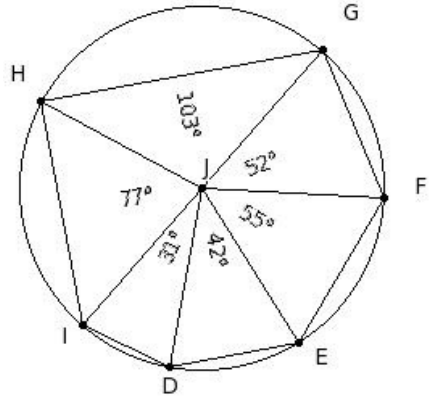
19. The diameters of the circle are



(i) $\overline{HC}, \overline{HD}, \overline{HE}, \overline{HF}, \overline{HG}$ (ii) $\overline{EG}$ (iii) $\overline{CD}, \overline{DE}, \overline{EF}, \overline{FG}, \overline{GC}$ (iv) $\overline{CD}, \overline{DE}, \overline{EF}, \overline{FG}, \overline{GC}, \overline{EG}$

(v) $\overline{HC}, \overline{HD}, \overline{HE}, \overline{HF}, \overline{HG}, \overline{EG}$

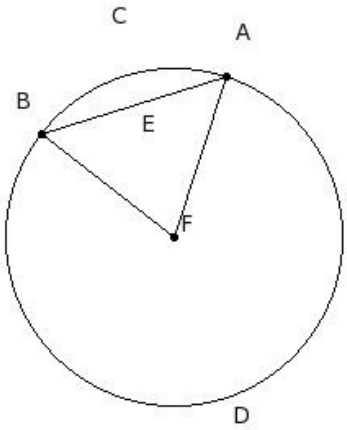
20. The radii of the circle are



(i) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HI}, \overline{ID}, \overline{GI}$ (ii) $\overline{JD}, \overline{JE}, \overline{JF}, \overline{JG}, \overline{JH}, \overline{JI}$ (iii) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HI}, \overline{ID}, \overline{JH}$

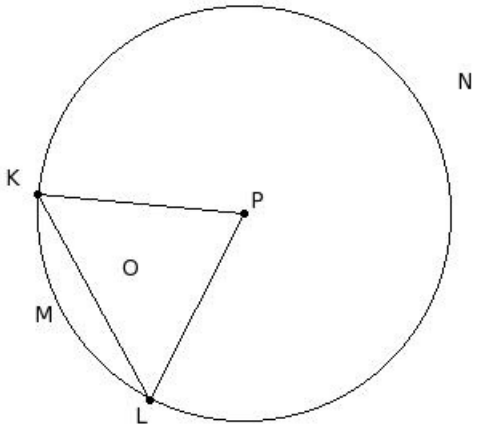
(iv) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HI}, \overline{ID}$ (v) $\overline{EF}, \overline{FG}, \overline{GH}, \overline{HI}, \overline{ID}$

21. The minor sector of the circle is



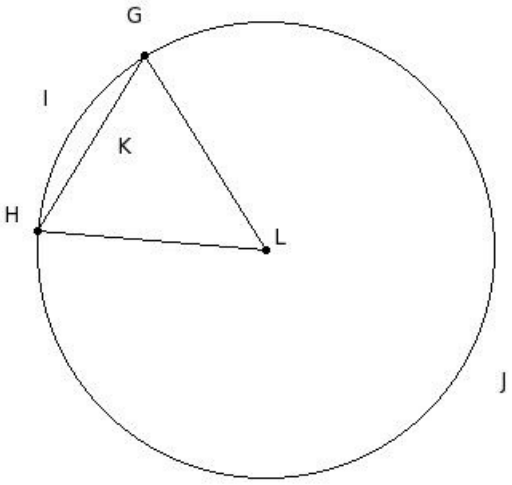
(i) FADBF (ii) ACB (iii) ADBEA (iv) ADB (v) FACBF

22. The major sector of the circle is



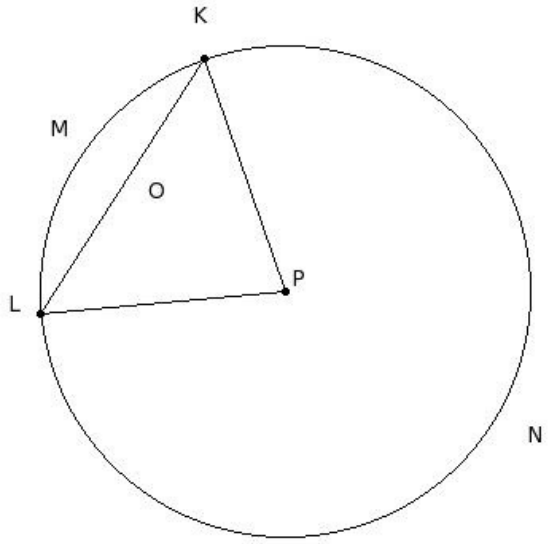
(i) PKMLP (ii) KNLOK (iii) KMLOK (iv) KNL (v) PKNLP

23. The minor arc of the circle is



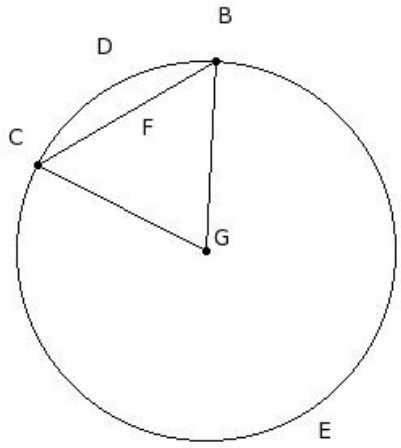
(i) LGJHL (ii) LGIHL (iii) GJHKG (iv) GJH (v) GIH

24. The major arc of the circle is



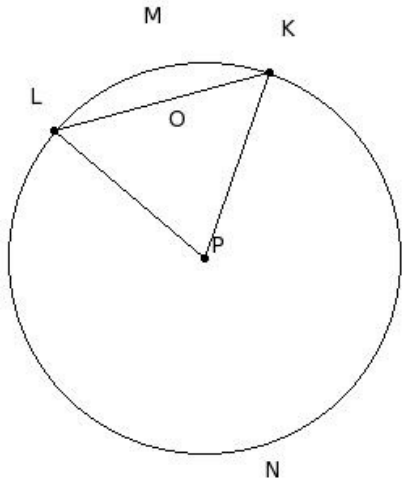
(i) PKMLP (ii) KML (iii) KNLOK (iv) KMLOK (v) KNL

25. The minor segment of the circle is



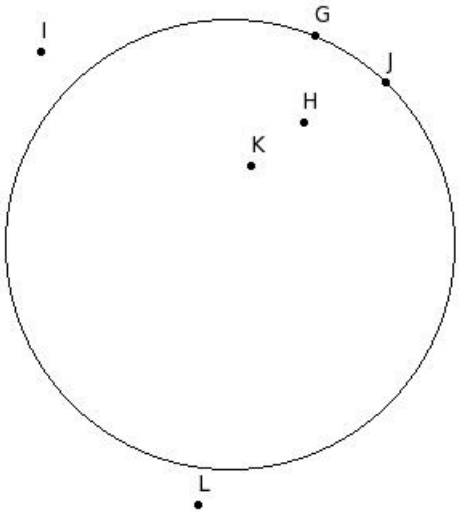
(i) BDCFB (ii) GBDCG (iii) BDC (iv) BEC (v) BECFB

26. The major segment of the circle is



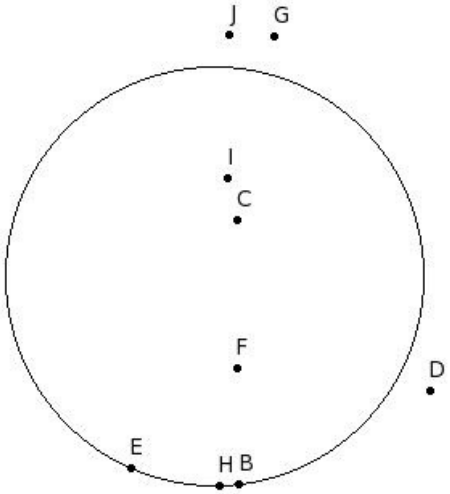
(i) KML (ii) KNL (iii) PKMLP (iv) PKNLP (v) KNLOK

27. Find the points belonging to the circle



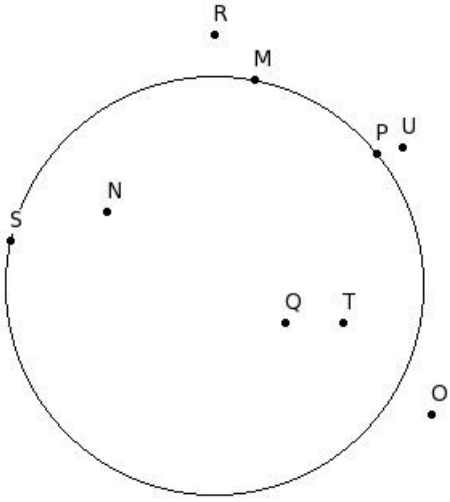
(i) {G,J} (ii) {K,J} (iii) {H,K} (iv) {I,L} (v) {I,J}

28. Find the points belonging to the inside of the circle



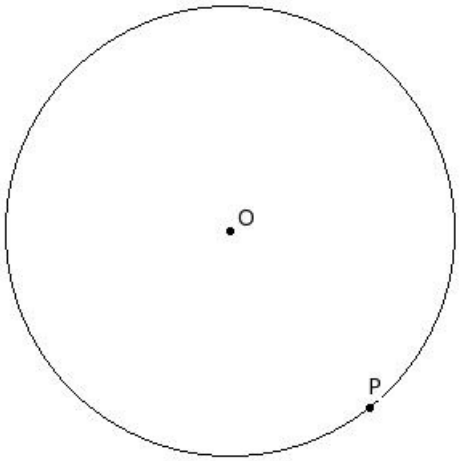
(i) {F,I,E} (ii) {C,F,I} (iii) {D,G,J} (iv) {B,E,H} (v) {C,F,J}

29. Find the points belonging to the outside of the circle



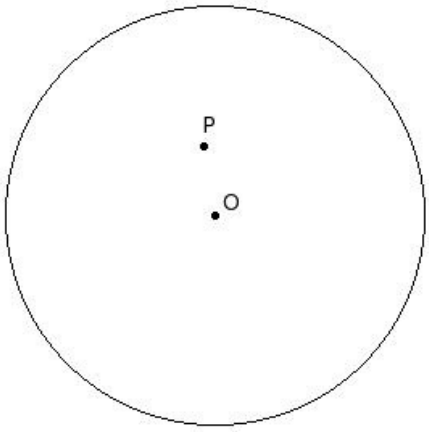
(i) {N,Q,T} (ii) {O,R,U} (iii) {M,P,S} (iv) {M,R,U} (v) {R,T,U}

30. '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



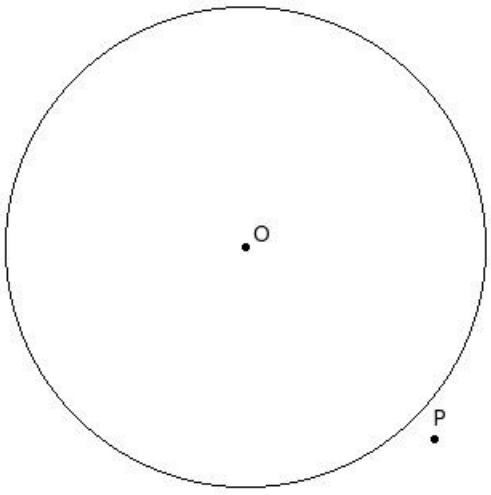
(i) outside the circle (ii) on the circle (iii) inside the circle

31. '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

32. '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

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

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

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

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

35. 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) quadrant (ii) diameter (iii) semi-circle (iv) tangent (v) major segment

36. Which of the following statements are true?

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

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

37. Which of the following statements are true?

a) The longest chord of the circle passes through the centre of the circle.
b) Equal length chords are equidistant from 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) Equal length chords subtend equal angles at the centre of the circle.

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

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

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

39. 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) Two chords bisect each other.
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) {b,a} (ii) {c,d} (iii) {c,d,a} (iv) {a,d} (v) {e,b,a}

40. Which of the following statements are true?

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

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

41. Which of the following statements are true?

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

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

42. Which of the following statements are true?

a) If two circles touch internally, the distance between their centres is the difference of their radii.
b) If two circles touch externally, the distance between their centres is the sum of their radii.
c) If two circles touch internally, the square of the distance between their centres is the difference of the squares of their radii.
d) If two circles touch externally, the square of the distance between their centres is the sum of the squares of their radii.
e) If two circles touch externally, their centres and the point of contact form an isosceles triangle.
f) If two circles touch internally, their centres and the point of contact form a scalene triangle.

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

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

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

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

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

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

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

46. 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) right angle triangle (iv) acute angled triangle

47. Circles having common centre are called

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

48. If two circles are concentric, then

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

(iv) their radii are same

49. Which of the following figures represent a chord ?

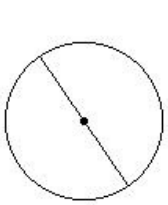


fig I

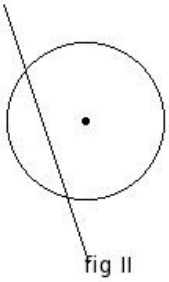


fig II

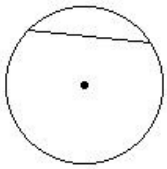


fig III

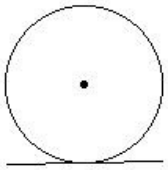


fig IV

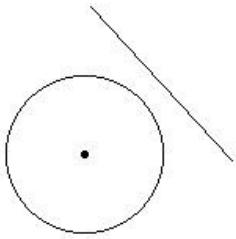


fig V

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

50. Which of the following figures represent a diameter ?

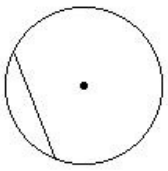


fig I

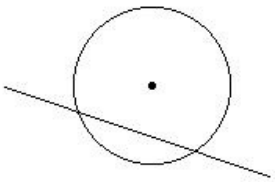


fig II

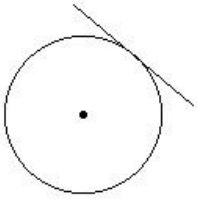


fig III

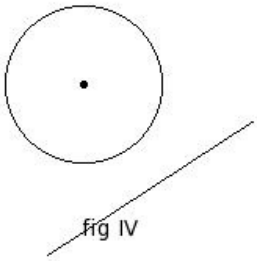


fig IV

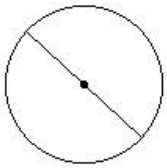


fig V

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

51. Which of the following figures represent a secant ?

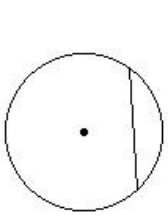


fig I

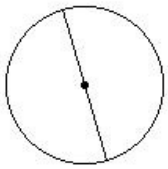


fig II

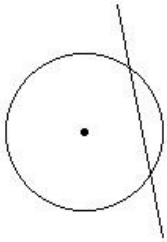


fig III

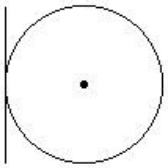


fig IV

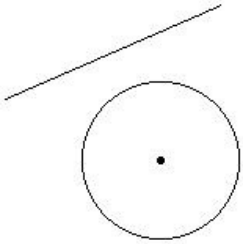


fig V

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

52. Which of the following figures represent a tangent ?

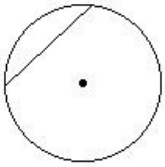


fig I

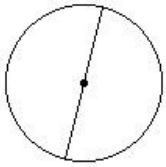


fig II

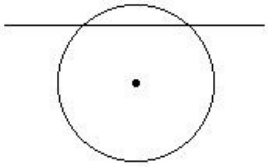


fig III

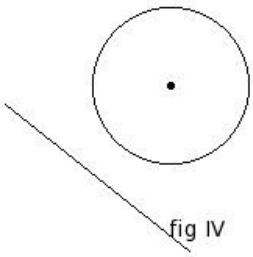


fig IV

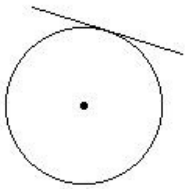


fig V

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

53. With the vertices of a triangle △GHI as centres, three circles are drawn touching each other externally. If the sides of the triangle are 10 cm , 15 cm and 13 cm , find the radii of the circles

(i) 9 cm , 11 cm & 14 cm respectively (ii) 4 cm , 11 cm & 9 cm respectively

(iii) 9 cm , 6 cm & 9 cm respectively (iv) 4 cm , 6 cm & 9 cm respectively

(v) 4 cm , 6 cm & 14 cm respectively

54. In triangle IJK, if a circle is drawn with JK as diameter and if it passes through I it is a

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

55. Which of the following statements are true?

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

b) π is a rational number.

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

d) All diameters of a circle are chords.

e) All chords of a circle are diameters.

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

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

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

Assignment Key

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