EduSahara™ Assignment

Name : Circle Basics

Chapter : Circles

Grade : CBSE Grade IX

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

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

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

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

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

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

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

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

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

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

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

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

7. Half of a circle is called

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

8. The perimeter of a circle is called

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

9. Which of the following statements are true?

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

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

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

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

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

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

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

13. If the radius of a circle is 42 cm, what is its diameter?

(i) 86 cm (ii) 85 cm (iii) 84 cm (iv) 82 cm (v) 83 cm

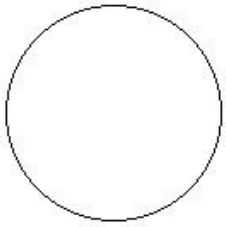
14. If the radius of a circle is 63 cm, what is its circumference?

(i) 398 cm (ii) 395 cm (iii) 397 cm (iv) 394 cm (v) 396 cm

15. Two circles with equal radii are

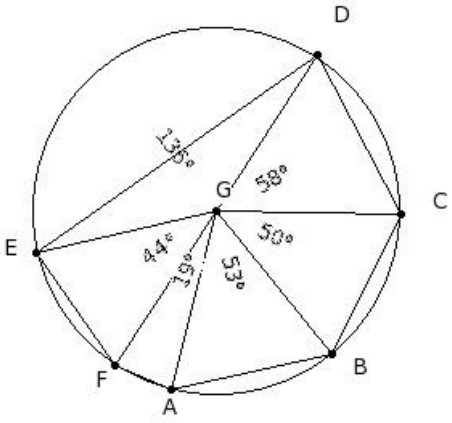
(i) only similar but not congruent (ii) not similar (iii) concentric (iv) congruent

16. Identify the figure below



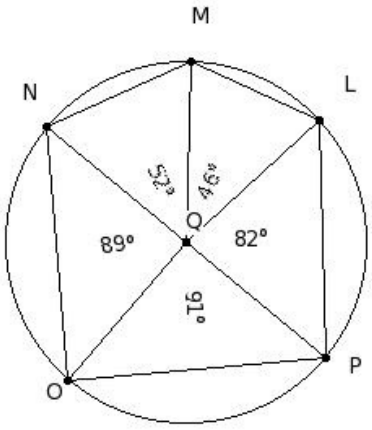
(i) pentagon (ii) circle (iii) decagon (iv) hexagon (v) angle

17. The centre of the circle is



(i) B (ii) G (iii) C (iv) A (v) D

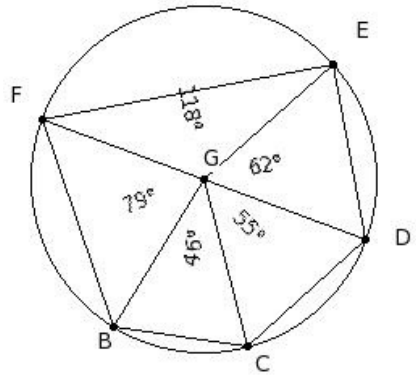
18. The chords of the circle are



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

(v) $\overline{LM}, \overline{MN}, \overline{NO}, \overline{OP}, \overline{PL}$

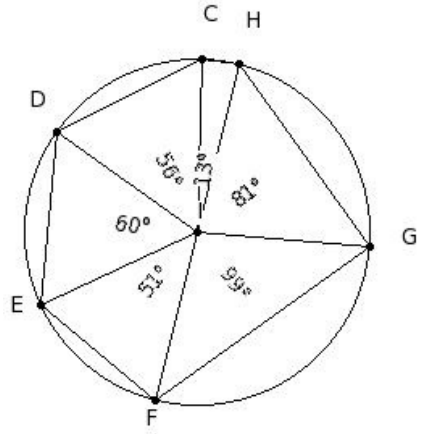
19. The diameters of the circle are



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

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

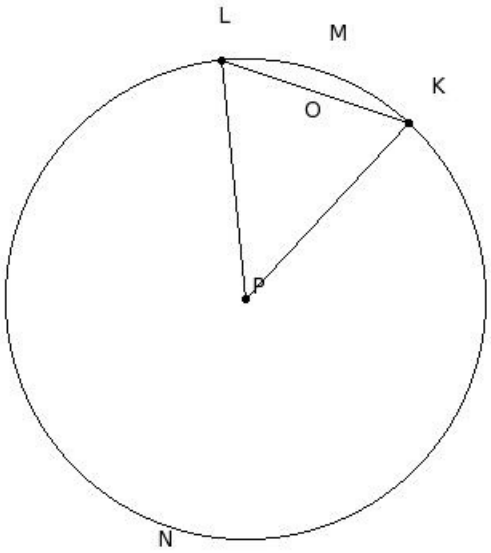
20. The radii of the circle are



(i) $\overline{IC}, \overline{ID}, \overline{IE}, \overline{IF}, \overline{IG}, \overline{IH}$ (ii) $\overline{CD}, \overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HC}, \overline{IF}$ (iii) $\overline{CD}, \overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HC}$

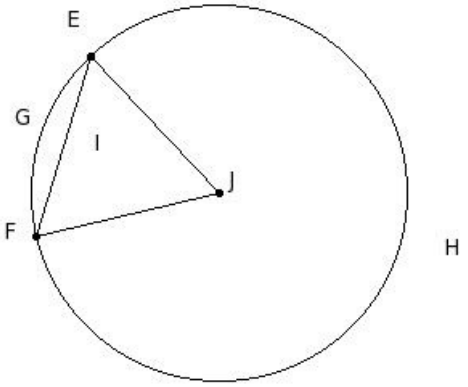
(iv) $\overline{CD}, \overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HC}, \overline{FH}$ (v) $\overline{DE}, \overline{EF}, \overline{FG}, \overline{GH}, \overline{HC}$

21. The minor sector of the circle is



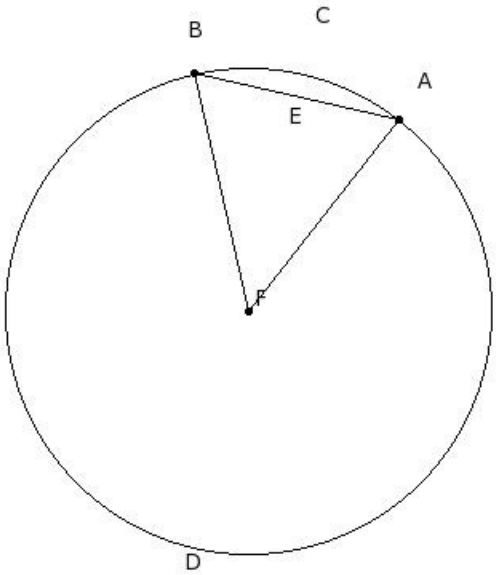
(i) KMLOK (ii) PKMLP (iii) KML (iv) PKNLP (v) KNL

22. The major sector of the circle is



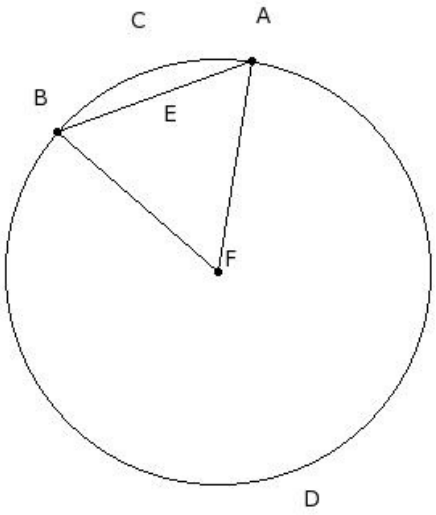
(i) EGF (ii) EHFIE (iii) EGFIE (iv) JEGFJ (v) JEHFJ

23. The minor arc of the circle is



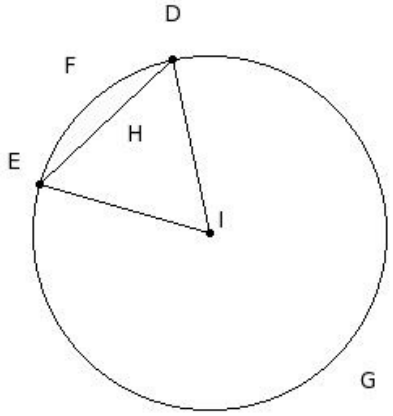
(i) ACBEA (ii) ACB (iii) FADBF (iv) ADB (v) FACBF

24. The major arc of the circle is



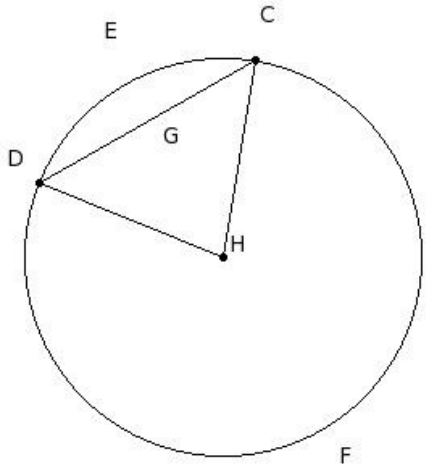
(i) ACBEA (ii) FADBF (iii) ADBEA (iv) ACB (v) ADB

25. The minor segment of the circle is



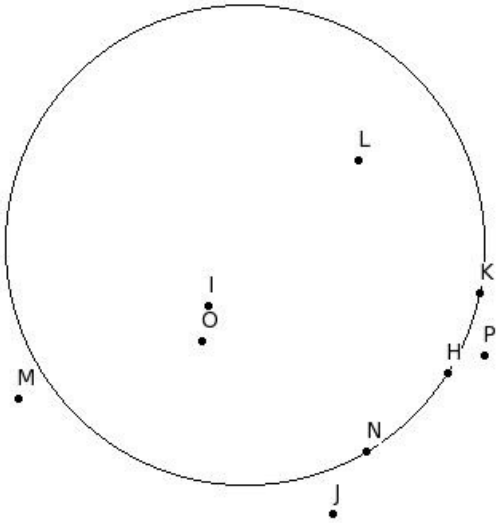
(i) DFEHD (ii) DGEHD (iii) DFE (iv) DGE (v) IDGEI

26. The major segment of the circle is



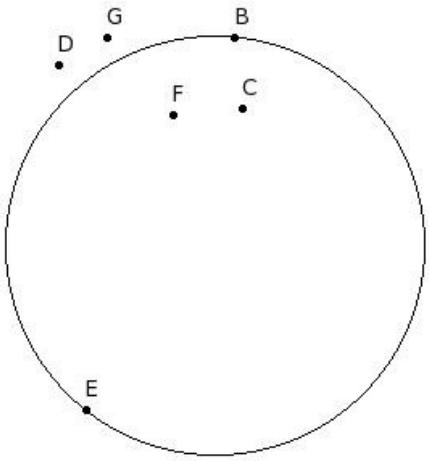
(i) CEDGC (ii) HCFDH (iii) HCEDH (iv) CFDGC (v) CFD

27. Find the points belonging to the circle



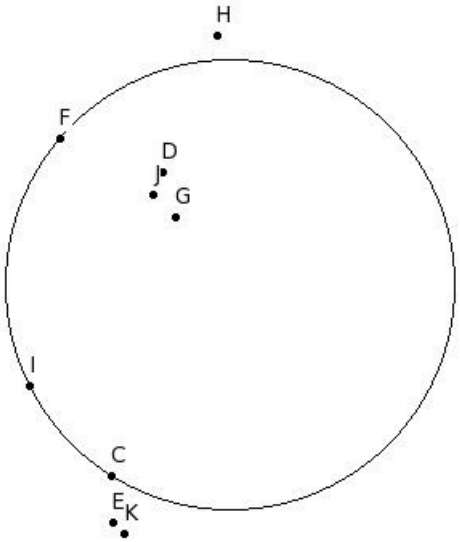
(i) {J,M,P} (ii) {H,K,N} (iii) {I,L,O} (iv) {P,H,K} (v) {L,H,K}

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



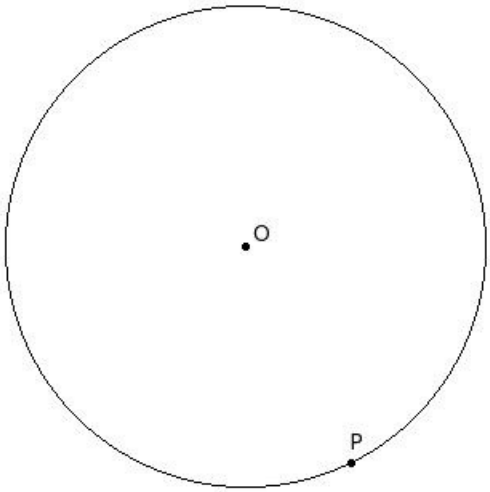
(i) {D,G} (ii) {E,F} (iii) {B,E} (iv) {C,F} (v) {D,F}

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



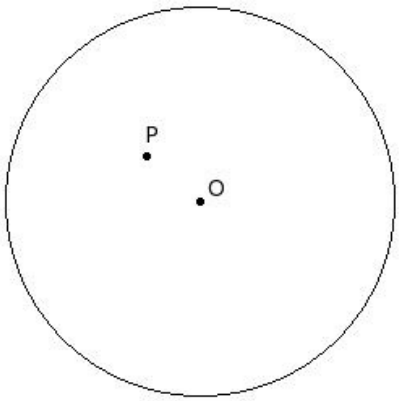
(i) {D,E,H} (ii) {E,H,K} (iii) {D,G,J} (iv) {F,E,K} (v) {C,F,I}

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



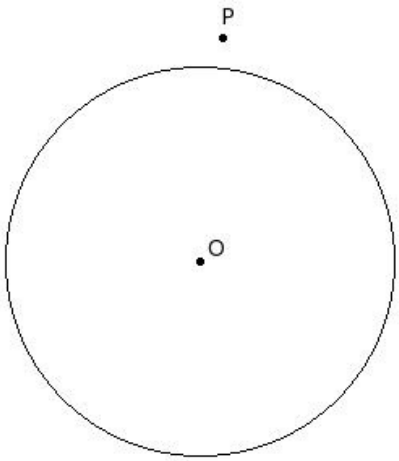
(i) inside the circle (ii) outside the circle (iii) on the circle

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

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

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

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

(i) secant (ii) tangent (iii) major segment (iv) chord (v) diameter

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) tangent (iii) centre (iv) major segment (v) diameter

36. Which of the following statements are true?

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

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

37. Which of the following statements are true?

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

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

38. Which of the following statements are true?

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

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

39. Which of the following statements are true?

a) The diameter divides the circle into two unequal parts.
b) Two chords bisect each other.
c) The longest of all chords of a circle is called diameter.
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) {e,a,c} (ii) {b,d,c} (iii) {b,d} (iv) {a,c} (v) {c,d}

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) Only one circle can be drawn passing through two points.
d) Infinite circles can be drawn passing through three collinear points.
e) Atmost one circle can be drawn passing through three non-collinear points.

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

41. Which of the following statements are true?

a) A secant and a chord are same.
b) A secant has two end points.
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) {b,d,c} (ii) {e,a,c} (iii) {a,c} (iv) {c,d} (v) {b,d}

42. Which of the following statements are true?

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

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

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

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

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

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

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

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

46. 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

47. Circles having common centre are called

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

48. If two circles are concentric, then

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

(iv) their radii are same

49. Which of the following figures represent a chord ?

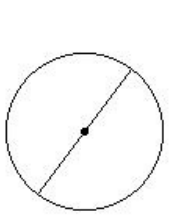


fig I

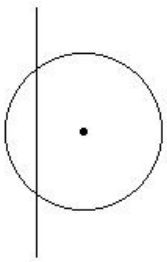


fig II

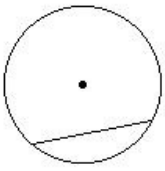


fig III

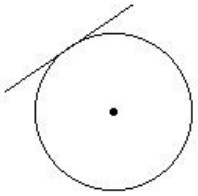


fig IV

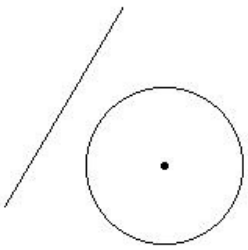


fig V

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

50. Which of the following figures represent a diameter ?

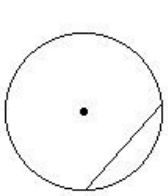


fig I

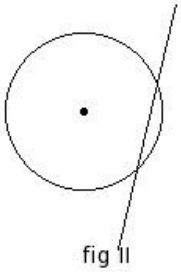


fig II

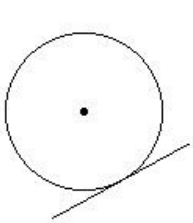


fig III

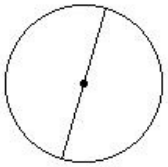


fig IV

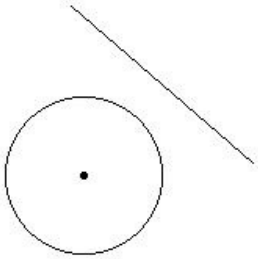


fig V

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

51. Which of the following figures represent a secant ?

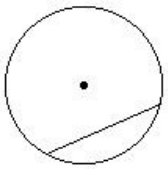


fig I

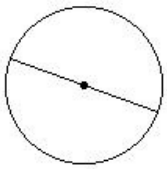


fig II

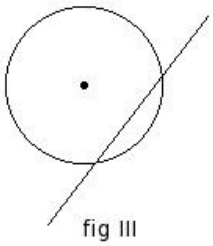


fig III

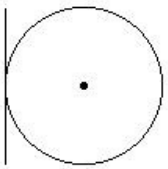


fig IV

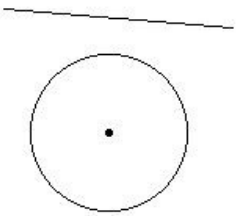


fig V

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

52. Which of the following figures represent a tangent ?

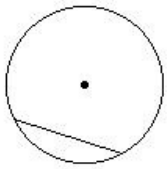


fig I

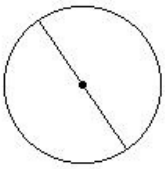


fig II

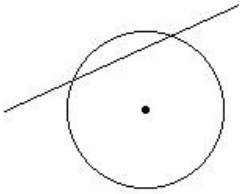


fig III

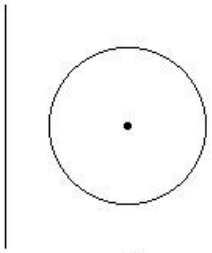


fig IV

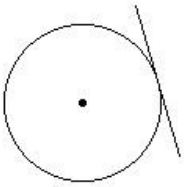


fig V

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

53. With the vertices of a triangle △ABC as centres, three circles are drawn touching each other externally. If the sides of the triangle are 9 cm , 17 cm and 12 cm , find the radii of the circles

(i) 7 cm , 7 cm & 10 cm respectively (ii) 2 cm , 7 cm & 10 cm respectively

(iii) 2 cm , 12 cm & 10 cm respectively (iv) 7 cm , 12 cm & 15 cm respectively

(v) 2 cm , 7 cm & 15 cm respectively

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

(i) acute angled triangle (ii) obtuse angled triangle (iii) equilateral triangle (iv) right angle 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 chords of a circle are diameters.

e) All diameters of a circle are chords.

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

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

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

Assignment Key

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