Name : Circle Basics

Chapter : Circles

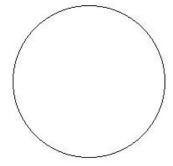
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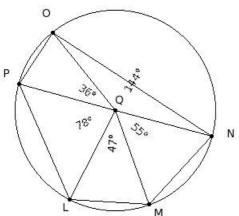
Ι.	The mid-point of	the air	ameter of	га	circie is called	

- (i) diameter (ii) radius (iii) circumference (iv) centre (v) segment
- 2. A line segment joining any point on the circle with its centre is called
 - (i) chord (ii) centre (iii) segment (iv) circumference (v) radius
- 3. A line segment having its end points on the circle is called a
 - (i) chord (ii) semi-circle (iii) centre (iv) circumference (v) segment
- 4. A chord that passes through the centre of the circle is called
 - (i) radius (ii) segment (iii) diameter (iv) chord (v) semi-circle
- 5. A chord of a circle divides the whole circular region into two parts, each called a
 - (i) semi-circle (ii) radius (iii) diameter (iv) segment (v) centre
- 6. The segment of the circle containing the centre of the circle is called
 - (i) radius (ii) centre (iii) major segment (iv) diameter (v) circumference
- 7. Half of a circle is called
 - (i) semi-circle (ii) segment (iii) circumference (iv) diameter (v) radius
- 8. The perimeter of a circle is called
 - (i) segment (ii) semi-circle (iii) chord (iv) radius (v) circumference
- 9. Which of the following statements are true?
 - a) Each radius of a circle is also a chord of the circle.
 - b) Every circle has a unique centre.
 - c) A circle consists of an infinite number of points.
 - d) A line can meet a circle atmost at two points.
 - e) Every circle has a unique diameter.
 - (i) {a,b} (ii) {a,b,c} (iii) {e,c} (iv) {a,e,d} (v) {b,c,d}
- 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) One and only one tangent can be drawn to a circle from a point outside it.
 - d) Every circle has a unique diameter.
 - e) An infinite number of chords may be drawn for a circle.
 - (i) {c,a,b} (ii) {a,b,e} (iii) {c,d,e} (iv) {d,b} (v) {c,a}

- 11. Which of the following statements are true?
 - a) One and only one tangent can be drawn to pass through a point on a circle.
 - b) Diameter of a circle is a part of the semi-circle of the circle.
 - c) A secant of a circle is a segment having its end points on the 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) $\{c,a\}$ (ii) $\{e,c,a\}$ (iii) $\{d,b,a\}$ (iv) $\{d,b\}$ (v) $\{a,b\}$
- 12. If the diameter of a circle is 70 cm, what is its radius?
 - (i) 37 cm (ii) 35 cm (iii) 36 cm (iv) 33 cm (v) 34 cm
- 13. If the radius of a circle is 14 cm, what is its diameter?
 - (i) 29 cm (ii) 28 cm (iii) 30 cm (iv) 27 cm (v) 26 cm
- 14. If the radius of a circle is 21 cm, what is its circumference?
 - (i) 130 cm (ii) 134 cm (iii) 132 cm (iv) 131 cm (v) 133 cm
- 15. Two circles with equal radii are
 - (i) not similar (ii) only similar but not congruent (iii) concentric (iv) congruent
- 16. Identify the figure below

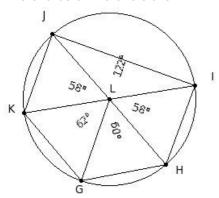


- (i) triangle (ii) circle (iii) nonagon (iv) pentagon (v) angle
- 17. The centre of the circle is



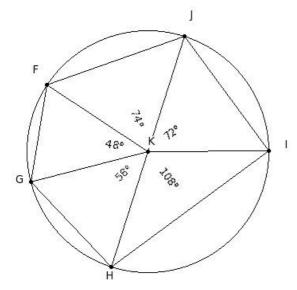
(i) N (ii) M (iii) L (iv) Q (v) O

18. The chords of the circle are



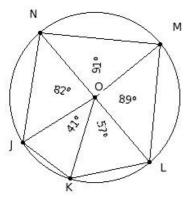
- (i) $\overline{\mathsf{LG}}, \overline{\mathsf{LH}}, \overline{\mathsf{LI}}, \overline{\mathsf{LK}}$ (ii) $\overline{\mathsf{HI}}, \overline{\mathsf{IJ}}, \overline{\mathsf{JK}}, \overline{\mathsf{KG}}$ (iii) $\overline{\mathsf{GH}}, \overline{\mathsf{HI}}, \overline{\mathsf{IJ}}, \overline{\mathsf{JK}}, \overline{\mathsf{KG}}$ (iv) $\overline{\mathsf{GH}}, \overline{\mathsf{HI}}, \overline{\mathsf{IJ}}, \overline{\mathsf{JK}}, \overline{\mathsf{KG}}, \overline{\mathsf{LG}}$
- (v) \overline{GH} , \overline{HI} , \overline{IJ} , \overline{JK} , \overline{KG} , \overline{HJ}

19. The diameters of the circle are



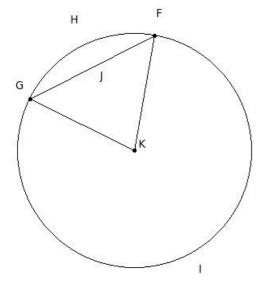
 $(i) \ \overline{KF}, \overline{KG}, \overline{KH}, \overline{KI}, \overline{KJ}, \overline{HJ} \ (ii) \ \overline{FG}, \overline{GH}, \overline{HI}, \overline{IJ}, \overline{JF} \ (iii) \ \overline{KF}, \overline{KG}, \overline{KH}, \overline{KI}, \overline{KJ} \ (iv) \ \overline{HJ} \ (v) \ \overline{FG}, \overline{GH}, \overline{HI}, \overline{IJ}, \overline{JF}, \overline{HJ}$

20. The radii of the circle are

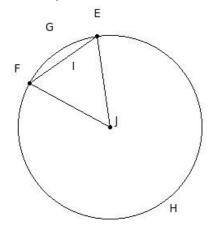


- $(i) \ \overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NJ}, \overline{LN} \ (ii) \ \overline{JK}, \overline{KL}, \overline{LM}, \overline{MN}, \overline{NJ} \ (iii) \ \overline{KL}, \overline{LM}, \overline{MN}, \overline{NJ} \ (iv) \ \overline{OJ}, \overline{OK}, \overline{OL}, \overline{OM}, \overline{ON}$
- (v) \overline{JK} , \overline{KL} , \overline{LM} , \overline{MN} , \overline{NJ} , \overline{OK}

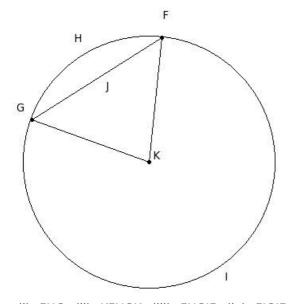
21. The minor sector of the circle is



- (i) KFHGK (ii) FHG (iii) FIGJF (iv) FHGJF (v) FIG
- 22. The major sector of the circle is

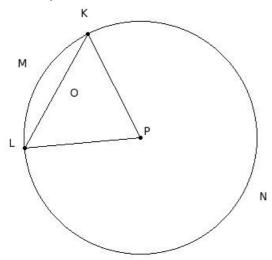


- (i) EGFIE (ii) EHFIE (iii) JEGFJ (iv) JEHFJ (v) EGF
- 23. The minor arc of the circle is



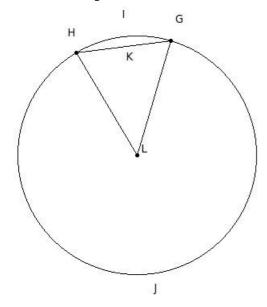
(i) FHG (ii) KFHGK (iii) FHGJF (iv) FIGJF (v) FIG

24. The major arc of the circle is



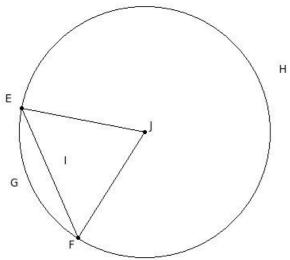
(i) KNL (ii) PKNLP (iii) PKMLP (iv) KML (v) KNLOK

25. The minor segment of the circle is



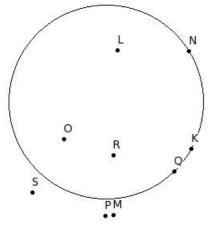
(i) LGJHL (ii) GIHKG (iii) GJHKG (iv) GJH (v) LGIHL

26. The major segment of the circle is



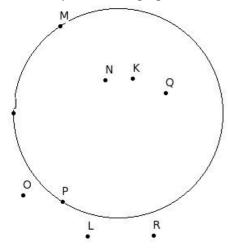
(i) JEGFJ (ii) EGF (iii) JEHFJ (iv) EHFIE (v) EHF

27. Find the points belonging to the circle



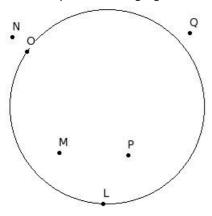
(i) $\{S,K,Q\}$ (ii) $\{Q,N,L\}$ (iii) $\{K,N,Q\}$ (iv) $\{M,P,S\}$ (v) $\{L,O,R\}$

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



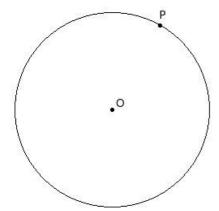
(i) $\{K,N,Q\}$ (ii) $\{L,O,R\}$ (iii) $\{J,M,P\}$ (iv) $\{K,Q,J\}$ (v) $\{R,N,K\}$

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

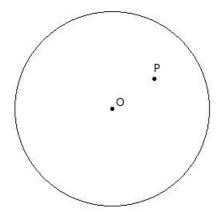


(i) {L,O} (ii) {N,Q} (iii) {M,P} (iv) {L,N} (v) {M,N}

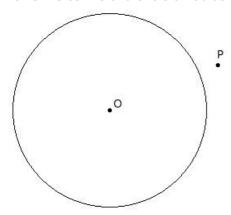




- (i) inside the circle (ii) outside the circle (iii) on the circle
- 31. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If \overline{OP} < r,then P is



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

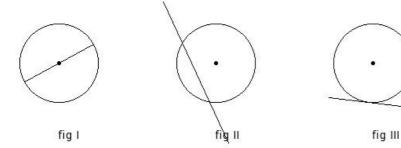


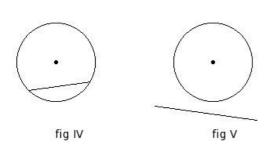
- (i) inside the circle (ii) outside the circle (iii) on the circle
- 33. A line which intersects the circle at two distinct points is called a
 - (i) centre (ii) diameter (iii) secant (iv) chord (v) semi-circle
- 34. A line which touches a circle at only one point is called a
 - (i) secant (ii) chord (iii) tangent (iv) diameter (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) diameter (ii) quadrant (iii) semi-circle (iv) major segment (v) centre

	a) The diameter is the longest chord.					
	b) The radius is the shortest chord.					
	c) A chord divides a circle into two sectors.					
	d) Atmost one chord can be drawn on a circle with a certain length.					
	e) A chord divides a circle into two segments.					
	(i) {d,b,a} (ii) {b,a} (iii) {a,e} (iv) {c,e,a} (v) {c,e}					
37.	Which of the following statements are true?					
	a) The longest chord of the circle passes through the centre of the circle.					
	b) The farther the chord is from the centre, the larger the angle it subtends at the centre.					
	c) Equal length chords are equidistant from the centre of the circle.					
	d) Equal length chords subtend equal angles at the centre of the circle. e) No two chords bisects each other.					
	e) No two chords disects each other.					
	(i) {b,a} (ii) {b,e,d} (iii) {a,c,d} (iv) {e,c} (v) {b,a,c}					
38.	Which of the following statements are true?					
	a) A circle divides the plane on which it lies into three parts.					
	b) The area enclosed by a chord and its major arc is called major segment.					
	c) The diameter divides the circle into two unequal 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.					
	c, the area enclosed by a chora and its minor are is called minor segment.					
	(i) {a,b,e} (ii) {c,a,b} (iii) {d,b} (iv) {c,a} (v) {c,d,e}					
39.	Which of the following statements are true?					
	a) A sector is the area enclosed by two radii and a chord.					
	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) The diameter divides the circle into two unequal parts.					
	e) The diameter divides the circle into two directal parts.					
	(i) {c,d} (ii) {a,c} (iii) {b,d,c} (iv) {e,a,c} (v) {b,d}					
40.	Which of the following statements are true?					
	a) Atmost one circle can be drawn passing through three non-collinear points.					
	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) Only one circle can be drawn with a centre.					
	(i) {e,c,a} (ii) {c,a} (iii) {d,b,a} (iv) {a,b} (v) {d,b}					
41.	Which of the following statements are true?					
	a) A secant and a chord are same.					
	b) A diameter is a limiting case of a chord.					
	c) A tangent is the limiting case of a secant.					
	d) A secant has two end points. e) A radius is a limiting case of a diameter.					
	e, made to a minering case of a diameter.					
	(i) {d,c,b} (ii) {a,b} (iii) {e,a,b} (iv) {b,c} (v) {d,c}					

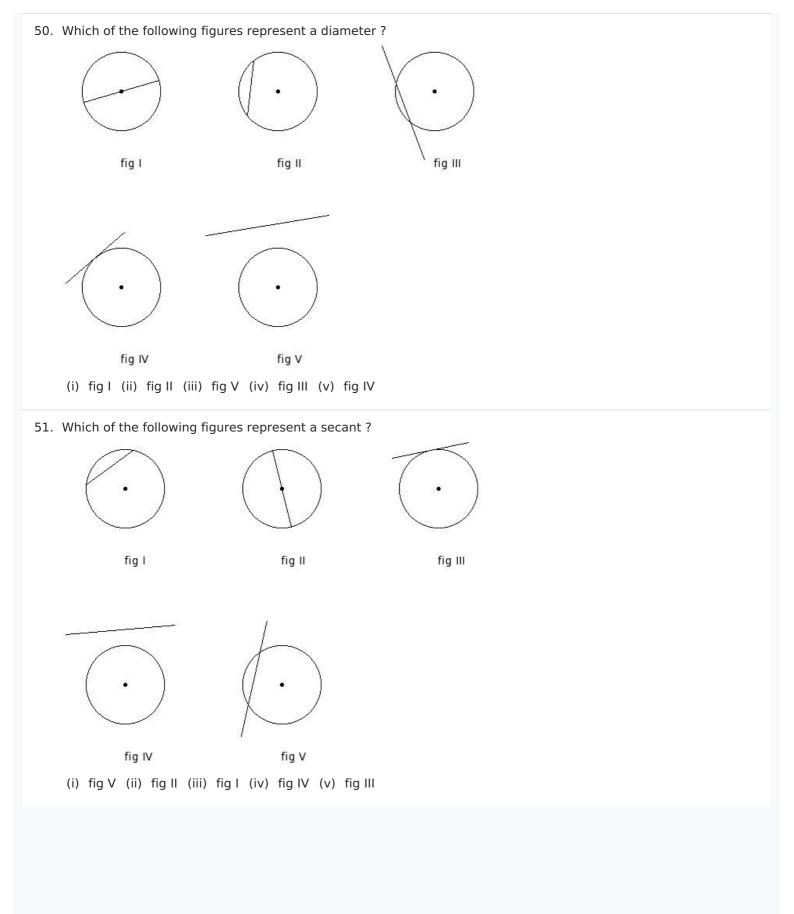
36. Which of the following statements are true?

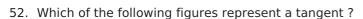
- 42. Which of the following statements are true?
 - a) If two circles touch internally, the square of the distance between their centres is the difference of the squares of their radii.
 - b) If two circles touch internally, the distance between their centres is the difference of their radii.
 - c) If two circles touch externally, the distance between their centres is the sum 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 internally, their centres and the point of contact form a scalene triangle.
 - f) If two circles touch externally, their centres and the point of contact form an isosceles triangle.
 - (i) {b,c} (ii) {a,c,b} (iii) {a,b} (iv) {d,c} (v) {e,f,b}
- 43. The point of intersection of the angular bisectors of a triangle is
 - (i) incentre (ii) circumcentre (iii) centroid (iv) excentre (v) orthocentre
- 44. The angle subtended by the semicircle at the centre is
 - (i) 190° (ii) 185° (iii) 195° (iv) 210° (v) 180°
- 45. The angle subtended by the diameter at any point on the circle is
 - (i) 120° (ii) 90° (iii) 100° (iv) 105° (v) 95°
- 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) obtuse angled triangle (iii) equilateral triangle (iv) acute angled triangle
- 47. Circles having common centre are called
 - (i) similar circles (ii) intersecting circles (iii) concentric circles (iv) congruent circles
- 48. If two circles are concentric, then
 - (i) their radii are same (ii) their diameters are same (iii) their centres are same
 - (iv) their perimeters are same
- 49. Which of the following figures represent a chord?





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





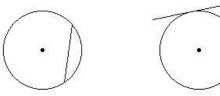


fig I

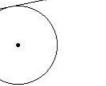


fig II



fig III

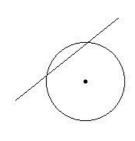


fig IV

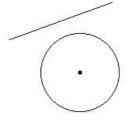


fig V

- (i) fig II (ii) fig V (iii) fig IV (iv) fig III (v) fig I
- With the vertices of a triangle \triangle IJK as centres, three circles are drawn touching each other externally. If the sides of the triangle are 10 cm , 17 cm and 11 cm , find the radii of the circles
 - (i) 2 cm , 13 cm & 9 cm respectively (ii) 7 cm , 13 cm & 14 cm respectively
 - (iii) 2 cm, 8 cm & 9 cm respectively (iv) 7 cm, 8 cm & 9 cm respectively
 - (v) 2 cm, 8 cm & 14 cm respectively
- 54. In triangle DEF, if a circle is drawn with EF as diameter and if it passes through D it is a
 - (i) acute angled triangle (ii) right angle triangle (iii) equilateral triangle (iv) obtuse angled triangle
- 55. Which of the following statements are true?
 - a) All diameters of a circle are chords.
 - b) $\frac{22}{7}$ is a rational number.
 - c) π is a rational number.
 - d) A circle divides the plane into three mutually disjoint sets of points.
 - e) All chords of a circle are diameters.
 - (i) {c,a,b} (ii) {e,b} (iii) {a,b,d} (iv) {c,a} (v) {c,e,d}
- 56. Points which lie on the circumference of the circle are called
 - (i) Concurrent points (ii) Similar points (iii) Cyclic points (iv) Coincident points (v) Concyclic points

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

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