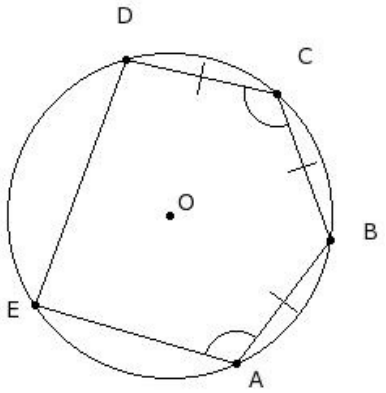
EduSahara™ Assignment

Name : Circles - Angle Properties1

Chapter : Angle Properties of a Circle

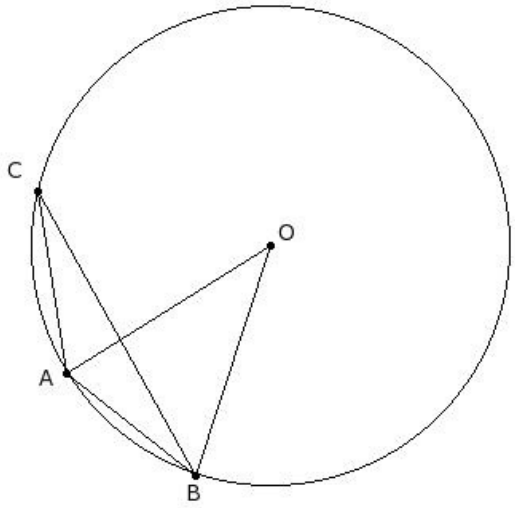
Grade : ICSE Grade X

1. In the given figure, a pentagon is inscribed in a circle with centre O. Given AB = BC = CD , ∠BCD = 115° and ∠EAB = 111°. Find ∠EAD



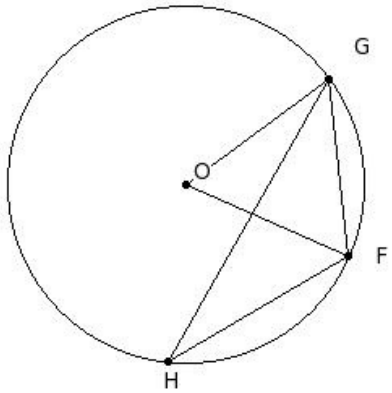
(i) 56° (ii) 46° (iii) 76° (iv) 61° (v) 51°

2. In the given figure, AB is a side of regular 8-sided polygon and AC is a side of regular 9-sided polygon inscribed in a circle with centre O. Find ∠AOB



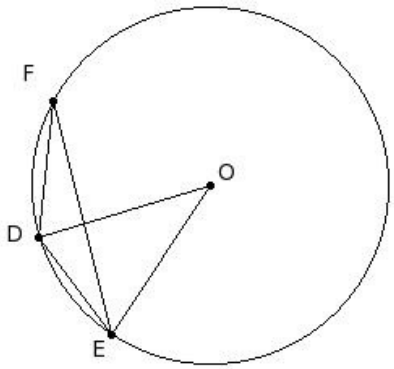
(i) 55° (ii) 45° (iii) 50° (iv) 60° (v) 75°

3. In the given figure, FG is a side of regular 5-sided polygon and FH is a side of regular 6-sided polygon inscribed in a circle with centre O. Find ∠FHG



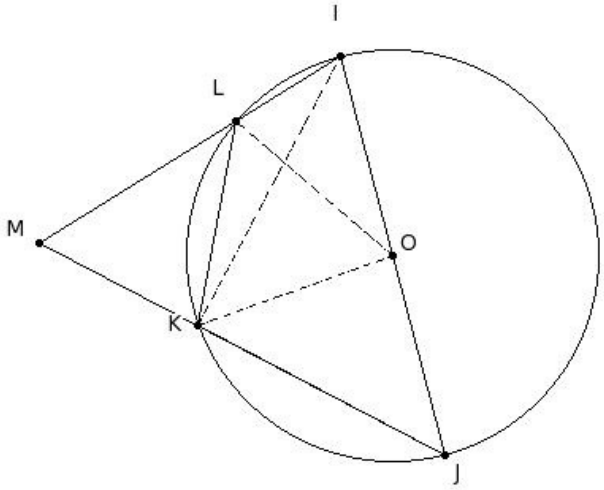
(i) 51° (ii) 41° (iii) 46° (iv) 66° (v) 36°

4. In the given figure, DE is a side of regular 8-sided polygon and DF is a side of regular 9-sided polygon inscribed in a circle with centre O. Find ∠DEF



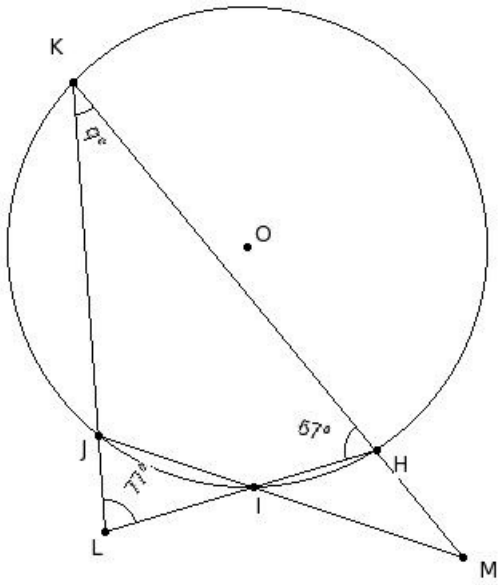
(i) 50° (ii) 25° (iii) 30° (iv) 35° (v) 20°

5. In the given figure, O is the centre of the circle. IJ is a diameter of the circle and KL is equal to radius. Find ∠IMJ



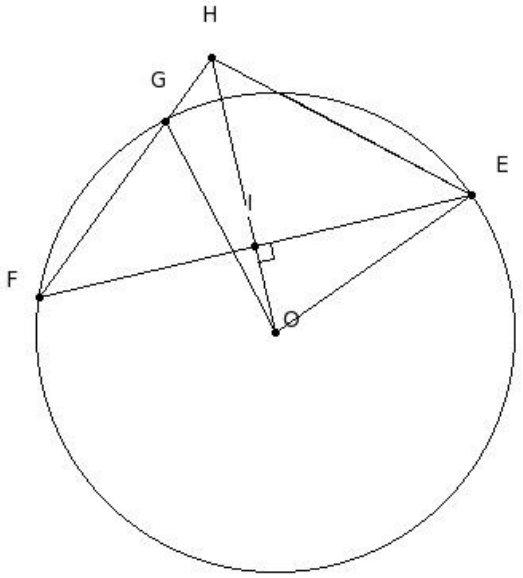
(i) 70° (ii) 65° (iii) 90° (iv) 75° (v) 60°

6. In the given figure, O is the centre of the circle. If ∠ILJ = 77° and ∠IHK = 67°, find ∠HKJ



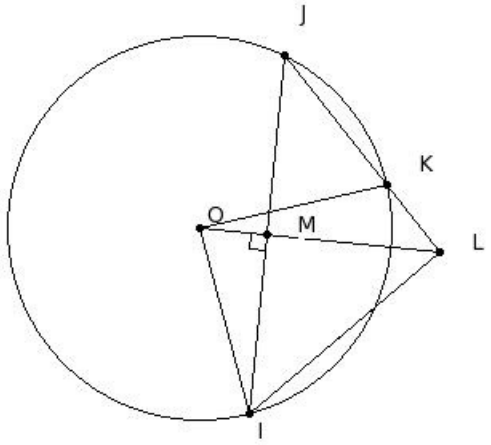
(i) 36° (ii) 41° (iii) 46° (iv) 66° (v) 51°

7. In the given figure, O is the centre of the circle, and OI ⊥ EF. If ∠EFG = 41.5°, find ∠EOG



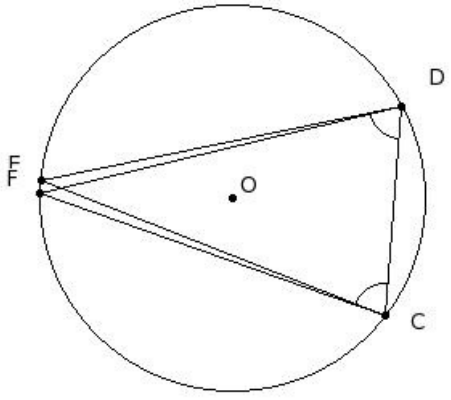
(i) 83° (ii) 93° (iii) 88° (iv) 98° (v) 113°

8. In the given figure, O is the centre of the circle, and OM ⊥ IJ. If ∠IJK = 44°, find ∠OLK



(i) 51° (ii) 61° (iii) 56° (iv) 46° (v) 76°

9. In the given figure, O is the centre of the circle. If ∠ECD = 72.97° and ∠CDE = 73.99°, find the angle ∠CFD



(i) 43.04° (ii) 63.04° (iii) 38.04° (iv) 33.04° (v) 48.04°

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

11. Which of the following statements are true?

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

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

12. Which of the following statements are true?

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

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

13. 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 midpoint of any diameter of a circle is its centre.
d) A sector is the area enclosed by two radii and a chord.
e) The longest of all chords of a circle is called diameter.

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

14. Which of the following statements are true?

a) If a trapezium is cyclic, it is a rectangle.
b) If a parallelogram is cyclic, it is a rectangle.
c) If a kite is cyclic, it is a square.
d) If a rhombus is cyclic, it is a square.
e) A cyclic quadrilateral is a regular polygon.

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

15. Which of the following statements are true?

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

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

16. Which of the following are cyclic quadrilaterals?

a) rhombus
b) rectangle
c) square
d) triangle
e) parallelogram
f) trapezium

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

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

18. Which of the following statements are true?

a) If two circles touch externally, the distance between their centres is the sum of their radii.
b) If two circles touch externally, the square of the distance between their centres is the sum of the squares 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 internally, the distance between their centres is the difference 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) {b,a} (ii) {a,d} (iii) {b,d,a} (iv) {e,f,a} (v) {c,d}

19. Which of the following statements are true?

a) It is always possible to inscribe a circle in a quadrilateral.
b) It is always possible to inscribe a circle in a regular polygon.
c) If a circle can be inscribed in a quadrilateral, it must be a kite.
d) If a circle can be inscribed in a quadrilateral, the sum of the lengths of a pair of opposite sides is equal to the other pair.
e) If a circle can be inscribed in a quadrilateral, then it must be a square.

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

20. Which of the following statements are true?

a) Angles in the same segment are equal.
b) Angles in the opposite segments are complementary.
c) Angles in the opposite segments are supplementary.
d) Angles subtended by equal length arcs in two circles are equal.

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

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

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

22. If an arc subtends an angle of x° in its alternate segment, then the angle is subtends at the centre is

(i) 2x° (ii) $\frac{x°}{2}$ (iii) x° (iv) 4x°

23. An arc subtends 90° in its alternate segment. The arc is

(i) major arc (ii) quadrant (iii) semi-circle (iv) major segment (v) minor arc

24. An arc subtends 150° in its alternate segment. The arc is

(i) quadrant (ii) minor segment (iii) major arc (iv) minor arc (v) semi-circle

25. An arc subtends 67° in its alternate segment. The arc is

(i) minor arc (ii) minor segment (iii) quadrant (iv) major arc (v) major segment

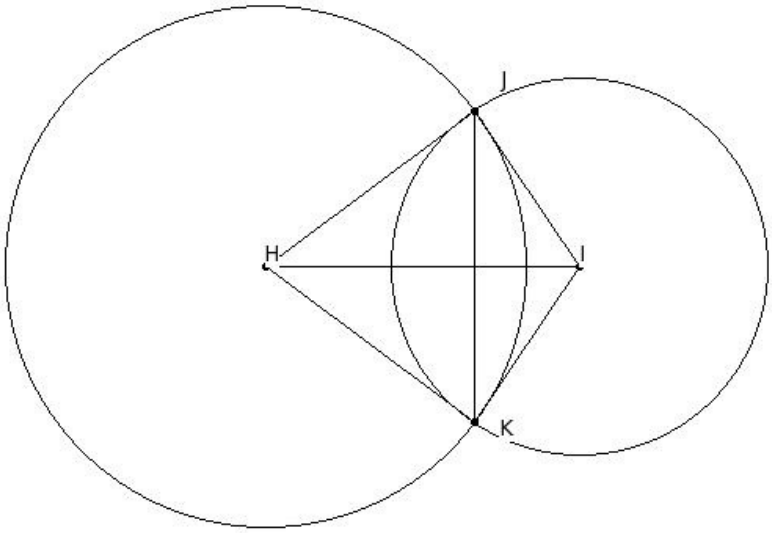
26. An arc subtends 65° in its alternate segment. Its corresponding major arc subtends what angle in its (major arc) alternate segment?

(i) 120° (ii) 130° (iii) 145° (iv) 125° (v) 115°

27. An arc subtends 43° in its alternate segment. The angle made by its corresponding major arc at the centre is

(i) 274° (ii) 304° (iii) 289° (iv) 284° (v) 279°

28. In the given figure, two circles of radii HJ = 16.6 cm & IJ = 12 cm intersect at J & K. The distance between the centres HI = 20 cm, find the length of JK



(i) 21.90 cm (ii) 19.90 cm (iii) 17.90 cm (iv) 20.90 cm (v) 18.90 cm

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

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

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

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

31. Angle subtended by the major arc at the centre is

(i) reflex angle (ii) right angle (iii) acute angle (iv) zero angle (v) obtuse angle

32. Angle subtended in the major segment is

(i) straight angle (ii) complete angle (iii) obtuse angle (iv) acute angle (v) zero angle

33. The opposite angles in a cyclic quadrilateral are

(i) supplementary (ii) linear pair (iii) equal (iv) complementary

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

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

35. Circles having common centre are called

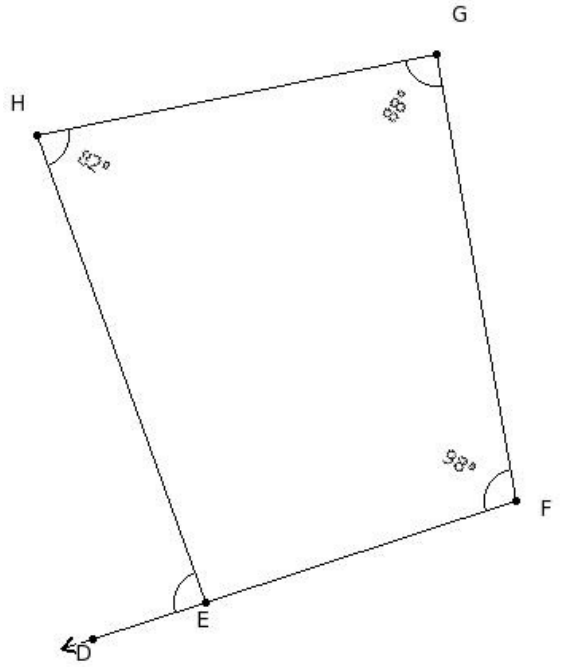
(i) congruent circles (ii) similar circles (iii) concentric circles (iv) intersecting circles

36. If two circles are concentric, then

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

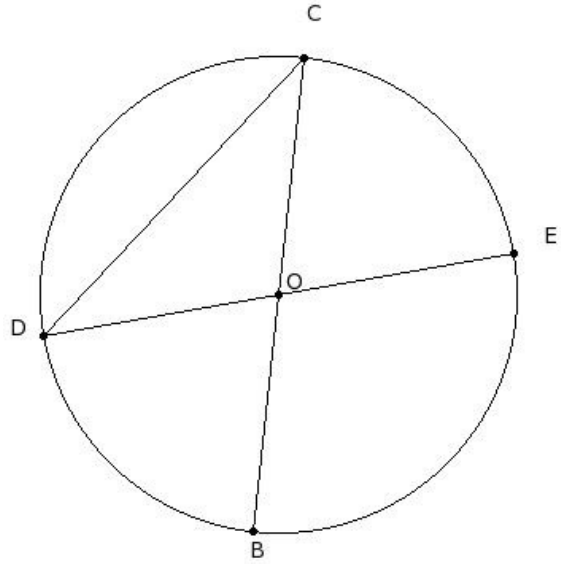
(iv) their diameters are same

37. In the given figure, EFGH is cyclic quadrilateral. If ∠FGH = 88°, find ∠DEH



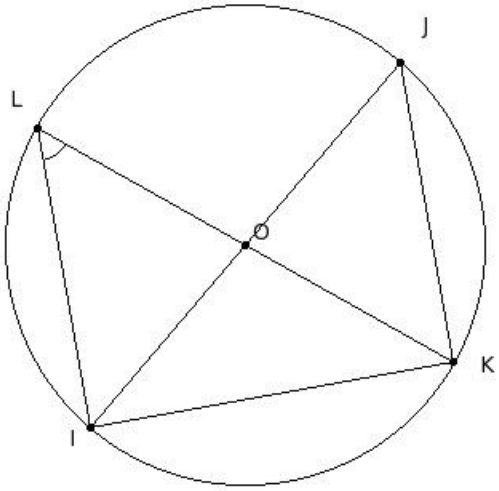
(i) 93° (ii) 103° (iii) 88° (iv) 118° (v) 98°

38. In the given figure, BC & DE are diameters of the circle. If ∠BCD = 37° find, ∠COD



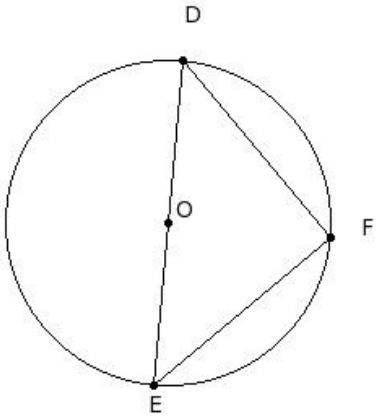
(i) 111° (ii) 106° (iii) 116° (iv) 121° (v) 136°

39. In the given figure, IJ & KL are diameters of the circle. If ∠ILK = 51°, find ∠OKJ



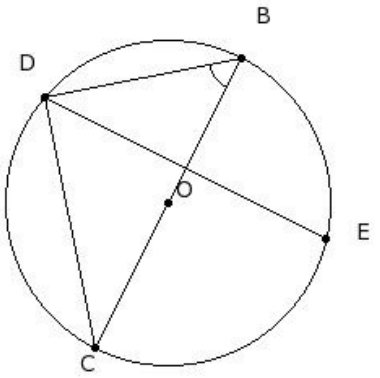
(i) 66° (ii) 81° (iii) 61° (iv) 56° (v) 51°

40. In the given figure DF & EF are equal length chords of the circle. Find ∠FDE



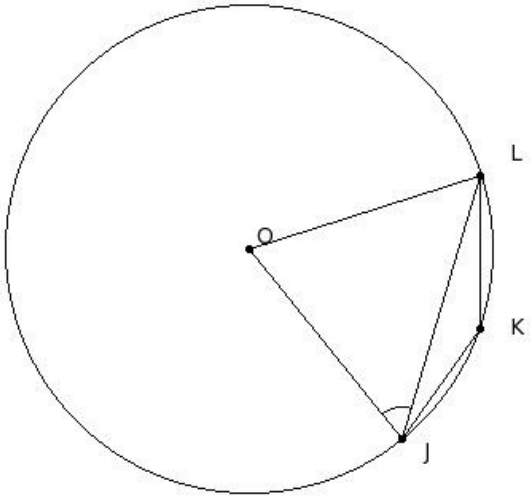
(i) 60° (ii) 75° (iii) 45° (iv) 50° (v) 55°

41. In the given figure, BC is a diameter of the circle with centre O. If ∠CBD = 51.96° and CD = CE, find ∠EDB



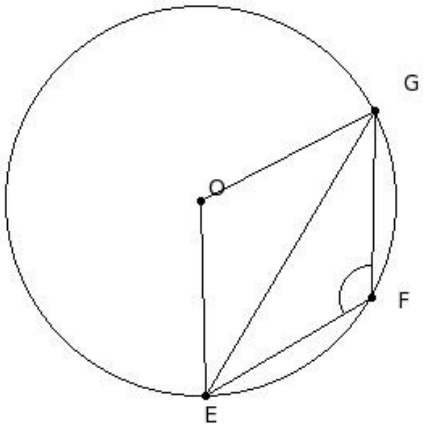
(i) 38.04° (ii) 53.04° (iii) 48.04° (iv) 43.04° (v) 68.04°

42. In the given figure, O is the centre of the circle. If ∠OJL = 55.5°, find ∠K



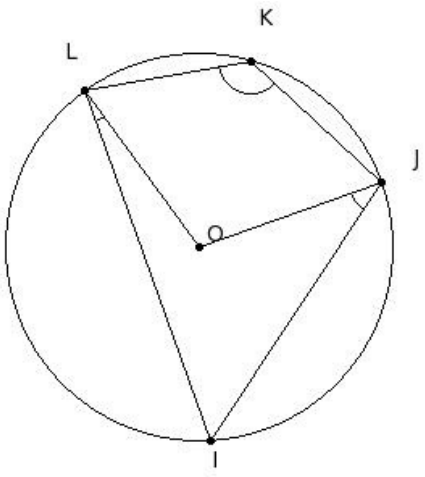
(i) 145.5° (ii) 150.5° (iii) 155.5° (iv) 175.5° (v) 160.5°

43. In the given figure, O is the centre of the circle. If ∠EFG = 122°, find ∠OEG



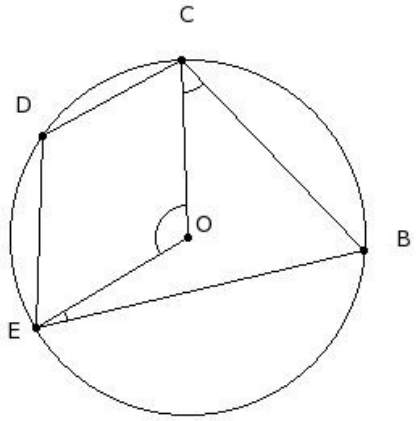
(i) 42° (ii) 47° (iii) 62° (iv) 37° (v) 32°

44. In the given figure, O is the centre of the circle. If ∠IJO = 37° and ∠OLI = 16°, find ∠JKL



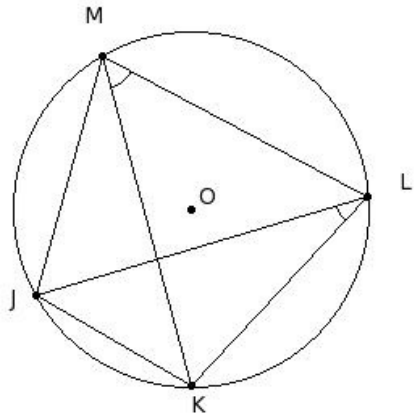
(i) 127° (ii) 132° (iii) 142° (iv) 137° (v) 157°

45. In the given figure, O is the centre of the circle. If ∠BCO = 42° and ∠OEB = 17°, find ∠COE



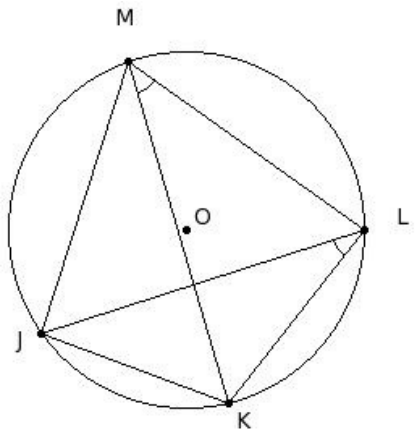
(i) 148° (ii) 123° (iii) 118° (iv) 128° (v) 133°

46. In the given figure, JKLM is a cyclic quadrilateral. If ∠JLK = 30° and ∠LMK = 47°, find ∠JKL



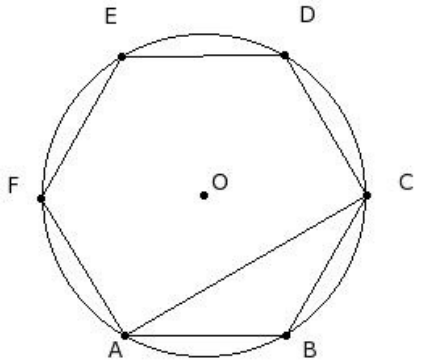
(i) 133° (ii) 118° (iii) 113° (iv) 103° (v) 108°

47. In the given figure, JKLM is a cyclic quadrilateral. If ∠JLK = 34° and ∠LMK = 38°, find ∠JML



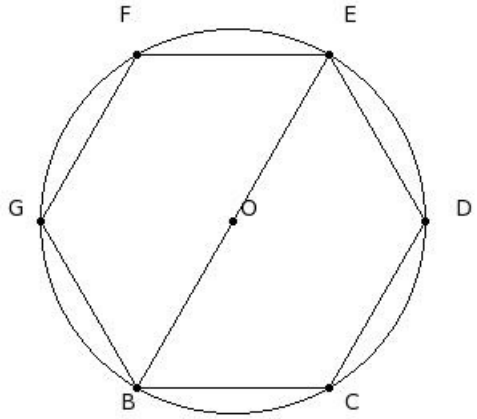
(i) 82° (ii) 77° (iii) 72° (iv) 102° (v) 87°

48. In the given figure, ABCDEF is a regular hexagon. Find ∠ACB



(i) 45° (ii) 30° (iii) 60° (iv) 40° (v) 35°

49. In the given figure, BCDEFG is a regular hexagon. Find ∠BED



(i) 70° (ii) 60° (iii) 65° (iv) 90° (v) 75°

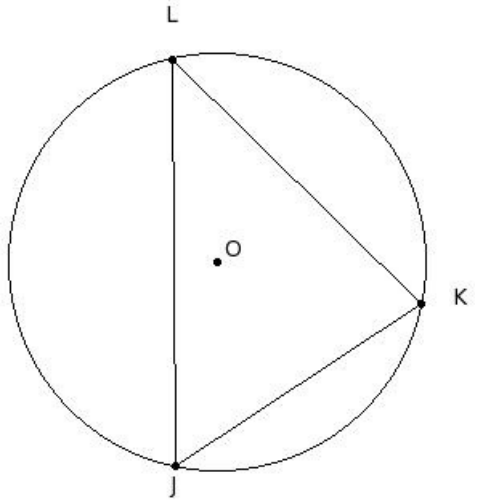
50. With the vertices of a triangle △FGH as centres, three circles are drawn touching each other externally. If the sides of the triangle are 9 cm , 16 cm and 13 cm , find the radii of the circles

(i) 3 cm , 6 cm & 10 cm respectively (ii) 8 cm , 11 cm & 15 cm respectively

(iii) 3 cm , 11 cm & 10 cm respectively (iv) 3 cm , 6 cm & 15 cm respectively

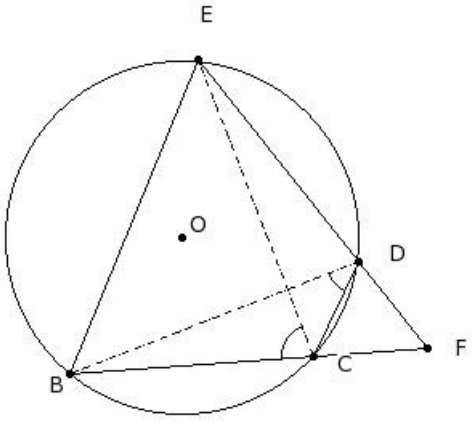
(v) 8 cm , 6 cm & 10 cm respectively

51. O is the centre of the circle. If ∠KLJ = 45°, find the angle ∠OKJ



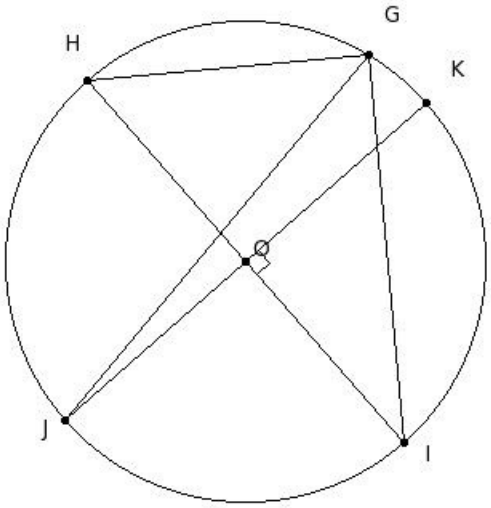
(i) 75° (ii) 55° (iii) 50° (iv) 60° (v) 45°

52. In the given figure, BCDE is a cyclic quadrilateral. If ∠BCE = 73° and ∠CDB = 43°, find ∠EBC



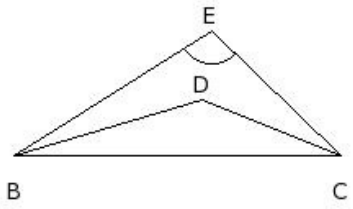
(i) 64° (ii) 79° (iii) 94° (iv) 74° (v) 69°

53. JK is the perpendicular bisector of side HI of △GHI. Given ∠GHI = 54° and ∠JGI = 45° , find ∠GIH



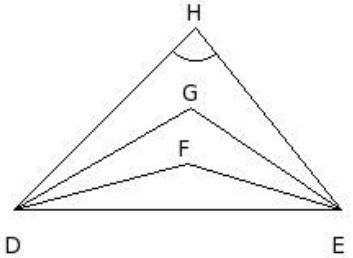
(i) 36° (ii) 66° (iii) 41° (iv) 46° (v) 51°

54. In the given figure, △EBC is a scalene triangle. DB bisects ∠EBC. Similarly CD bisects ∠BCE. Given ∠CEB = 104°, find ∠CDB



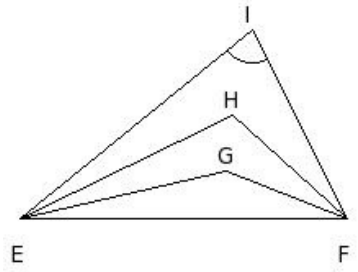
(i) 142° (ii) 152° (iii) 147° (iv) 172° (v) 157°

55. In the given figure, △HDE is a scalene triangle. FD & GD trisect ∠HDE. Similarly EF & EG trisect ∠DEH. Given ∠EHD = 84°, find ∠EFD



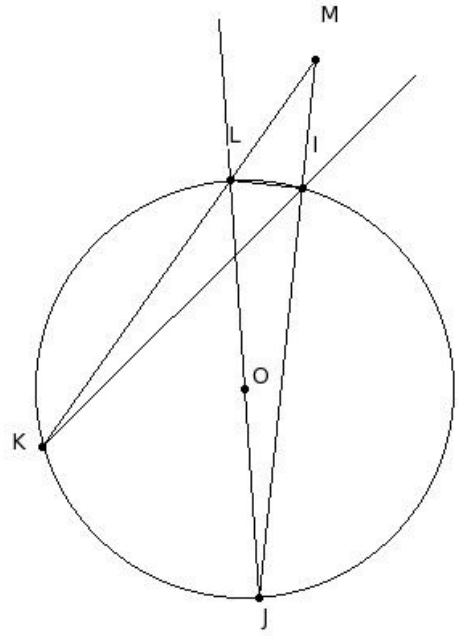
(i) 163° (ii) 148° (iii) 153° (iv) 158° (v) 178°

56. In the given figure, △IEF is a scalene triangle. GE & HE trisect ∠IEF. Similarly FG & FH trisect ∠EFI. Given ∠FIE = 78°, find ∠FHE



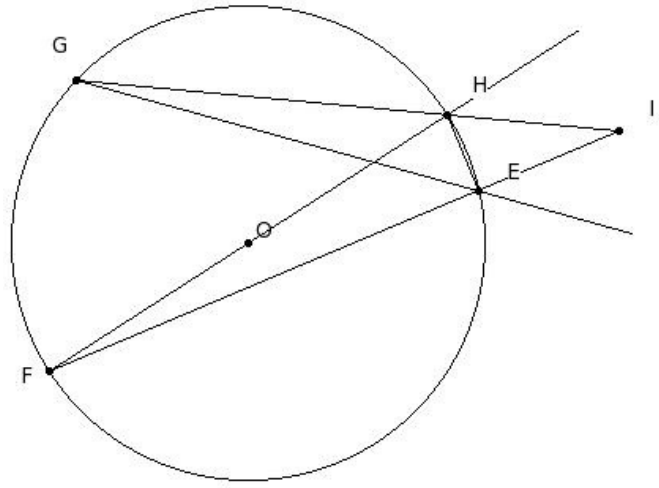
(i) 122° (ii) 117° (iii) 142° (iv) 112° (v) 127°

57. In the given figure, ∠IKL = 10° and ∠IML = 29°, find ∠KIL



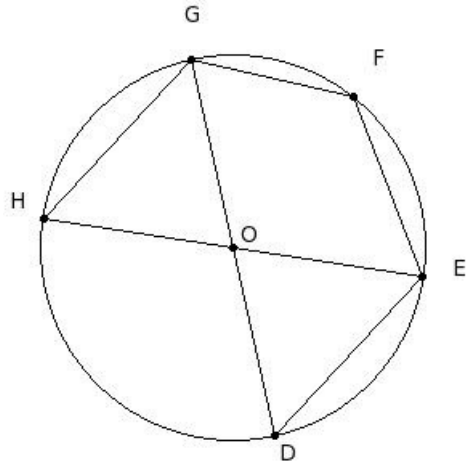
(i) 56° (ii) 61° (iii) 81° (iv) 51° (v) 66°

58. In the given figure, ∠EGH = 10° and ∠EIH = 28°, find ∠FHE



(i) 80° (ii) 110° (iii) 95° (iv) 85° (v) 90°

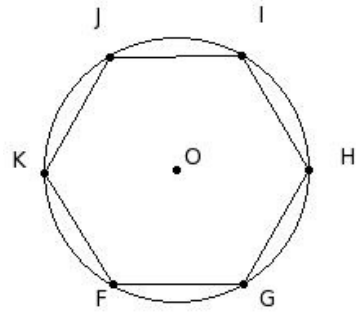
59. In the given figure, DE , EF , FG and GH are chords and DG , EH are diameters passing through the centre O. If ∠DOE = 69°. Find ∠EFG



(i) 154.5° (ii) 139.5° (iii) 134.5° (iv) 124.5° (v) 129.5°

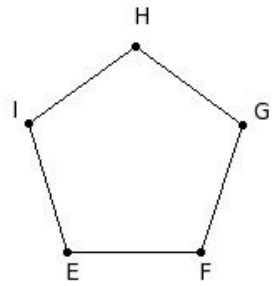
60. In the given figure, FGHIJK is a regular hexagon inscribed in a circle with centre O. Which of the following are true?

a) ∠GJH = 30°
b) ∠FOK = 60°
c) ∠KIH = 90°
d) ∠GOI = 120°
e) ∠FHG = 60°



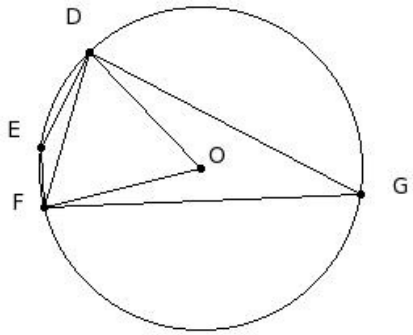
(i) {e,c} (ii) {a,b,c,d} (iii) {e,a} (iv) {e,b} (v) {e,d,a}

61. In the given figure, EFGHI is a regular pentagon . Find ∠EIG



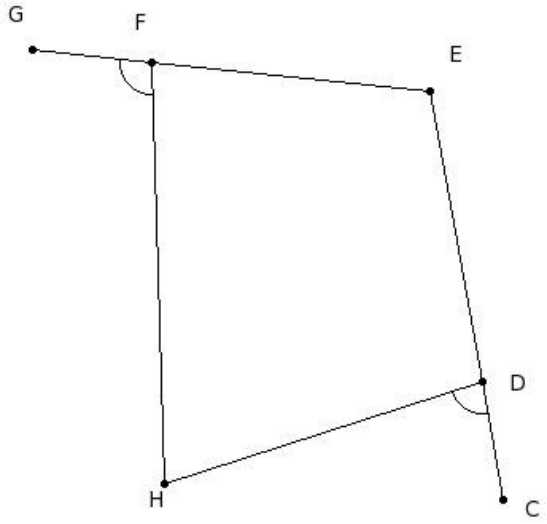
(i) 82° (ii) 87° (iii) 72° (iv) 102° (v) 77°

62. In the given figure, DF is a chord which is equal to the radius of the circle. Find ∠G and ∠E



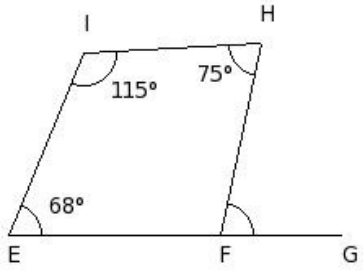
(i) 45° & 135° (ii) 50° & 130° (iii) 30° & 150° (iv) 60° & 120° (v) 40° & 140°

63. In the given figure, DEFH is a cyclic quadrilateral where EF and ED are produced to G and C respectively. If ∠CDH = 83°, find ∠GFH



(i) 97° (ii) 127° (iii) 107° (iv) 102° (v) 112°

64. In the given figure, ∠E = 68° , ∠H = 75° and ∠I = 115°, find ∠HFG



(i) 88° (ii) 83° (iii) 78° (iv) 93° (v) 108°

65. Which of the following statements are true?

a) A cyclic kite is a square.
b) A cyclic parallelogram is a rectangle.
c) A cyclic rhombus is a square.
d) A cyclic trapezium is a rectangle.
e) A cyclic parallelogram is a rhombus.

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

66. Which of the following statements are true?

a) An isosceles trapezium is cyclic.
b) Either pair of opposite angles of a cyclic quadrilateral are supplementary.
c) All parallelograms are cyclic.
d) A quadrilateral in which the diagonals are equal and bisect each other is cyclic.
e) The exterior angle of a quadrilateral and its interior opposite angle are supplementary.

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

67. Which of the following are not cyclic quadrilaterals?

a) isosceles trapezium
b) rhombus
c) kite
d) square
e) rectangle

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

68. Which of the following statements are true?

a) Angle subtended by the major arc at the centre is acute.
b) Angle subtended in the major segment is obtuse.
c) Angle subtended by the major arc in its alternate segment is obtuse.
d) The angle subtended in a semicircle is a right angle.
e) If two chords are equal, then they are equidistant from the centre of the circle.

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

69. In triangle CDE, if a circle is drawn with DE as diameter and if it passes through C it is a

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

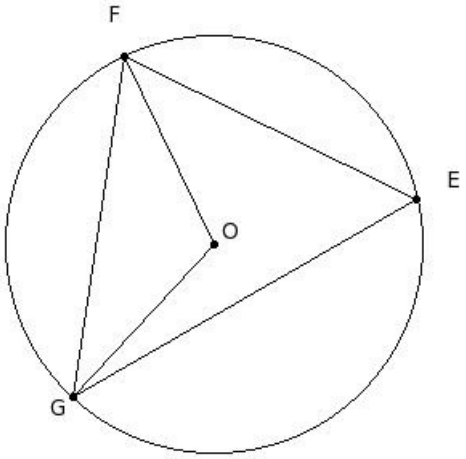
70. Which of the following statements are true?

a) π is a rational number.
b) All chords of a circle are diameters.
c) All diameters of a circle are chords.
d) A circle divides the plane into three mutually disjoint sets of points.
e) $\frac{22}{7}$ is a rational number.

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

71. In the given figure, which of the following are true?

a) $\angle E + \angle OFG + \angle OGF = 2\angle E$
b) $\angle E + \angle OGF = 90°$
c) $\angle E + \angle OFG = 120°$
d) $\angle E + \angle OFG = 90°$
e) $\angle E + \angle FOG = 180°$



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

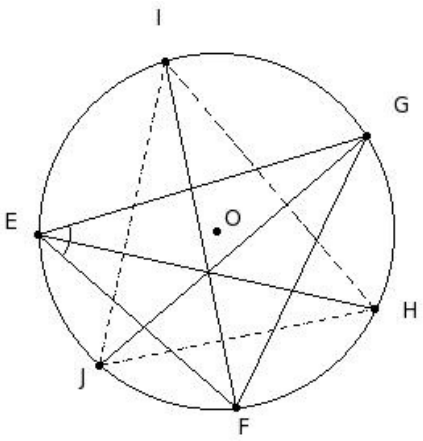
72. If GHIJ is a cyclic quadrilateral and $\angle G - \angle I = 8°$, then $\angle I$

(i) 101° (ii) 91° (iii) 96° (iv) 86° (v) 116°

73. If HIJK is a cyclic parallelogram, then $\angle K$

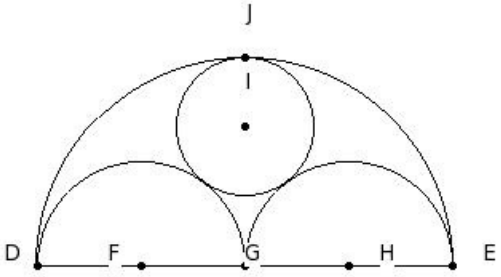
(i) 120° (ii) 100° (iii) 105° (iv) 90° (v) 95°

74. In the given figure, the bisectors of $\angle E$, $\angle F$ & $\angle G$ of $\triangle EFG$ meet the circumcircle at H , I & J. If $\angle E = 58°$, find $\angle H$



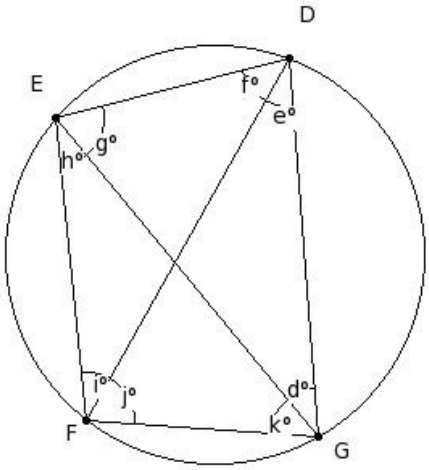
(i) 66° (ii) 76° (iii) 61° (iv) 71° (v) 91°

75. DE is a line segment and G is its mid-point. Three semi-circles are drawn with DG , GE and DE as diameters. F , H and G respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given DF = 7 cm



(i) 5.67 cm (ii) 2.67 cm (iii) 3.67 cm (iv) 6.67 cm (v) 4.67 cm

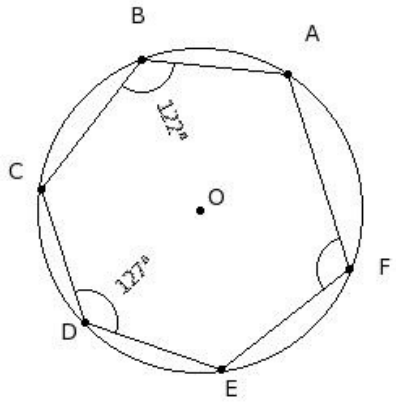
76. In the given figure, which of the following angle pairs are equal?



(i) {(f,k),(h,d),(g,i),(e,j)} (ii) {(h,f),(i,d),(k,g),(e,j)} (iii) {(h,d),(e,i),(f,g),(j,k)} (iv) {(i,f),(d,g),(e,k),(j,h)}

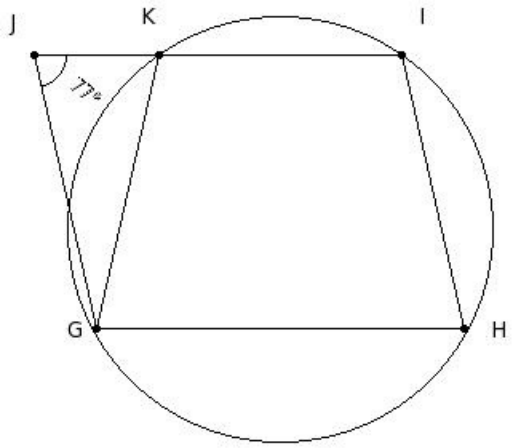
(v) {(d,i),(e,h),(f,k),(g,j)}

77. ABCDEF is a hexagon inscribed in a circle. Given ∠ABC = 122° & ∠CDE = 127°, find ∠EFA



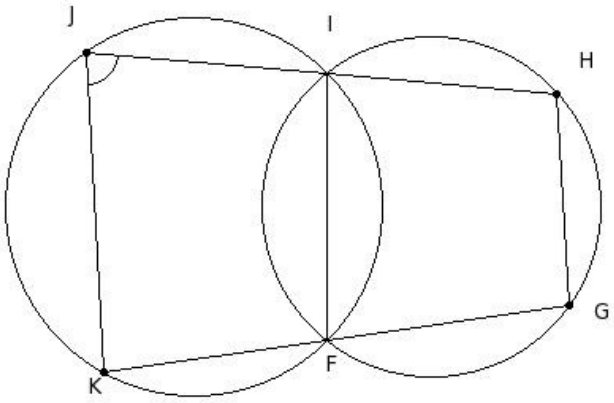
(i) 141° (ii) 111° (iii) 116° (iv) 126° (v) 121°

78. In the given figure, GHIJ is a parallelogram. The circumcircle of △GHI cuts IJ at K. Given ∠GJK = 77°, find ∠JGK



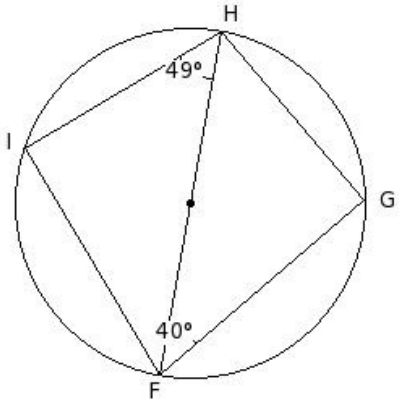
(i) 36° (ii) 56° (iii) 31° (iv) 41° (v) 26°

79. In the given figure, JH and KG are two lines passing through the points of intersection of the two circles at I and F. If ∠KJI = 82° , find ∠IHG



(i) 103° (ii) 113° (iii) 108° (iv) 98° (v) 128°

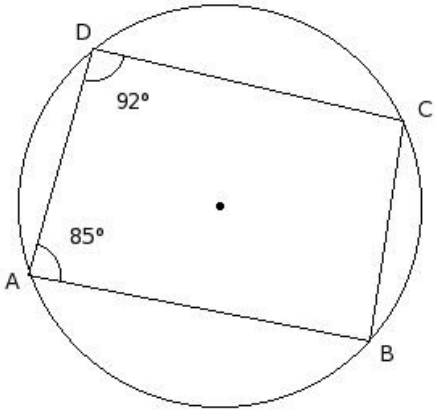
80. In the given figure, find the angles of the quadrilateral.



(i) F = 81°, G = 90°, H = 99°, I = 90° (ii) F = 82°, G = 90°, H = 98°, I = 90° (iii) F = 80°, G = 90°, H = 100°, I = 90°

(iv) F = 83°, G = 90°, H = 97°, I = 90° (v) F = 79°, G = 90°, H = 101°, I = 90°

81. In the given figure, find the remaining angles of the quadrilateral.

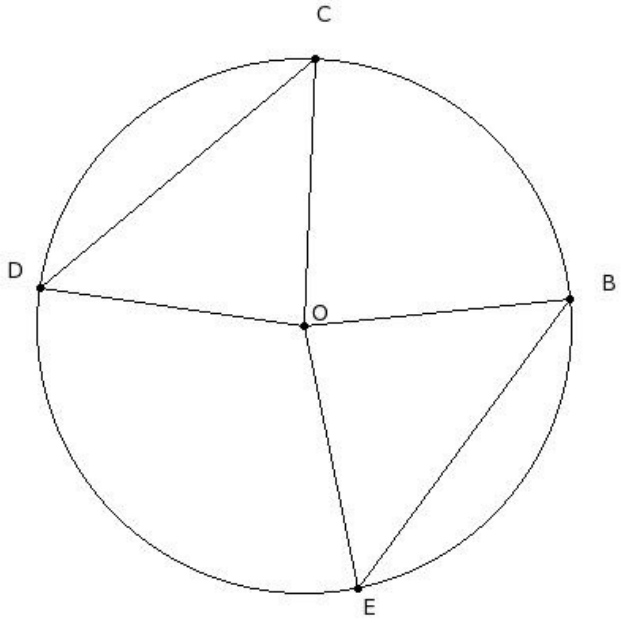


(i) B = 90°, C = 97° (ii) B = 89°, C = 96° (iii) B = 88°, C = 95° (iv) B = 86°, C = 93° (v) B = 87°, C = 94°

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

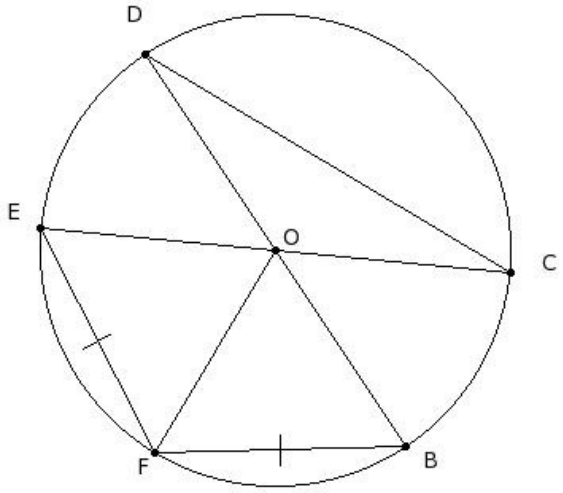
(i) Similar points (ii) Concyclic points (iii) Cyclic points (iv) Coincident points (v) Concurrent points

83. In the given figure, BE & CD are two chords of equal length. Given ∠CDO = 48°, find ∠BOE



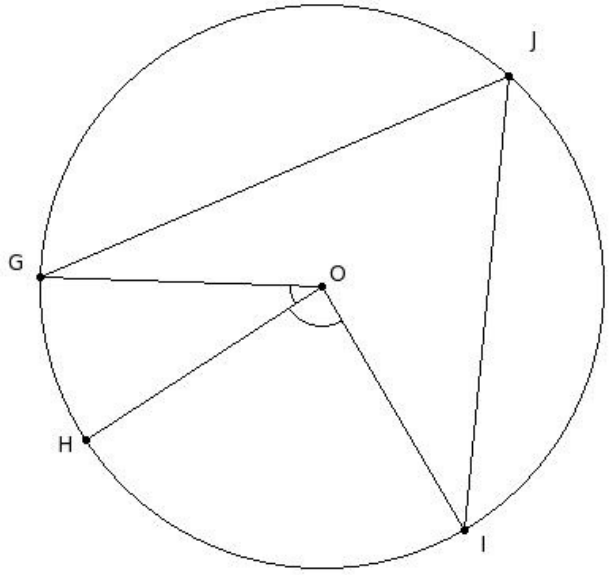
(i) 114° (ii) 99° (iii) 89° (iv) 84° (v) 94°

84. In the given figure, EF & FB are equal length chords, BD and CE are diameters. Given ∠OFB = 58° find, ∠CDO



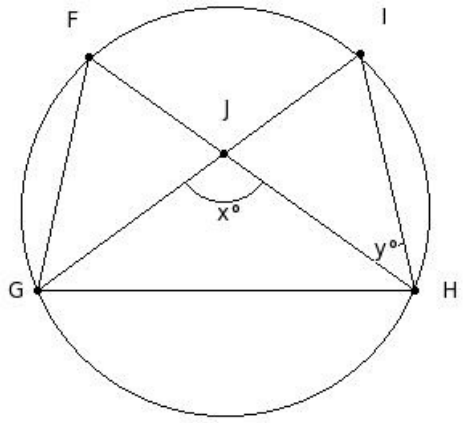
(i) 56° (ii) 41° (iii) 31° (iv) 26° (v) 36°

85. In the given figure, O is the centre of the circle. Given ∠HOI = 87° & ∠GOH = 35°, find ∠GJI



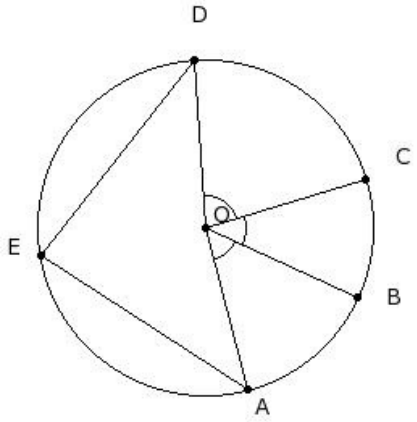
(i) 71° (ii) 66° (iii) 61° (iv) 76° (v) 91°

86. In the given figure, chords FH & GI meet at J. Given x = 108° and y = 41°, find ∠GFH



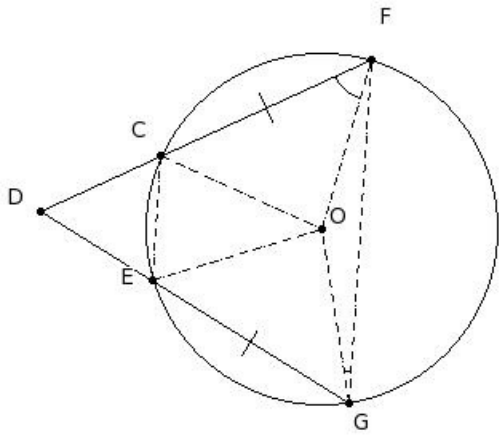
(i) 97° (ii) 77° (iii) 82° (iv) 72° (v) 67°

87. In the given figure, O is the centre of the circle. Given ∠BOC = 41°, ∠COD = 77° and ∠AED = 84.5°, find ∠AOB



(i) 56° (ii) 66° (iii) 51° (iv) 61° (v) 81°

88. In the given figure, ∠EDC = 56° & ∠OGF = 13°, find ∠OFC



(i) 64° (ii) 54° (iii) 79° (iv) 59° (v) 49°

Assignment Key

1) (ii)	2) (ii)	3) (v)	4) (v)	5) (v)	6) (i)
7) (i)	8) (iv)	9) (iv)	10) (i)	11) (iv)	12) (ii)
13) (ii)	14) (iii)	15) (iii)	16) (iv)	17) (v)	18) (ii)
19) (iv)	20) (i)	21) (iii)	22) (i)	23) (iii)	24) (iii)
25) (i)	26) (v)	27) (i)	28) (ii)	29) (ii)	30) (ii)
31) (i)	32) (iv)	33) (i)	34) (ii)	35) (iii)	36) (iii)
37) (iii)	38) (ii)	39) (v)	40) (iii)	41) (i)	42) (i)
43) (v)	44) (i)	45) (iii)	46) (iv)	47) (iii)	48) (ii)
49) (ii)	50) (i)	51) (v)	52) (i)	53) (i)	54) (i)
55) (ii)	56) (iv)	57) (iv)	58) (i)	59) (iv)	60) (ii)
61) (iii)	62) (iii)	63) (i)	64) (iii)	65) (v)	66) (v)
67) (i)	68) (iv)	69) (iii)	70) (iii)	71) (ii)	72) (iv)
73) (iv)	74) (iii)	75) (v)	76) (v)	77) (ii)	78) (v)
79) (iv)	80) (i)	81) (iii)	82) (ii)	83) (iv)	84) (iv)
85) (iii)	86) (v)	87) (iii)	88) (v)		