EduSahara™ Assignment

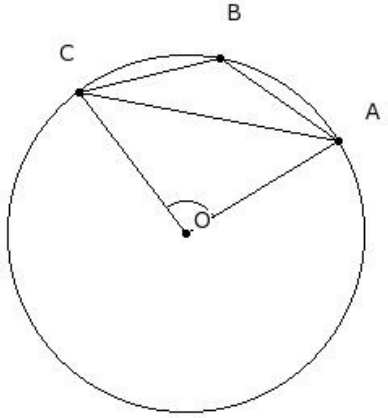
Name : Circles - Angle Properties

Chapter : Angle Properties of a Circle

Grade : ICSE Grade X

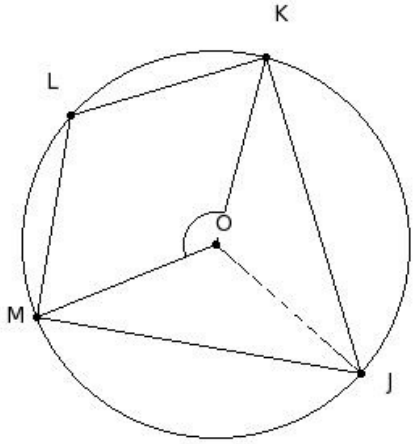
License : Non Commercial Use

1. O is the centre of the circle. If $\angle O = 96°$, find $\angle B$



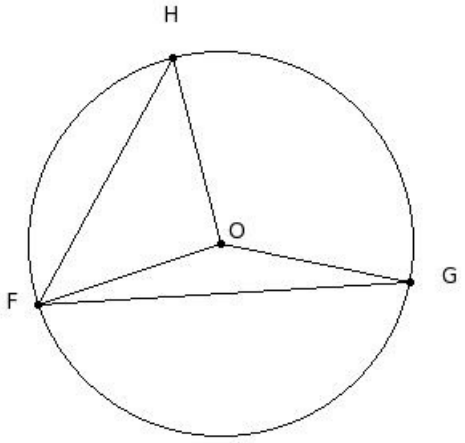
(i) 132° (ii) 162° (iii) 142° (iv) 147° (v) 137°

2. O is the centre of the circle. If ∠KOM = 127°, find ∠J



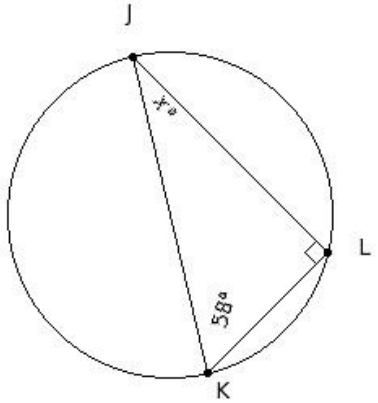
(i) 68.5° (ii) 78.5° (iii) 73.5° (iv) 93.5° (v) 63.5°

3. O is the centre of the circle. If ∠GOF = 150° and ∠HOF = 94°, find ∠GFH



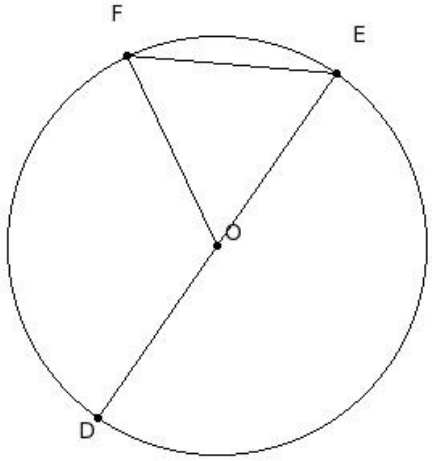
(i) 58° (ii) 68° (iii) 88° (iv) 73° (v) 63°

4. Find the missing angle in the following figure?



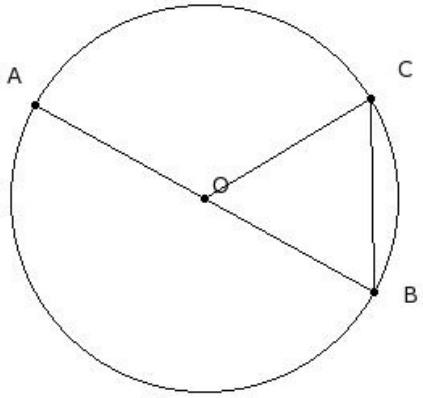
(i) 62° (ii) 42° (iii) 47° (iv) 32° (v) 37°

5. O is the centre of the circle and OF = EF. Find ∠EOF



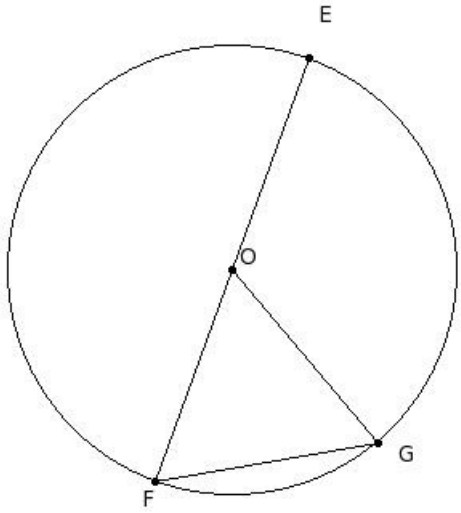
(i) 90° (ii) 65° (iii) 75° (iv) 70° (v) 60°

6. O is the centre of the circle and OC = BC. Find ∠COA



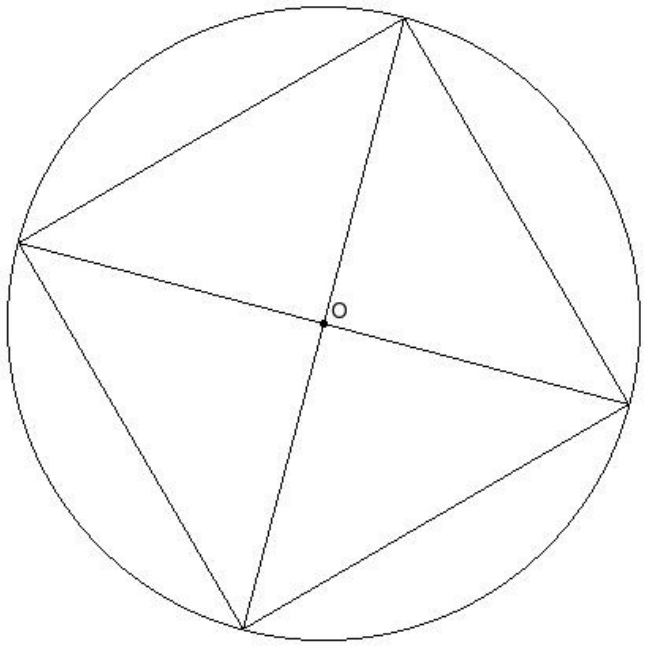
(i) 125° (ii) 135° (iii) 120° (iv) 150° (v) 130°

7. O is the centre of the circle and OG = FG. Find reflex ∠GOE



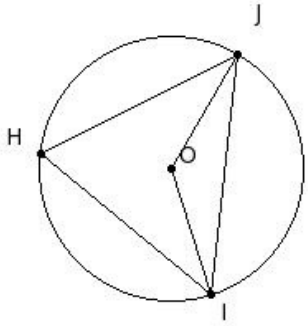
(i) 245° (ii) 270° (iii) 255° (iv) 240° (v) 250°

8. Find the side of the square in the following figure if the radius of the circle is 20.00 cm.



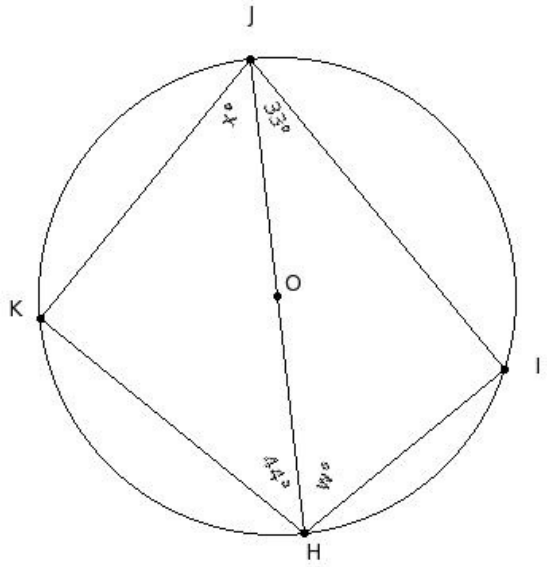
(i) 29.28 cm (ii) 30.28 cm (iii) 26.28 cm (iv) 27.28 cm (v) 28.28 cm

9. O is the centre of the circle. If $\angle H + \angle IOJ = 198°$, find $\angle IOJ$



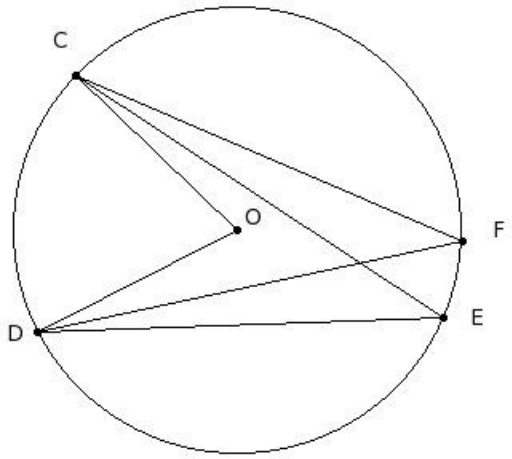
(i) 142° (ii) 162° (iii) 137° (iv) 147° (v) 132°

10. O is the centre of the circle. If ∠HJI = 33° and ∠JHK = 44°, find w°, x°



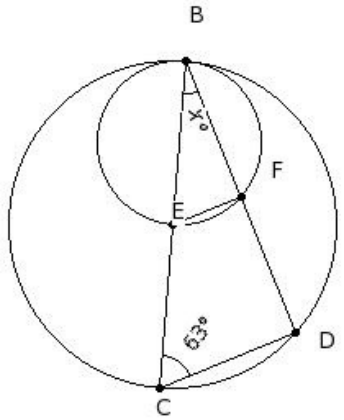
(i) 56°, 67° (ii) 46°, 57° (iii) 36°, 57° (iv) 76°, 77° (v) 57°, 46°

11. O is the centre of the circle. If ∠COD = 71°, find the angle ∠E



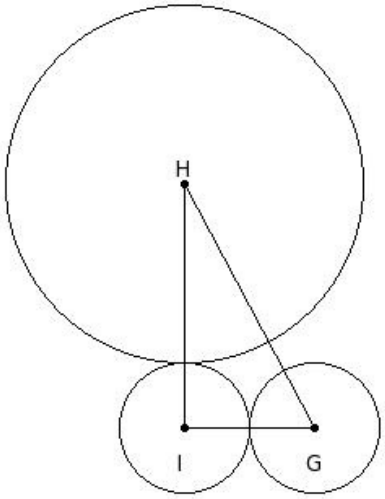
(i) 50.5° (ii) 45.5° (iii) 40.5° (iv) 65.5° (v) 35.5°

12. Two circles touch internally. E is the centre of the bigger circle and lies on the smaller circle. If ∠BCD = 63°, find ∠B



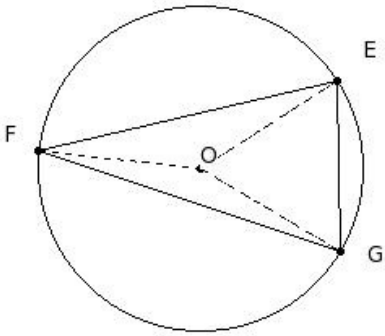
(i) 42° (ii) 37° (iii) 32° (iv) 27° (v) 57°

13. 'G' and 'H' are centres of circles of radii 4 cm and 11 cm such that GH = 17 cm and 'I' is the centre of the circle of radius 'r' cm which touches the above circles externally. If ∠GIH = 90°, find 'r'



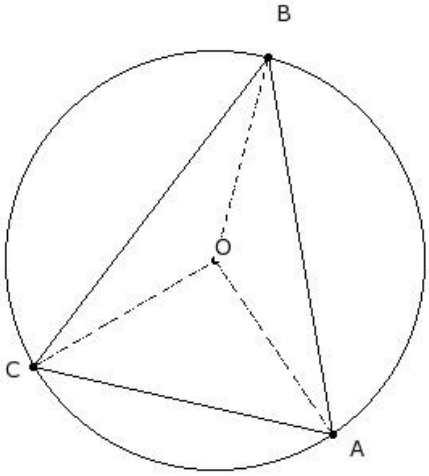
(i) 3 cm (ii) 5 cm (iii) 2 cm (iv) 4 cm (v) 6 cm

14. △EFG is inscribed in a circle with centre O. If ∠EOF = 141° and ∠FOG = 156°, find ∠GEF



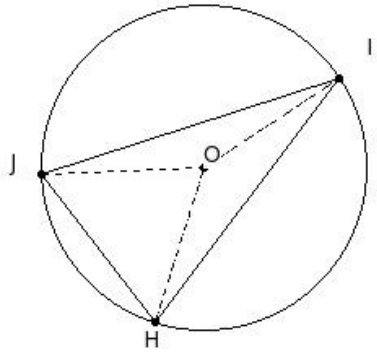
(i) 88° (ii) 78° (iii) 108° (iv) 93° (v) 83°

15. △ABC is inscribed in a circle with centre O. If ∠AOB = 131° and ∠BOC = 135°, find ∠ABC



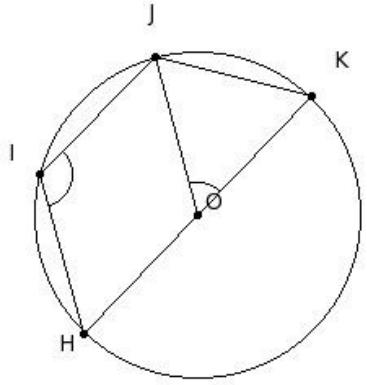
(i) 47° (ii) 62° (iii) 57° (iv) 52° (v) 77°

16. △HIJ is inscribed in a circle with centre O. If ∠HOI = 141° and ∠IOJ = 149°, find ∠IJH



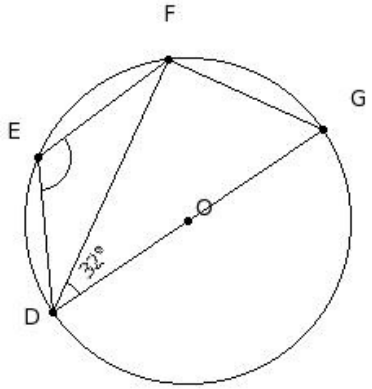
(i) 85.5° (ii) 70.5° (iii) 100.5° (iv) 80.5° (v) 75.5°

17. O is the centre of the circle. If ∠HIJ = 119.5°, find ∠JOK



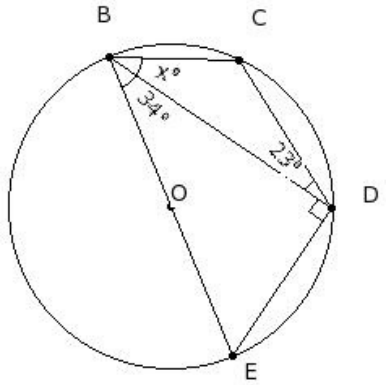
(i) 89° (ii) 64° (iii) 69° (iv) 59° (v) 74°

18. O is the centre of the circle and ∠GDF = 32°, find ∠DEF



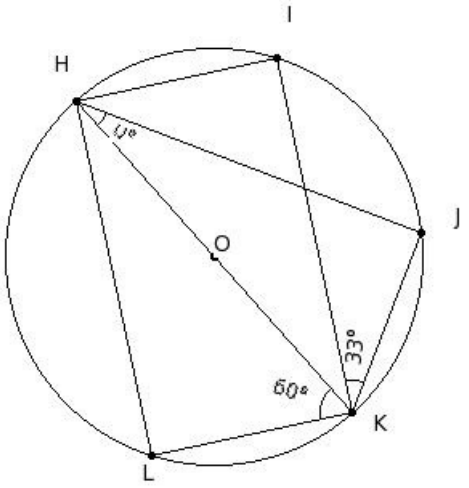
(i) 127° (ii) 122° (iii) 137° (iv) 132° (v) 152°

19. O is the centre of the circle. If ∠DBE = 34° and ∠BDC = 23°, find ∠CBD



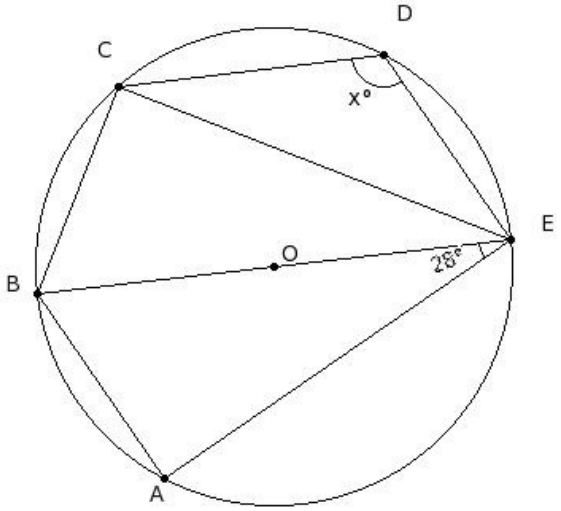
(i) 63° (ii) 38° (iii) 33° (iv) 43° (v) 48°

20. In the given figure, O is the centre of the circle and HK is a diameter. If ∠HKL = 60° and ∠IKJ = 33°, find ∠KHJ



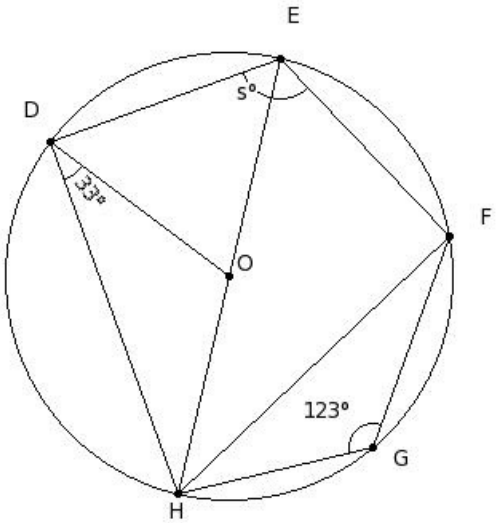
(i) 27° (ii) 42° (iii) 32° (iv) 37° (v) 57°

21. In the given figure, O is the centre of the circle and chord AB is equal to chord BC and BE is a diameter. If ∠AEB = 28°, find ∠EDC



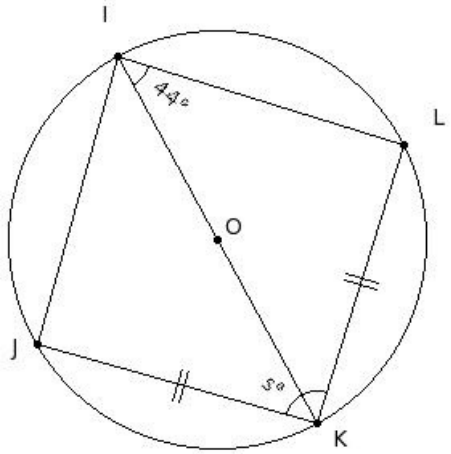
(i) 128° (ii) 133° (iii) 118° (iv) 123° (v) 148°

22. In the given figure, O is the centre of the circle and chord DE is equal to chord EF and EH is a diameter. If ∠HDO = 33° and ∠FGH = 123°, find ∠DEF



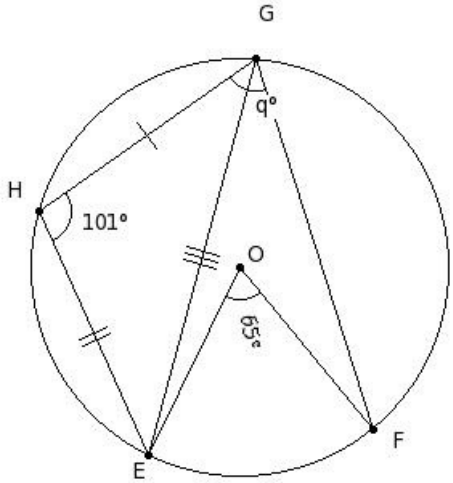
(i) 144° (ii) 129° (iii) 124° (iv) 119° (v) 114°

23. In the given figure, O is the centre of the circle , chord JK is equal to chord KL and IK is a diameter. If ∠LIK = 44° find ∠JKL



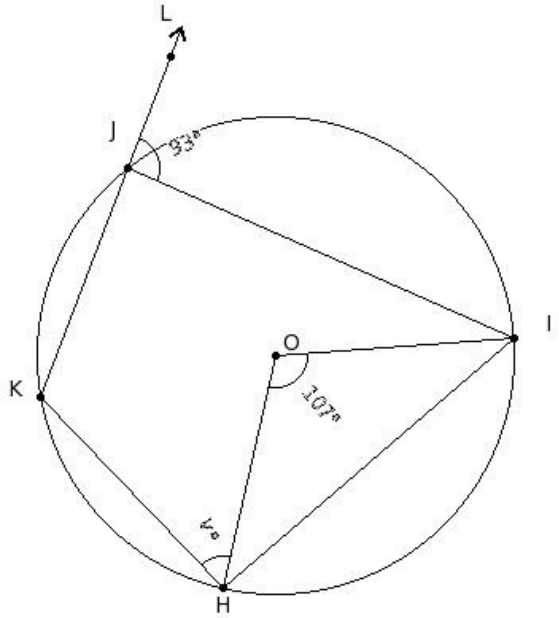
(i) 107° (ii) 122° (iii) 97° (iv) 102° (v) 92°

24. In the given figure, O is the centre of the circle , chord EH is equal to chord HG. If ∠EOF = 65° and ∠EHG = 101°, find ∠FGH



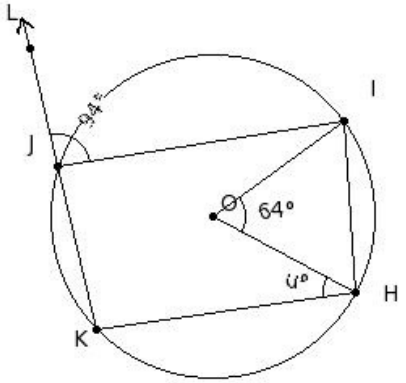
(i) 72° (ii) 77° (iii) 87° (iv) 102° (v) 82°

25. In the given figure, O is the centre of the circle. If ∠HOI = 107° and ∠IJL = 93°, find ∠KHO



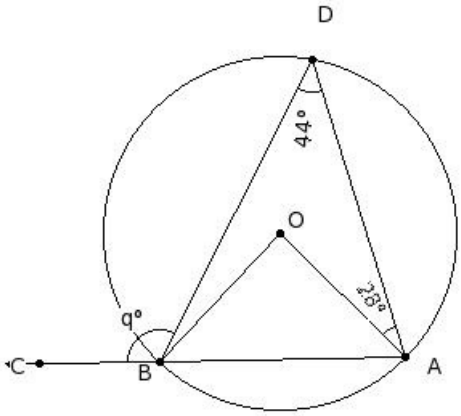
(i) 56.5° (ii) 61.5° (iii) 71.5° (iv) 86.5° (v) 66.5°

26. In the given figure, O is the centre of the circle. If ∠HOI = 64° and ∠IJL = 94°, find ∠KHO



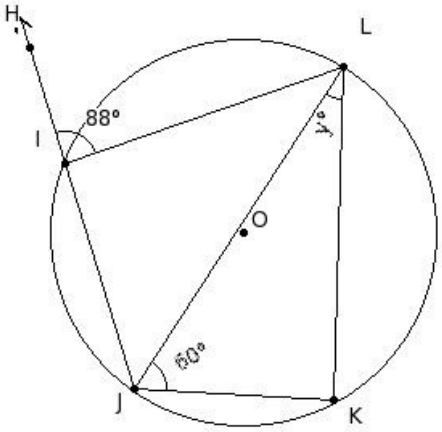
(i) 46° (ii) 41° (iii) 36° (iv) 51° (v) 66°

27. In the given figure, O is the centre of the circle. If ∠ADB = 44° and ∠OAD = 28°, find ∠CBD



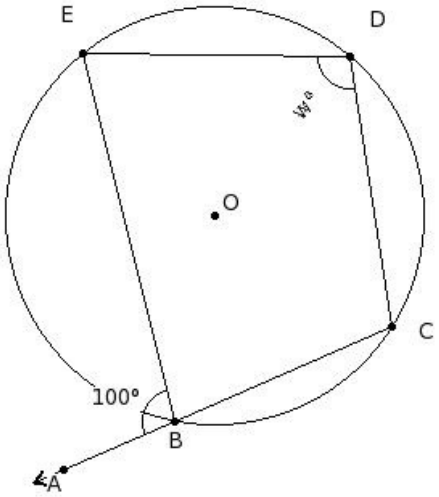
(i) 148° (ii) 133° (iii) 118° (iv) 128° (v) 123°

28. In the given figure, O is the centre of the circle. If ∠LJK = 60° and ∠HIL = 88°, find ∠JLK



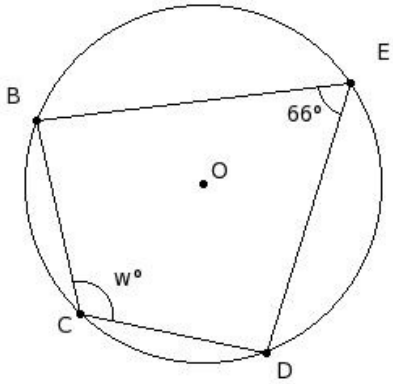
(i) 47° (ii) 42° (iii) 37° (iv) 62° (v) 32°

29. In the given figure, O is the centre of the circle. If ∠ABE = 100°, find ∠CDE



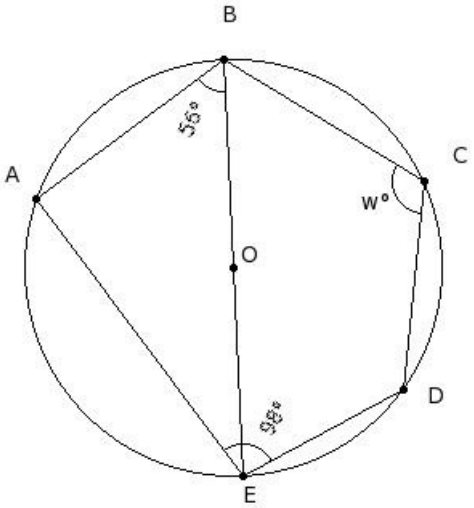
(i) 110° (ii) 130° (iii) 105° (iv) 115° (v) 100°

30. In the given figure, O is the centre of the circle. If ∠DEB = 66°, find ∠BCD



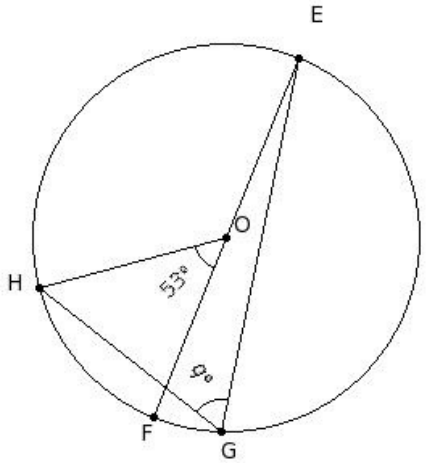
(i) 144° (ii) 124° (iii) 119° (iv) 129° (v) 114°

31. In the given figure, O is the centre of the circle and BE is a diameter. If ∠DEA = 98° and ∠ABE = 56°, find ∠BCD



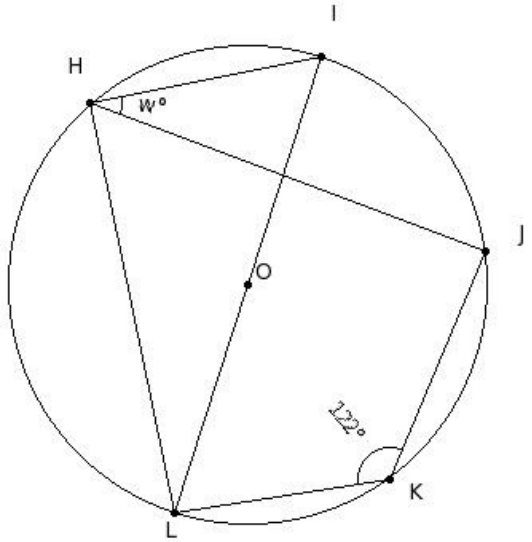
(i) 126° (ii) 146° (iii) 131° (iv) 121° (v) 116°

32. In the given figure, O is the centre of the circle and EF is a diameter. If ∠FOH = 53°, find ∠EGH



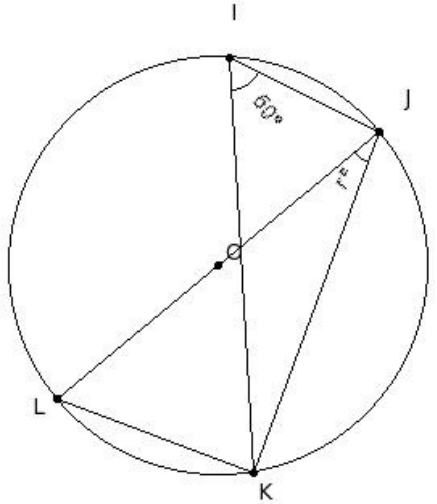
(i) 63.5° (ii) 93.5° (iii) 68.5° (iv) 73.5° (v) 78.5°

33. In the given figure, O is the centre of the circle and IL is a diameter. If ∠JKL = 122°, find ∠JHI



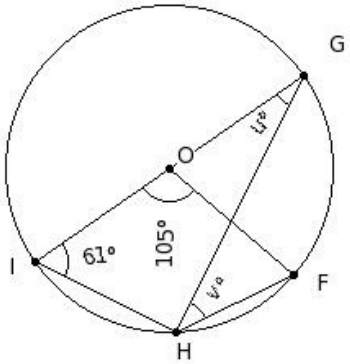
(i) 37° (ii) 42° (iii) 62° (iv) 47° (v) 32°

34. In the given figure, O is the centre of the circle and JL is a diameter. If ∠KIJ = 60°, find ∠KJL



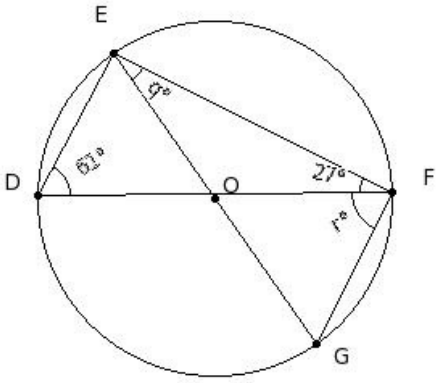
(i) 30° (ii) 45° (iii) 40° (iv) 60° (v) 35°

35. In the given figure, O is the centre of the circle and GI is a diameter. If ∠FOI = 105° and ∠OIH = 61°, find ∠GHF + ∠HGI



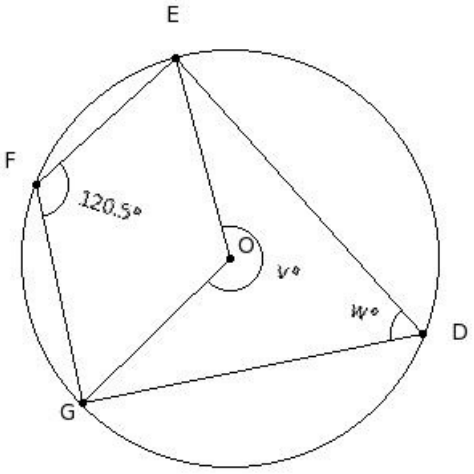
(i) 66.5° (ii) 71.5° (iii) 81.5° (iv) 96.5° (v) 76.5°

36. In the given figure, O is the centre of the circle and EG is a diameter. If ∠DFE = 27° and ∠EDF = 61°, find ∠GEF + ∠DFG



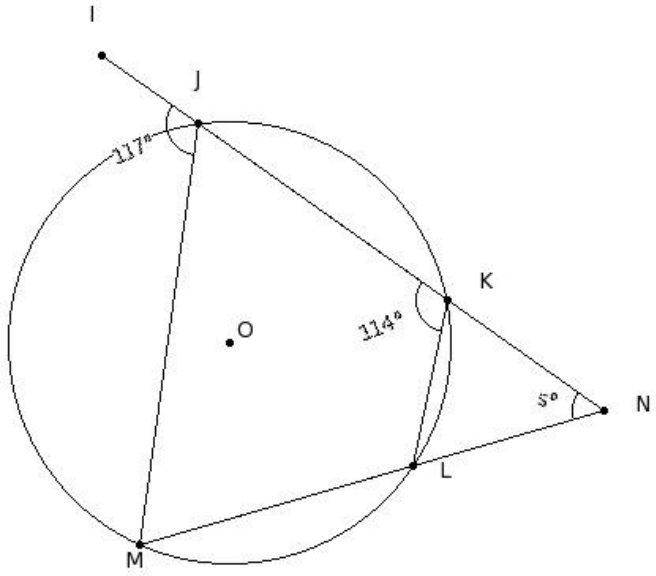
(i) 97° (ii) 122° (iii) 92° (iv) 107° (v) 102°

37. In the given figure, O is the centre of the circle. If ∠EFG = 120.5°, find ∠GOE + ∠EDG



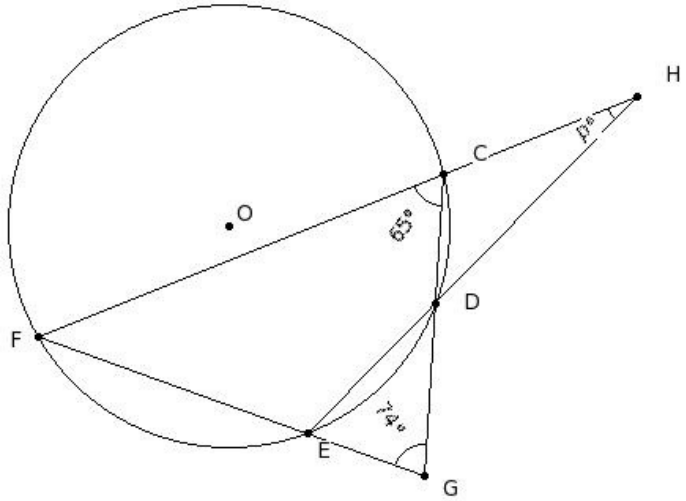
(i) 315.5° (ii) 310.5° (iii) 330.5° (iv) 305.5° (v) 300.5°

38. In the given figure, O is the centre of the circle. If ∠IJM = 117° and ∠JKL = 114°, find ∠KNL



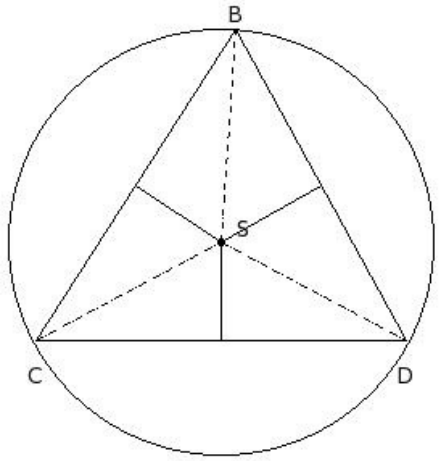
(i) 56° (ii) 66° (iii) 81° (iv) 51° (v) 61°

39. In the given figure, O is the centre of the circle . If ∠DGE = 74° and ∠DCF = 65°, find ∠CHD



(i) 54° (ii) 34° (iii) 29° (iv) 39° (v) 24°

40. In the given triangle S is the circumcentre. If SB = 13.20 cm, find the circumference of the circumcircle



(i) 83.0 cm (ii) 85.0 cm (iii) 82.0 cm (iv) 81.0 cm (v) 84.0 cm

41. Two circles with radii R and r touch internally. If the distance between their centres is d, then

(i) d = R + r (ii) d < R - r (iii) d = R - r (iv) d > R - r (v) d < R + r

42. Two circles with equal radii are

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

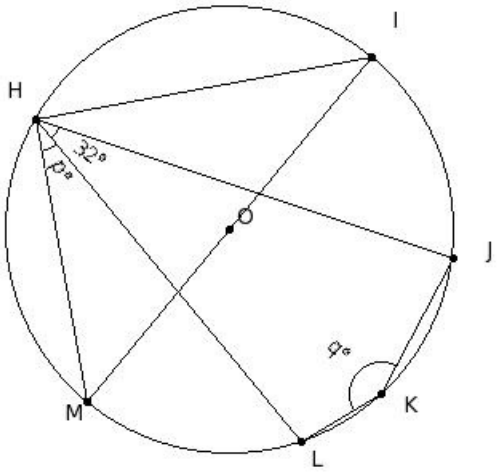
43. If two circles of radii 8 cm and 6 cm touch internally, the distance between their centres is

(i) 2 cm (ii) 0 cm (iii) 3 cm (iv) 1 cm (v) 4 cm

44. If two circles of radii 10 cm and 2 cm touch externally, the distance between their centres is

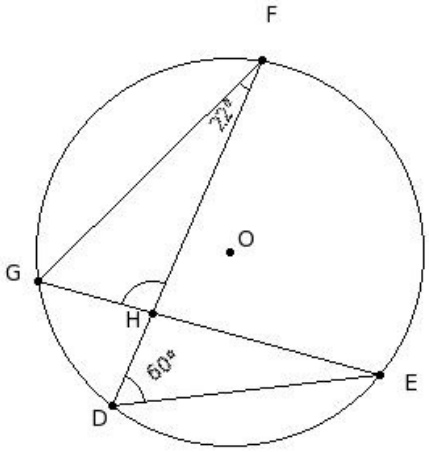
(i) 13 cm (ii) 11 cm (iii) 12 cm (iv) 14 cm (v) 10 cm

45. In the given figure, O is the centre and IM is a diameter of the circle and chord IJ is equal to chord LM. If ∠JHL = 32°, find ∠LHM + ∠JKL



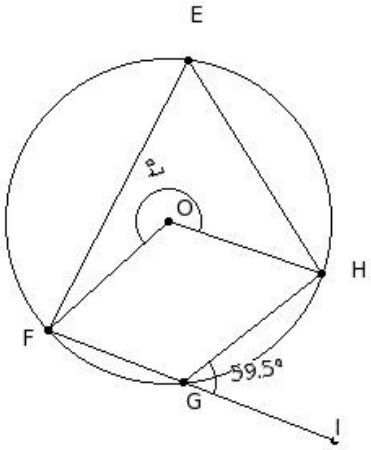
(i) 182° (ii) 187° (iii) 177° (iv) 207° (v) 192°

46. In the given figure, O is the centre of the circle. If ∠EDF = 60° and ∠DFG = 22°, find ∠FHG



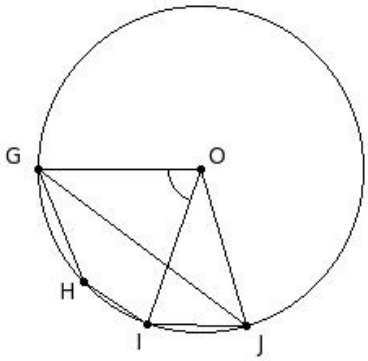
(i) 98° (ii) 103° (iii) 128° (iv) 108° (v) 113°

47. In the given figure, O is the centre of the circle. If ∠IGH = 59.5°, find reflex ∠HOF



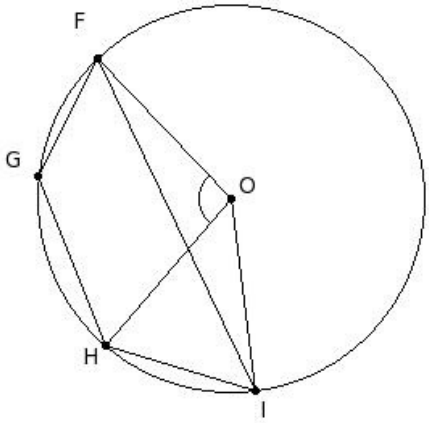
(i) 256° (ii) 241° (iii) 246° (iv) 251° (v) 271°

48. O is the centre of the circle. If Arc GI = 2 Arc IJ and ∠GOI = 71°, find ∠GJI



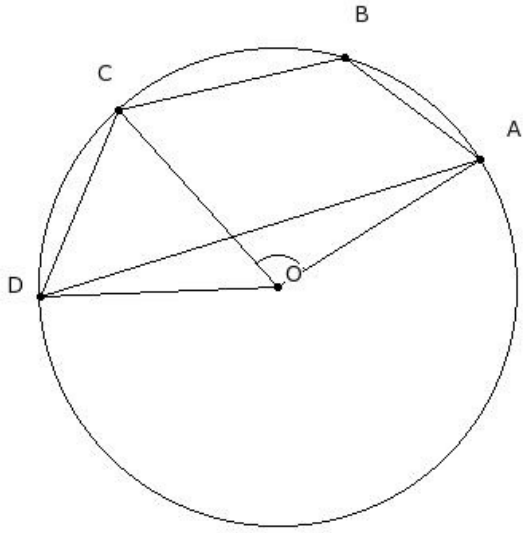
(i) 40.5° (ii) 50.5° (iii) 45.5° (iv) 35.5° (v) 65.5°

49. O is the centre of the circle. If Arc FH = 2 Arc HI and ∠FOH = 96°, find ∠IFH



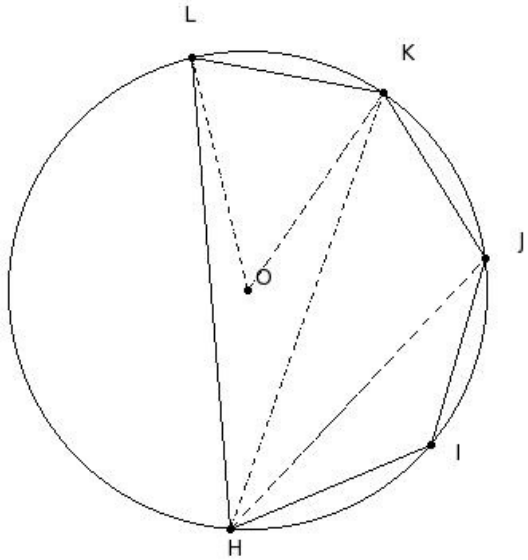
(i) 29° (ii) 24° (iii) 39° (iv) 54° (v) 34°

50. O is the centre of the circle. If Arc AC = 2 Arc CD and ∠AOC = 100°, find ∠ABC



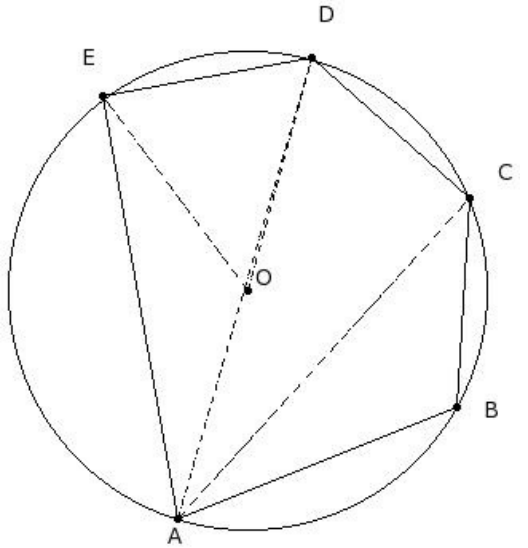
(i) 140° (ii) 145° (iii) 135° (iv) 130° (v) 160°

51. In the given figure, a pentagon is inscribed in a circle with centre O. Given IJ = JK = KL and ∠IJK = 132°. Find ∠IHJ



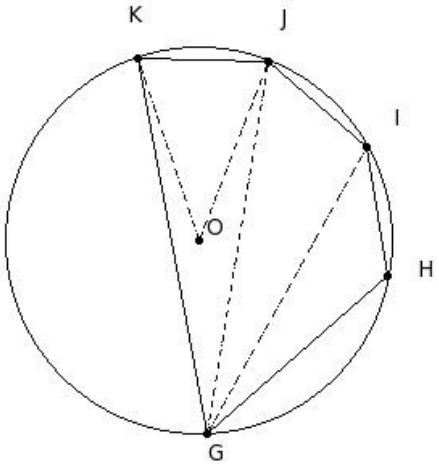
(i) 54° (ii) 39° (iii) 34° (iv) 24° (v) 29°

52. In the given figure, a pentagon is inscribed in a circle with centre O. Given BC = CD = DE and ∠BCD = 128°. Find ∠BAE



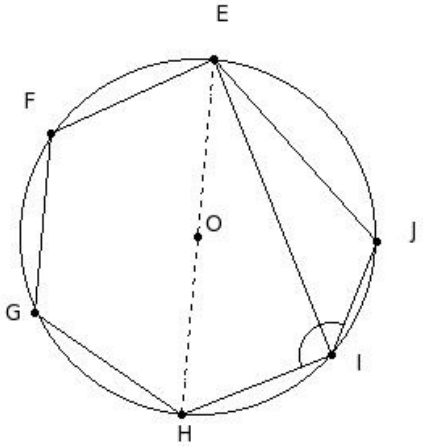
(i) 78° (ii) 93° (iii) 108° (iv) 83° (v) 88°

53. In the given figure, a pentagon is inscribed in a circle with centre O. Given HI = IJ = JK and ∠HIJ = 140°. Find ∠JOK



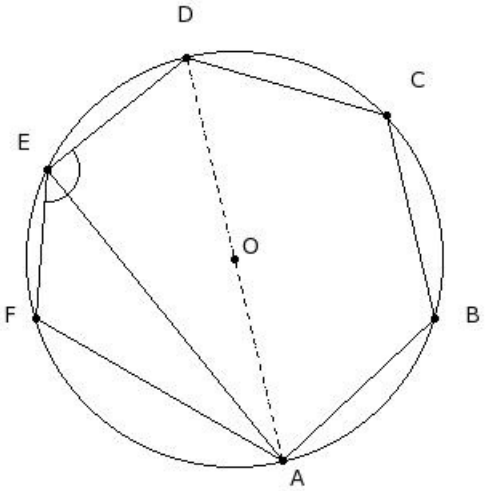
(i) 50° (ii) 55° (iii) 40° (iv) 45° (v) 70°

54. In the given figure, a hexagon is inscribed in a circle with centre O. Given EF = FG = GH and ∠HIJ = 133.49°. Find ∠EIJ



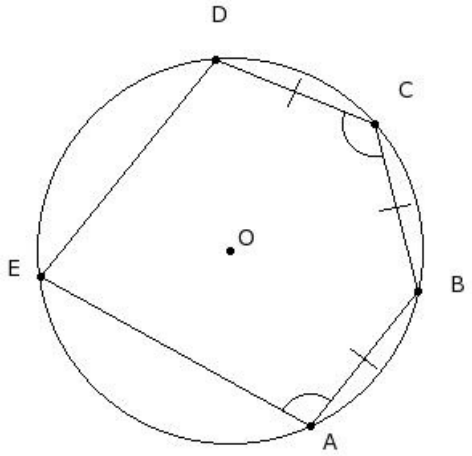
(i) 73.49° (ii) 53.49° (iii) 48.49° (iv) 58.49° (v) 43.49°

55. In the given figure, a hexagon is inscribed in a circle with centre O. Given AB = BC = CD and ∠DEF = 133.12°. Find ∠FAB



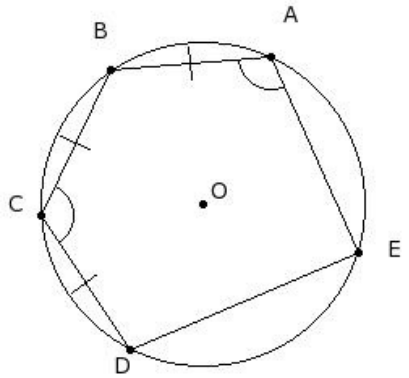
(i) 121.88° (ii) 111.88° (iii) 106.88° (iv) 116.88° (v) 136.88°

56. In the given figure, a pentagon is inscribed in a circle with centre O. Given AB = BC = CD , ∠BCD = 106° and ∠EAB = 100°. Find ∠ABC



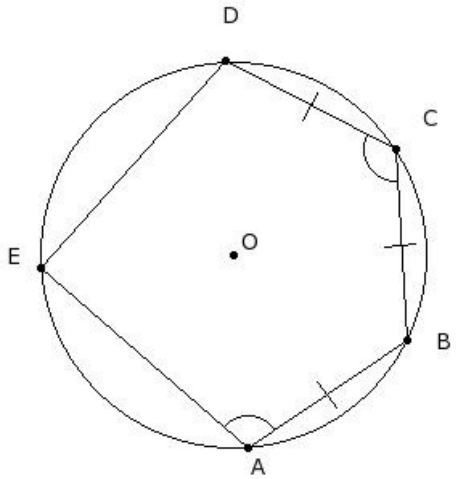
(i) 121° (ii) 116° (iii) 106° (iv) 136° (v) 111°

57. In the given figure, a pentagon is inscribed in a circle with centre O. Given AB = BC = CD , ∠BCD = 119° and ∠EAB = 109°. Find ∠CDE



(i) 131.5° (ii) 116.5° (iii) 106.5° (iv) 101.5° (v) 111.5°

58. In the given figure, a pentagon is inscribed in a circle with centre O. Given AB = BC = CD , ∠BCD = 119° and ∠EAB = 105°. Find ∠AED



(i) 96.5° (ii) 106.5° (iii) 121.5° (iv) 91.5° (v) 101.5°

Assignment Key

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

Copyright © Small Systems Computing Pvt. Ltd.