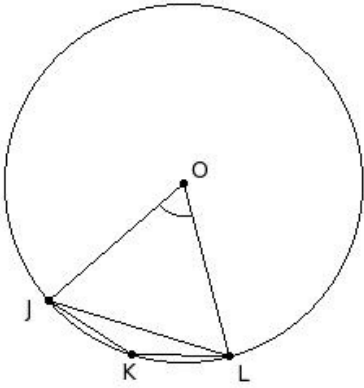


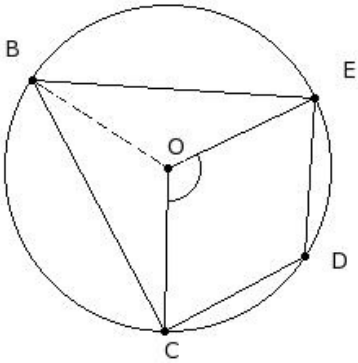


1. O is the centre of the circle. If $\angle O = 64^\circ$, find $\angle K$



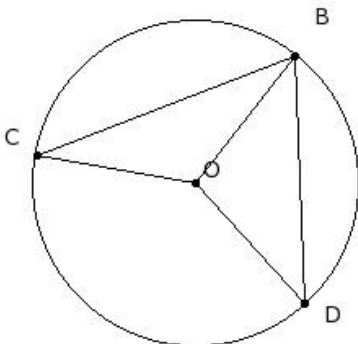
- (i) 153° (ii) 178° (iii) 158° (iv) 148° (v) 163°

2. O is the centre of the circle. If $\angle COE = 117^\circ$, find $\angle B$



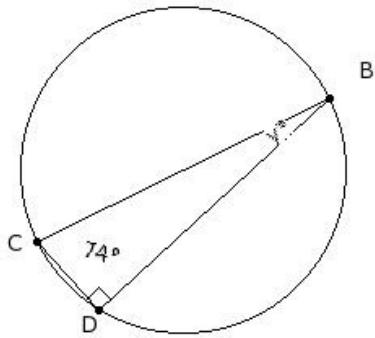
- (i) 88.5° (ii) 58.5° (iii) 73.5° (iv) 63.5° (v) 68.5°

3. O is the centre of the circle. If $\angle COB = 118^\circ$ and $\angle DOB = 100^\circ$, find $\angle CBD$



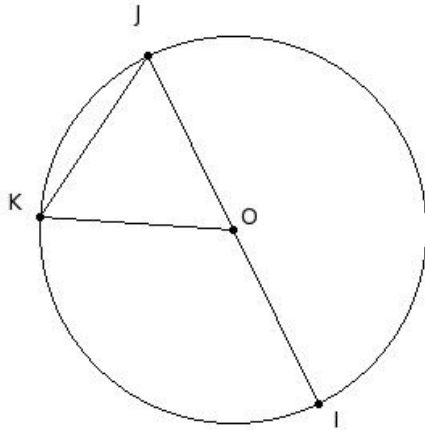
- (i) 81° (ii) 76° (iii) 101° (iv) 86° (v) 71°

4. Find the missing angle in the following figure?



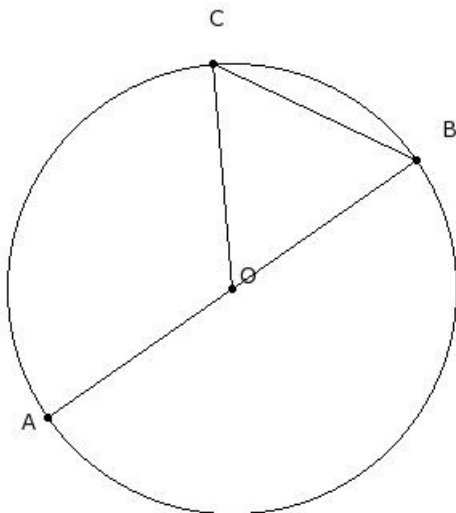
- (i) 31° (ii) 46° (iii) 21° (iv) 26° (v) 16°

5. O is the centre of the circle and $OK = JK$. Find $\angle JOK$



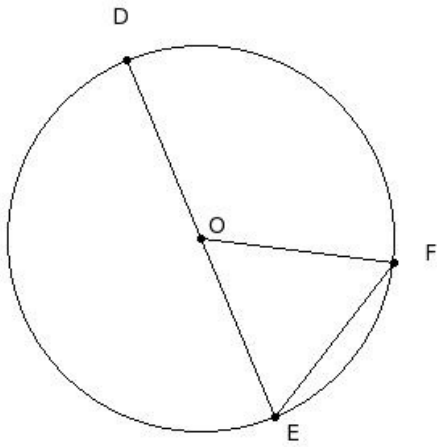
- (i) 90° (ii) 70° (iii) 60° (iv) 65° (v) 75°

6. O is the centre of the circle and $OC = BC$. Find $\angle COA$



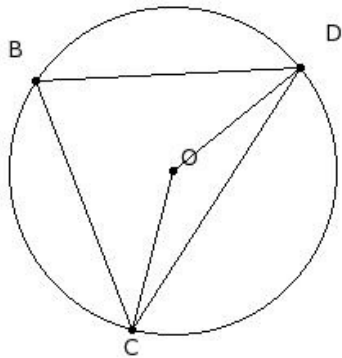
- (i) 135° (ii) 125° (iii) 120° (iv) 150° (v) 130°

7. O is the centre of the circle and $OF = EF$. Find reflex $\angle FOD$



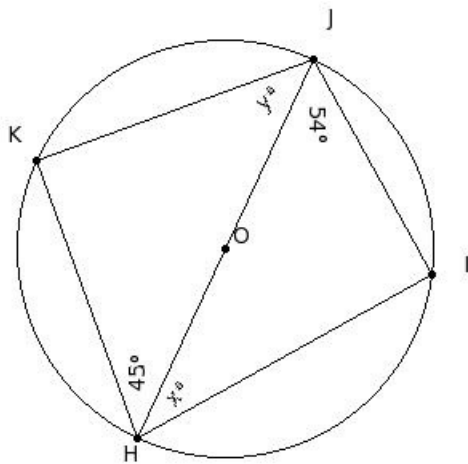
- (i) 245° (ii) 270° (iii) 240° (iv) 250° (v) 255°

8. O is the centre of the circle. If $\angle B + \angle COD = 214.5^\circ$, find $\angle COD$



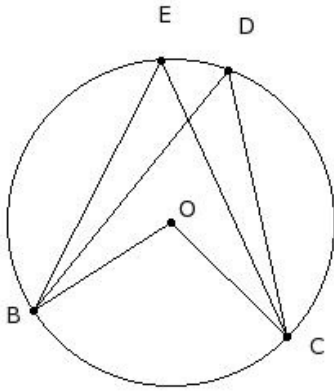
- (i) 143° (ii) 148° (iii) 153° (iv) 173° (v) 158°

9. O is the centre of the circle. If $\angle HJI = 54^\circ$ and $\angle JHK = 45^\circ$, find x°, y°



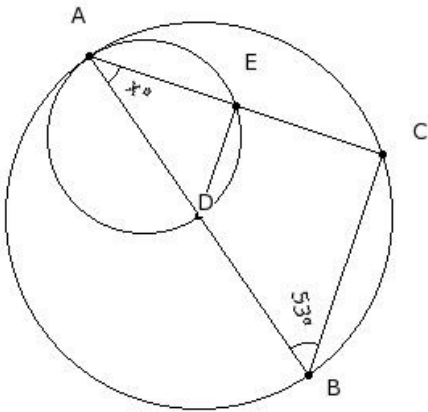
- (i) $55^\circ, 46^\circ$ (ii) $45^\circ, 36^\circ$ (iii) $35^\circ, 36^\circ$ (iv) $36^\circ, 45^\circ$ (v) $75^\circ, 56^\circ$

10. O is the centre of the circle. If $\angle BOC = 103^\circ$, find the angle $\angle E$



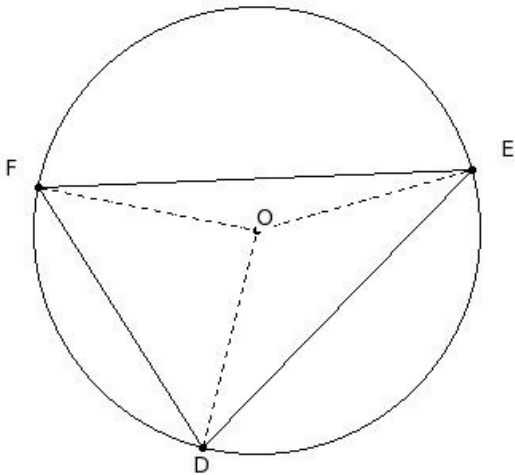
- (i) 61.5° (ii) 51.5° (iii) 56.5° (iv) 81.5° (v) 66.5°

11. Two circles touch internally. D is the centre of the bigger circle and lies on the smaller circle. If $\angle ABC = 53^\circ$, find $\angle A$



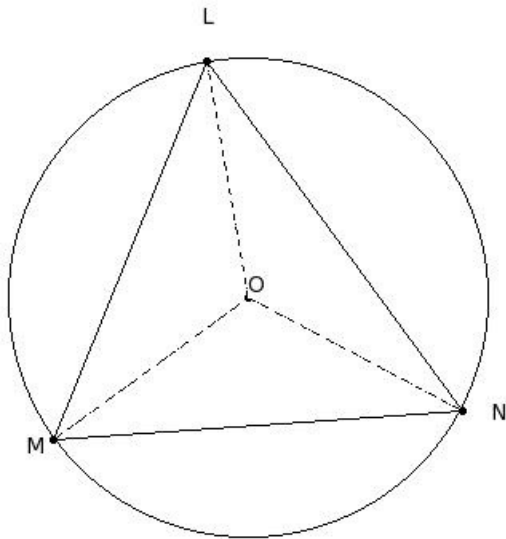
- (i) 47° (ii) 37° (iii) 42° (iv) 52° (v) 67°

12. $\triangle DEF$ is inscribed in a circle with centre O. If $\angle DOE = 120^\circ$ and $\angle EOF = 153^\circ$, find $\angle FDE$



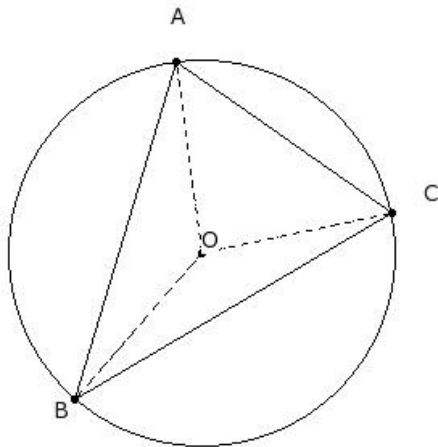
- (i) 86.5° (ii) 91.5° (iii) 106.5° (iv) 76.5° (v) 81.5°

13. $\triangle LMN$ is inscribed in a circle with centre O. If $\angle LOM = 116^\circ$ and $\angle MON = 116^\circ$, find $\angle LMN$



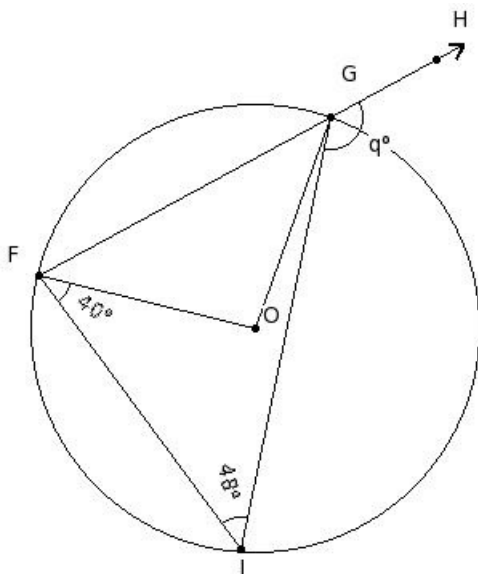
- (i) 74° (ii) 69° (iii) 79° (iv) 64° (v) 94°

14. $\triangle ABC$ is inscribed in a circle with centre O. If $\angle AOB = 131^\circ$ and $\angle BOC = 143^\circ$, find $\angle BCA$



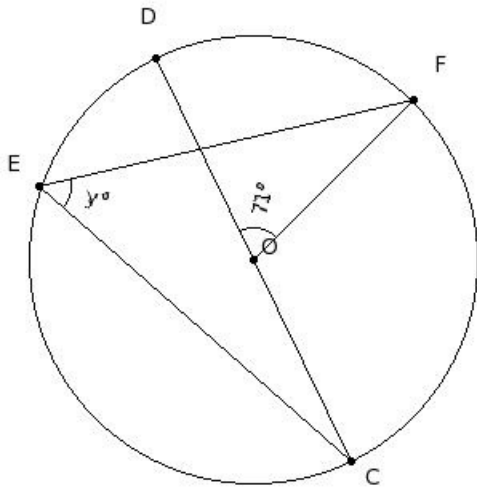
- (i) 75.5° (ii) 65.5° (iii) 95.5° (iv) 80.5° (v) 70.5°

15. In the given figure, O is the centre of the circle. If $\angle FIG = 48^\circ$ and $\angle OFI = 40^\circ$, find $\angle HGI$



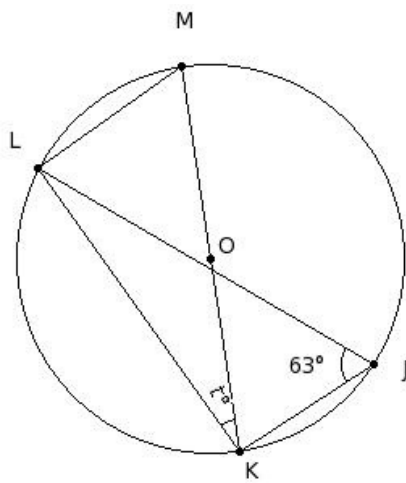
- (i) 140° (ii) 160° (iii) 130° (iv) 135° (v) 145°

16. In the given figure, O is the centre of the circle and CD is a diameter. If $\angle DOF = 71^\circ$, find $\angle CEF$



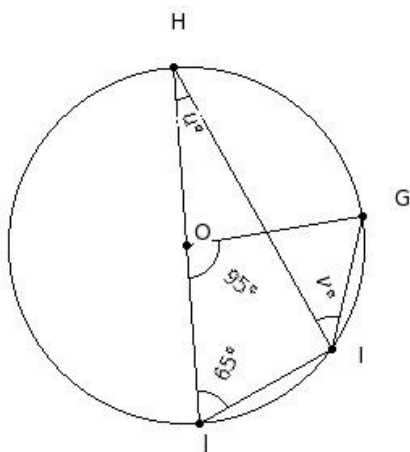
- (i) 84.5° (ii) 54.5° (iii) 64.5° (iv) 59.5° (v) 69.5°

17. In the given figure, O is the centre of the circle and KM is a diameter. If $\angle LJK = 63^\circ$, find $\angle LKM$



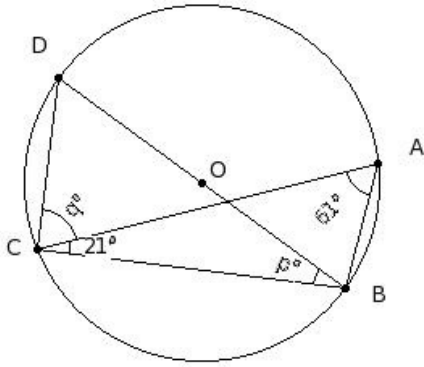
- (i) 42° (ii) 32° (iii) 27° (iv) 37° (v) 57°

18. In the given figure, O is the centre of the circle and HJ is a diameter. If $\angle GOJ = 95^\circ$ and $\angle OJI = 65^\circ$, find $\angle HIG + \angle IHJ$



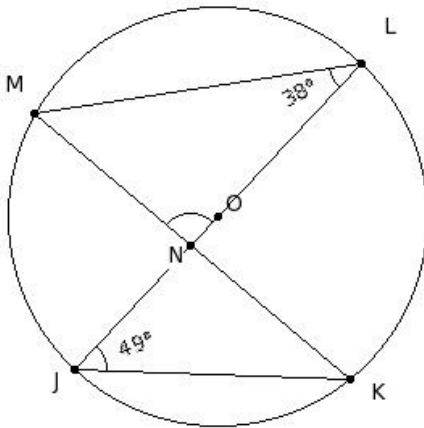
- (i) 72.5° (ii) 82.5° (iii) 67.5° (iv) 97.5° (v) 77.5°

19. In the given figure, O is the centre of the circle and BD is a diameter. If $\angle ACB = 21^\circ$ and $\angle BAC = 61^\circ$, find $\angle DBC + \angle ACD$



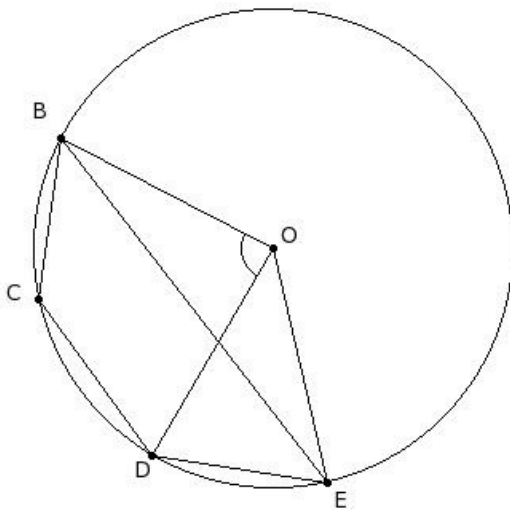
- (i) 103° (ii) 113° (iii) 108° (iv) 128° (v) 98°

20. In the given figure, O is the centre of the circle. If $\angle KJL = 49^\circ$ and $\angle JLM = 38^\circ$, find $\angle LNM$



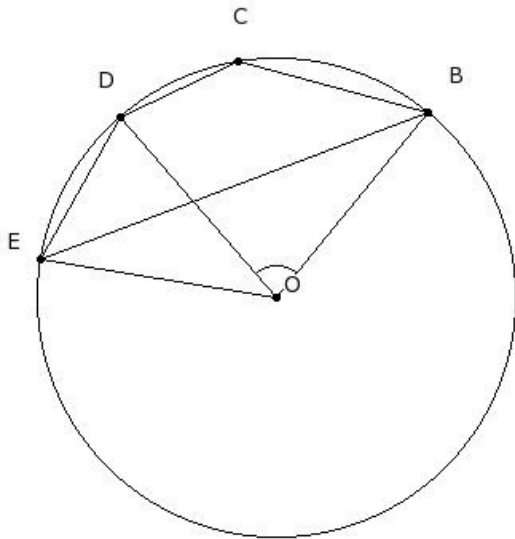
- (i) 93° (ii) 108° (iii) 103° (iv) 98° (v) 123°

21. O is the centre of the circle. If Arc BD = 2 Arc DE and $\angle BOD = 87^\circ$, find $\angle BED$



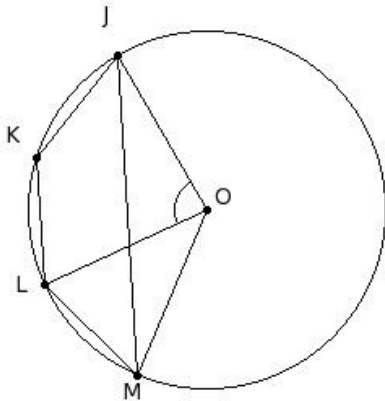
- (i) 58.5° (ii) 53.5° (iii) 43.5° (iv) 73.5° (v) 48.5°

22. O is the centre of the circle. If Arc BD = 2 Arc DE and $\angle BOD = 80^\circ$, find $\angle EBD$



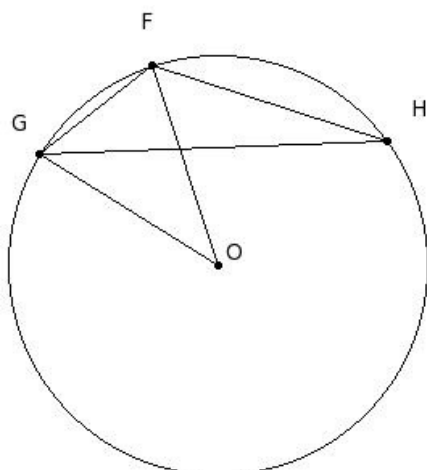
- (i) 20° (ii) 50° (iii) 25° (iv) 35° (v) 30°

23. O is the centre of the circle. If Arc JL = 2 Arc LM and $\angle JOL = 85^\circ$, find $\angle JKL$



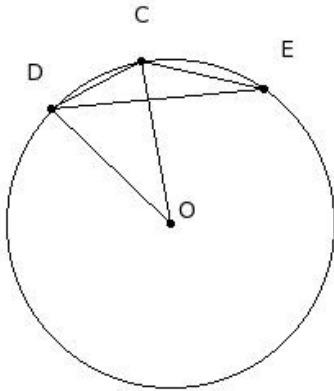
- (i) 152.5° (ii) 137.5° (iii) 167.5° (iv) 147.5° (v) 142.5°

24. In the given figure, FG is a side of regular 5-sided polygon and FH is a side of regular 9-sided polygon inscribed in a circle with centre O. Find $\angle FOG$



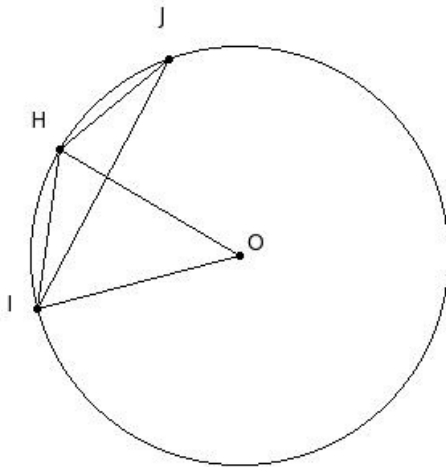
- (i) 82° (ii) 77° (iii) 87° (iv) 102° (v) 72°

25. In the given figure, CD is a side of regular 8-sided polygon and CE is a side of regular 10-sided polygon inscribed in a circle with centre O. Find $\angle CED$



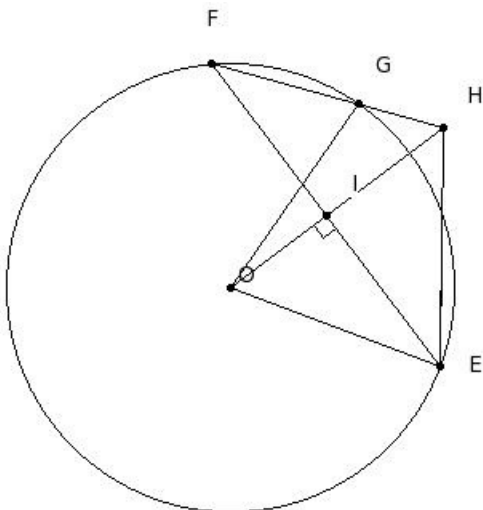
- (i) 22.5° (ii) 37.5° (iii) 32.5° (iv) 27.5° (v) 52.5°

26. In the given figure, HI is a side of regular 9-sided polygon and HJ is a side of regular 8-sided polygon inscribed in a circle with centre O. Find $\angle HIJ$



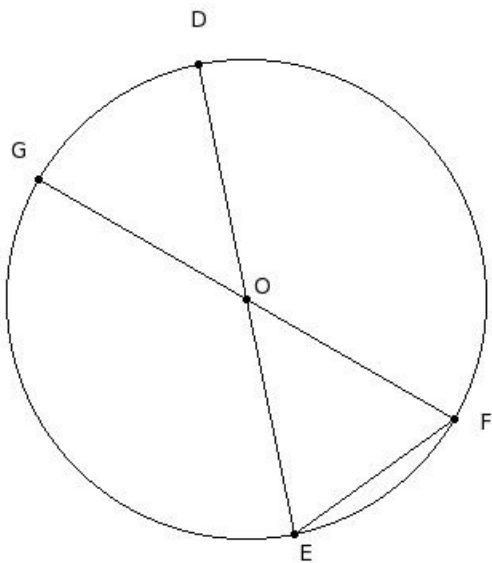
- (i) 37.5° (ii) 22.5° (iii) 27.5° (iv) 52.5° (v) 32.5°

27. In the given figure, O is the centre of the circle, and $OI \perp EF$. If $\angle EFG = 38^\circ$, find $\angle EOG$



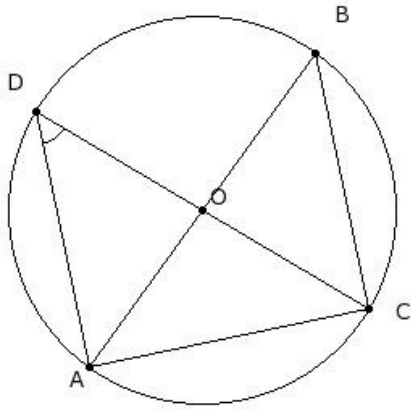
- (i) 91° (ii) 106° (iii) 76° (iv) 86° (v) 81°

34. An arc subtends 39° in its alternate segment. The arc is
 (i) minor arc (ii) minor segment (iii) major segment (iv) major arc (v) quadrant
35. An arc subtends 74° in its alternate segment. Its corresponding major arc subtends what angle in its (major arc) alternate segment?
 (i) 121° (ii) 136° (iii) 116° (iv) 106° (v) 111°
36. An arc subtends 41° in its alternate segment. The angle made by its corresponding major arc at the centre is
 (i) 293° (ii) 308° (iii) 283° (iv) 278° (v) 288°
37. The angle subtended by the semicircle at the centre is
 (i) 195° (ii) 185° (iii) 190° (iv) 210° (v) 180°
38. The angle subtended by the diameter at any point on the circle is
 (i) 90° (ii) 100° (iii) 95° (iv) 105° (v) 120°
39. Angle subtended by the major arc at the centre is
 (i) straight angle (ii) right angle (iii) zero angle (iv) complete angle (v) reflex angle
40. Angle subtended in the major segment is
 (i) zero angle (ii) acute angle (iii) obtuse angle (iv) complete angle (v) right angle
41. In the given figure, DE & FG are diameters of the circle. If $\angle DEF = 65.5^\circ$ find, $\angle EOF$



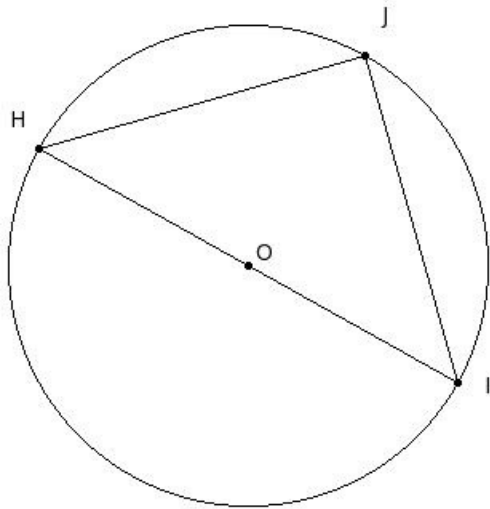
- (i) 64° (ii) 54° (iii) 49° (iv) 79° (v) 59°

42. In the given figure, AB & CD are diameters of the circle. If $\angle ADC = 48^\circ$, find $\angle OCB$



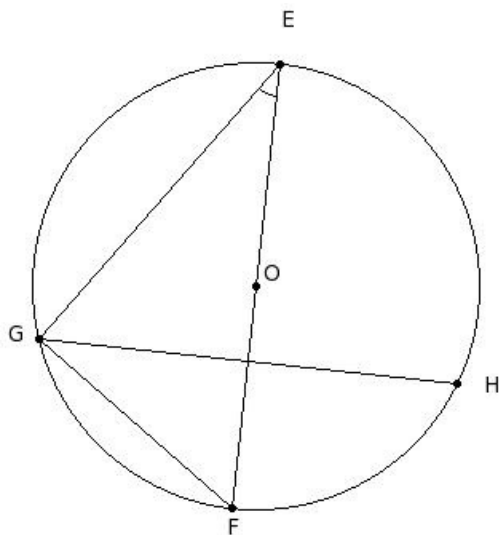
- (i) 63° (ii) 58° (iii) 53° (iv) 78° (v) 48°

43. In the given figure HJ & IJ are equal length chords of the circle. Find $\angle JHI$



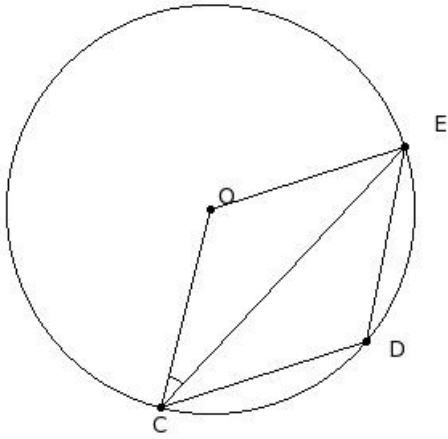
- (i) 50° (ii) 75° (iii) 55° (iv) 45° (v) 60°

44. In the given figure, EF is a diameter of the circle with centre O. If $\angle FEG = 35.12^\circ$ and $FG = FH$, find $\angle HGE$



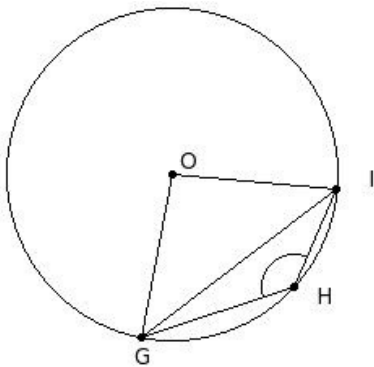
- (i) 69.88° (ii) 84.88° (iii) 59.88° (iv) 54.88° (v) 64.88°

45. In the given figure, O is the centre of the circle. If $\angle OCE = 29^\circ$, find $\angle D$



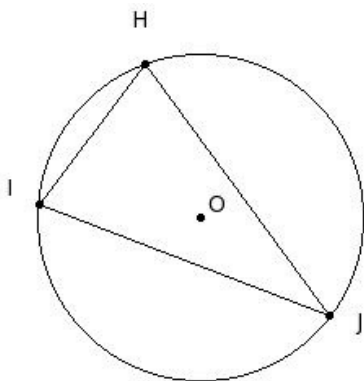
- (i) 134° (ii) 124° (iii) 129° (iv) 149° (v) 119°

46. In the given figure, O is the centre of the circle. If $\angle GHI = 132^\circ$, find $\angle OGI$



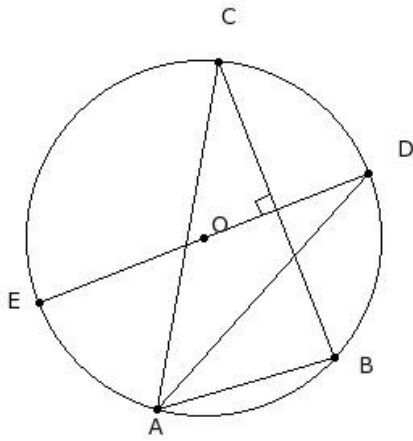
- (i) 72° (ii) 57° (iii) 42° (iv) 52° (v) 47°

47. O is the centre of the circle. If $\angle IJH = 33^\circ$, find the angle $\angle OIH$



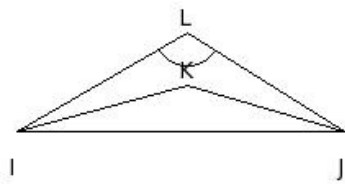
- (i) 57° (ii) 87° (iii) 72° (iv) 67° (v) 62°

48. DE is the perpendicular bisector of side BC of $\triangle ABC$. Given $\angle ABC = 85^\circ$ and $\angle DAC = 32^\circ$, find $\angle ACB$



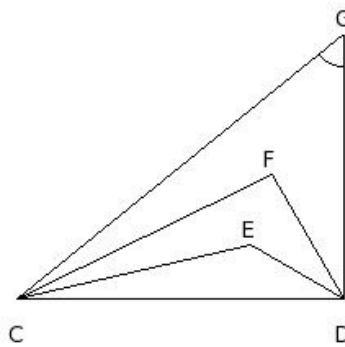
- (i) 61° (ii) 41° (iii) 36° (iv) 31° (v) 46°

49. In the given figure, $\triangle LIJ$ is a scalene triangle. KI bisects $\angle LIJ$. Similarly JK bisects $\angle IJL$. Given $\angle JLI = 118^\circ$, find $\angle JKI$



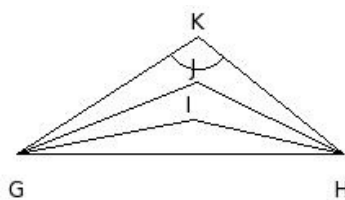
- (i) 154° (ii) 179° (iii) 159° (iv) 149° (v) 164°

50. In the given figure, $\triangle GCD$ is a scalene triangle. EC & FC trisect $\angle GCD$. Similarly DE & DF trisect $\angle CDG$. Given $\angle DGC = 51^\circ$, find $\angle DEC$



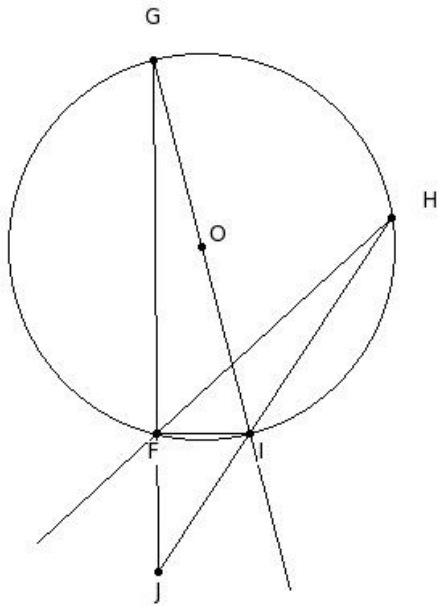
- (i) 152° (ii) 137° (iii) 147° (iv) 167° (v) 142°

51. In the given figure, $\triangle KGH$ is a scalene triangle. IG & JG trisect $\angle KGH$. Similarly HI & HJ trisect $\angle GHK$. Given $\angle HKG = 108^\circ$, find $\angle HJG$



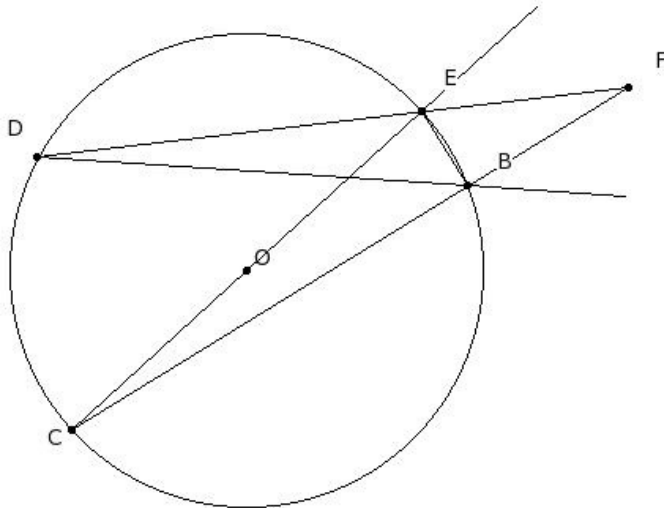
- (i) 147° (ii) 142° (iii) 162° (iv) 132° (v) 137°

52. In the given figure, $\angle FHI = 14^\circ$ and $\angle FJI = 34^\circ$, find $\angle HFI$



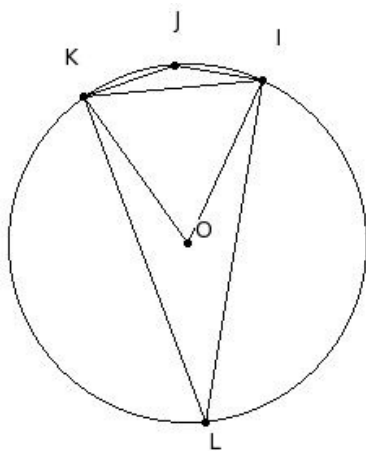
- (i) 52° (ii) 47° (iii) 72° (iv) 57° (v) 42°

53. In the given figure, $\angle BDE = 11^\circ$ and $\angle BFE = 25^\circ$, find $\angle CEB$



- (i) 94° (ii) 89° (iii) 84° (iv) 79° (v) 109°

54. In the given figure, IK is a chord which is equal to the radius of the circle. Find $\angle L$ and $\angle J$



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

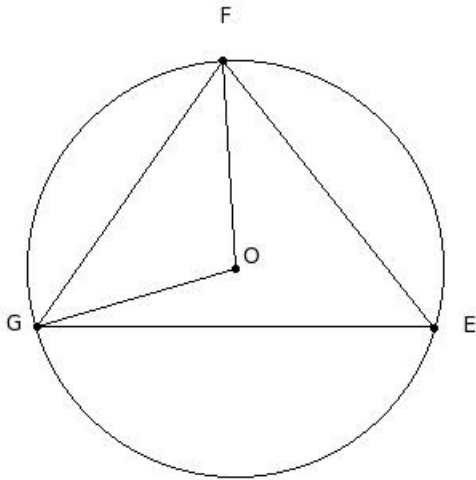
55. Which of the following statements are true?

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

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

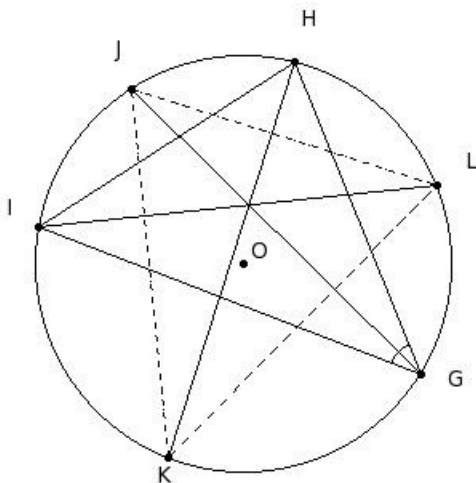
56. In the given figure, which of the following are true?

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



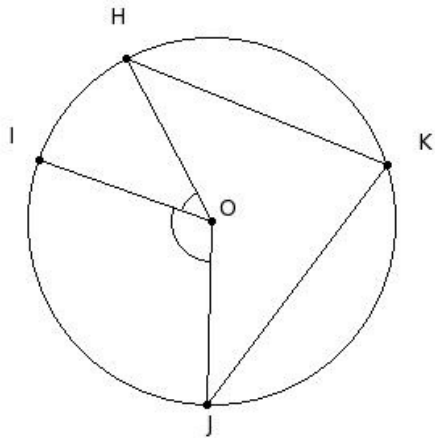
- (i) {c,e} (ii) {b,a} (iii) {a,e} (iv) {d,b,a} (v) {c,e,a}

57. In the given figure, the bisectors of $\angle G$, $\angle H$ & $\angle I$ of $\triangle GHI$ meet the circumcircle at J, K & L. If $\angle G = 47^\circ$, find $\angle J$



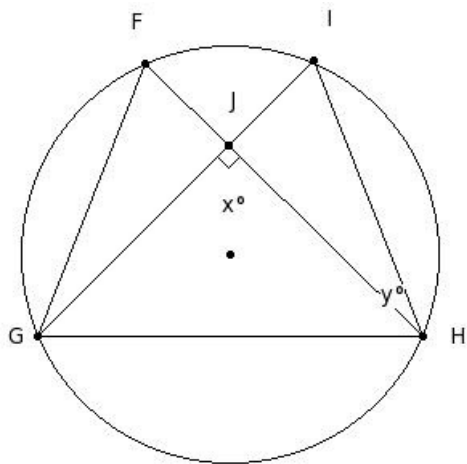
- (i) 96.5° (ii) 76.5° (iii) 66.5° (iv) 81.5° (v) 71.5°

58. In the given figure, O is the centre of the circle. Given $\angle HKJ = 75.5^\circ$ & $\angle HOI = 43^\circ$, find $\angle IOJ$



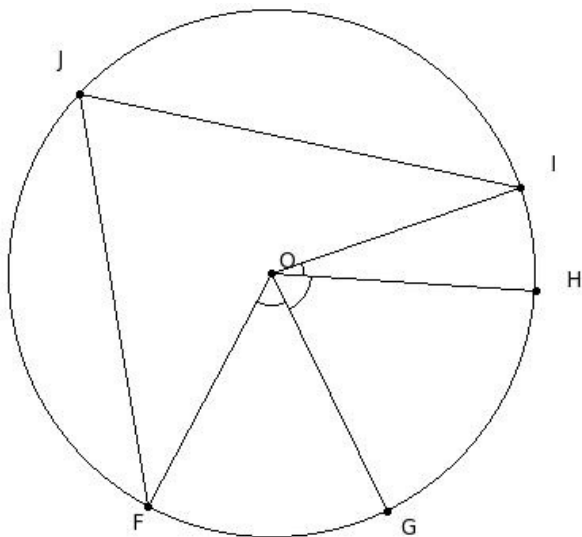
- (i) 113° (ii) 138° (iii) 118° (iv) 123° (v) 108°

59. In the given figure, chords FH & GI meet at J. Given $x = 90^\circ$ and $y = 23^\circ$, find $\angle GFH$



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

60. In the given figure, O is the centre of the circle. Given $\angle FJI = 68.5^\circ$, $\angle GOH = 60^\circ$ and $\angle HOI = 23^\circ$, find $\angle FOG$



- (i) 84° (ii) 59° (iii) 64° (iv) 54° (v) 69°

Assignment Key

1) (iv)	2) (ii)	3) (v)	4) (v)	5) (iii)	6) (iii)
7) (iii)	8) (i)	9) (iv)	10) (ii)	11) (ii)	12) (iv)
13) (iv)	14) (ii)	15) (iii)	16) (ii)	17) (iii)	18) (iii)
19) (v)	20) (i)	21) (iii)	22) (i)	23) (ii)	24) (v)
25) (i)	26) (ii)	27) (iii)	28) (v)	29) (iii)	30) (v)
31) (iv)	32) (ii)	33) (iii)	34) (i)	35) (iv)	36) (iv)
37) (v)	38) (i)	39) (v)	40) (ii)	41) (iii)	42) (v)
43) (iv)	44) (iv)	45) (v)	46) (iii)	47) (i)	48) (iv)
49) (iv)	50) (ii)	51) (iv)	52) (v)	53) (iv)	54) (i)
55) (i)	56) (iii)	57) (iii)	58) (v)	59) (v)	60) (iv)