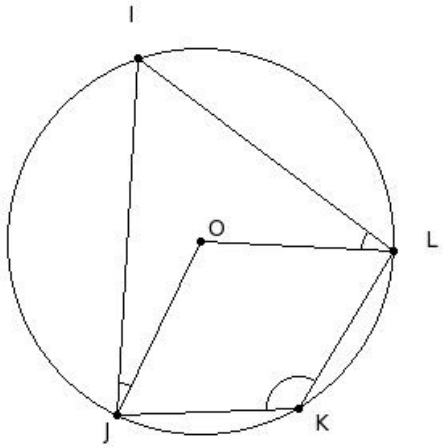
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Circles

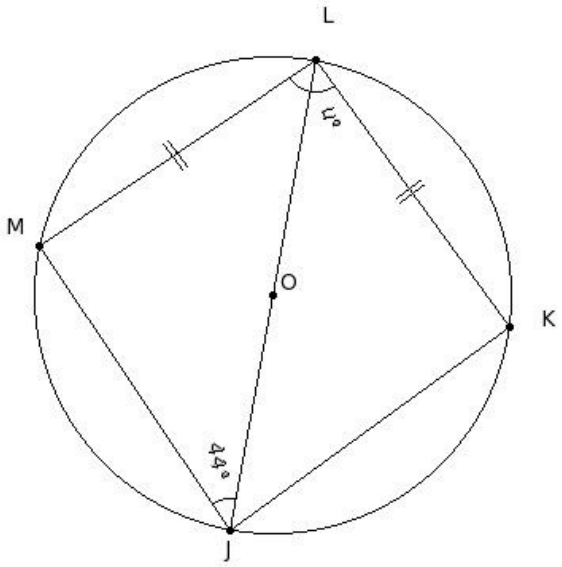
Grade : CBSE Grade IX

1. In the given figure, O is the centre of the circle. If ∠IJO = 22° and ∠OLI = 34°, find ∠JKL



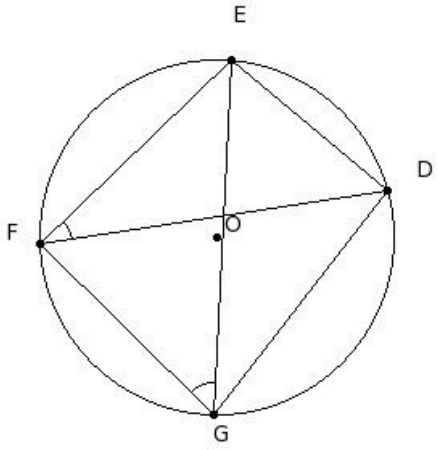
(i) 124° (ii) 134° (iii) 129° (iv) 139° (v) 154°

2. In the given figure, O is the centre of the circle , chord KL is equal to chord LM and JL is a diameter. If ∠MJL = 44° find ∠KLM



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

3. In the given figure, DEFG is a cyclic quadrilateral. If ∠DFE = 35° and ∠FGE = 48°, find ∠DEF

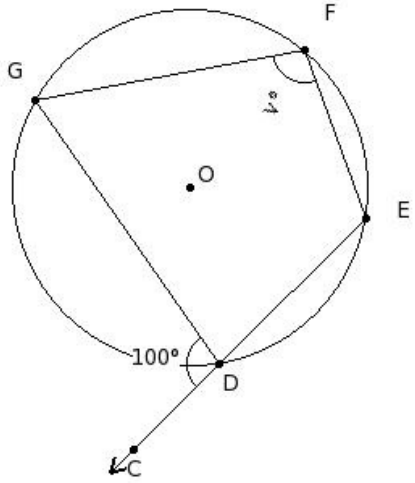


(i) 107° (ii) 97° (iii) 102° (iv) 112° (v) 127°

4. Angle subtended in the major segment is

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

5. In the given figure, O is the centre of the circle. If ∠CDG = 100°, find ∠EFG



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

6. Which of the following statements are true?

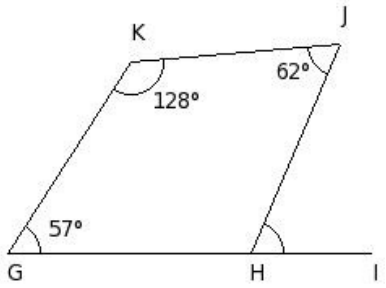
a) Every circle has a unique diameter.
b) One and only one tangent can be drawn to pass through a point on a circle.
c) A secant of a circle is a segment having its end points on the circle.
d) Diameter of a circle is a part of the semi-circle of the circle.
e) One and only one tangent can be drawn to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

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

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

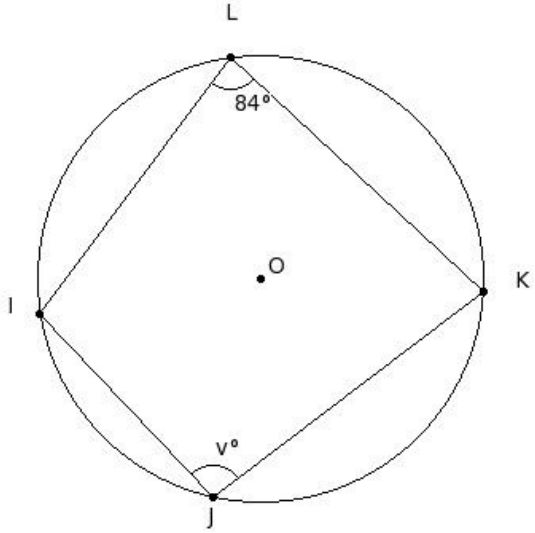
(i) 100° (ii) 120° (iii) 105° (iv) 90° (v) 95°

8. In the given figure, ∠G = 57° , ∠J = 62° and ∠K = 128°, find ∠JHI



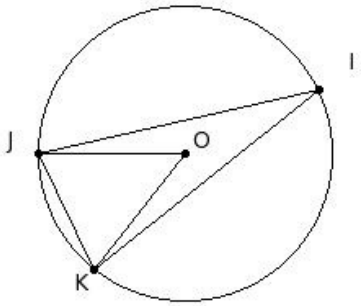
(i) 67° (ii) 77° (iii) 72° (iv) 97° (v) 82°

9. In the given figure, O is the centre of the circle. If ∠KLI = 84°, find ∠IJK



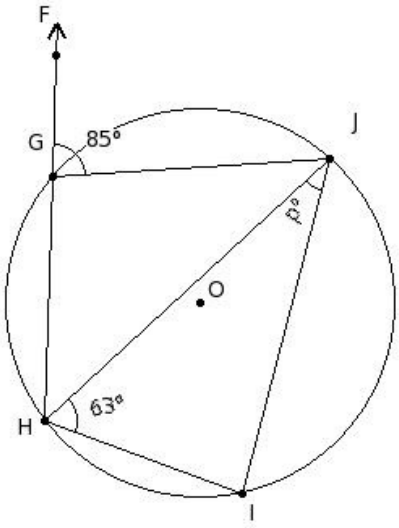
(i) 101° (ii) 106° (iii) 126° (iv) 111° (v) 96°

10. O is the centre of the circle. If ∠I + ∠JOK = 78° , find ∠JOK



(i) 52° (ii) 67° (iii) 57° (iv) 62° (v) 82°

11. In the given figure, O is the centre of the circle. If ∠JHI = 63° and ∠FGJ = 85°, find ∠HJI



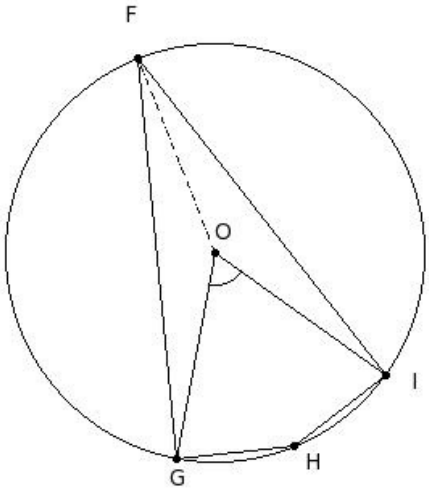
(i) 62° (ii) 32° (iii) 42° (iv) 47° (v) 37°

12. Which of the following statements are true?

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

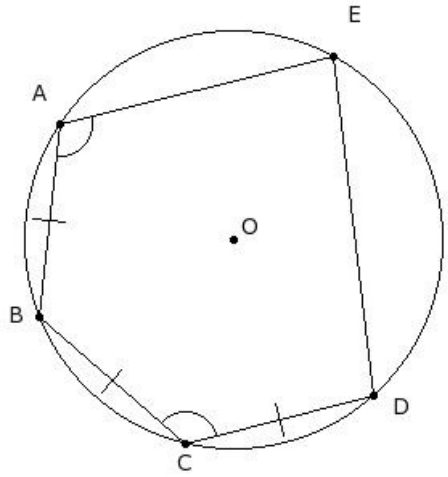
(i) {a,d} (ii) {c,d} (iii) {b,c,a} (iv) {b,d,a} (v) {b,a}

13. O is the centre of the circle. If ∠GOI = 65°, find ∠F



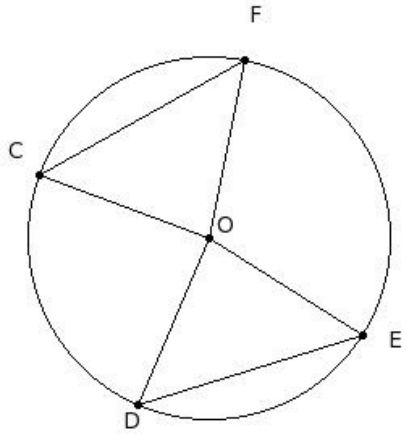
(i) 37.5° (ii) 42.5° (iii) 32.5° (iv) 62.5° (v) 47.5°

14. In the given figure, a pentagon is inscribed in a circle with centre O. Given AB = BC = CD , ∠BCD = 110° and ∠EAB = 110°. Find ∠ABC



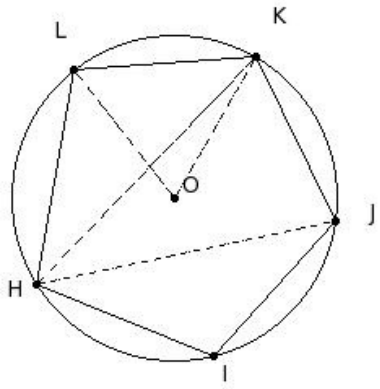
(i) 110° (ii) 115° (iii) 125° (iv) 140° (v) 120°

15. In the given figure, CF & DE are two chords of equal length. Given ∠FCO = 49.5°, find ∠EOD



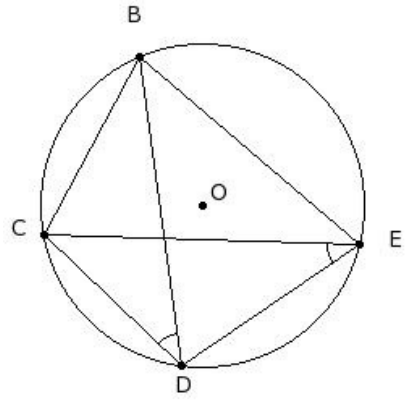
(i) 96° (ii) 111° (iii) 81° (iv) 91° (v) 86°

16. In the given figure, a pentagon is inscribed in a circle with centre O. Given IJ = JK = KL and ∠IJK = 112°. Find ∠KOL



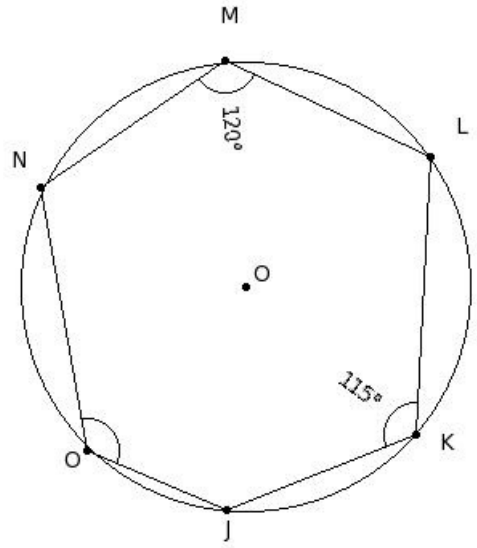
(i) 78° (ii) 68° (iii) 73° (iv) 98° (v) 83°

17. In the given figure, BCDE is a cyclic quadrilateral. If ∠BDC = 39° and ∠DEC = 36°, find ∠BED



(i) 90° (ii) 105° (iii) 85° (iv) 75° (v) 80°

18. JKLMNO is a hexagon inscribed in a circle. Given ∠JKL = 115° & ∠LMN = 120°, find ∠NOJ

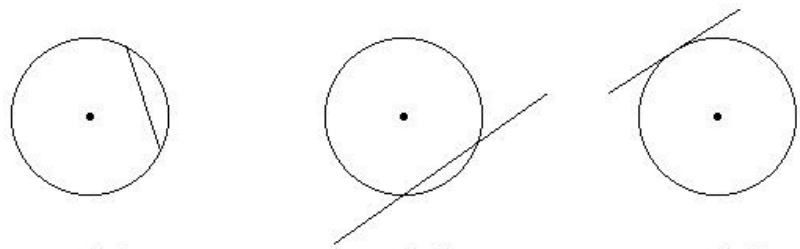


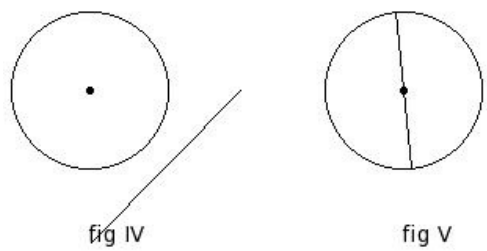
(i) 140° (ii) 125° (iii) 155° (iv) 135° (v) 130°

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

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

20. Which of the following figures represent a diameter ?



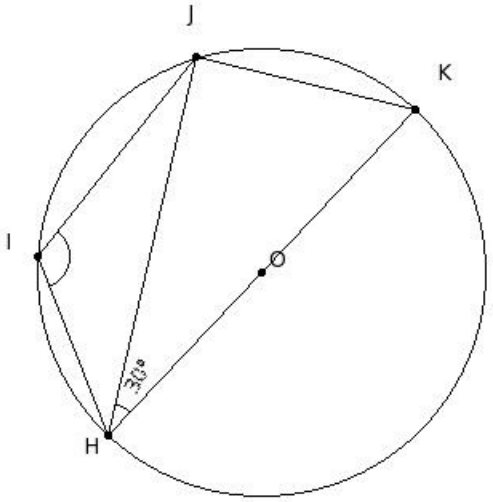


(i) fig V (ii) fig II (iii) fig IV (iv) fig III (v) fig I

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

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

22. O is the centre of the circle and ∠KHJ = 30°, find ∠HIJ



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

23. Which of the following figures represent a tangent ?

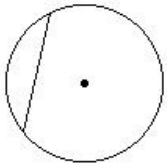


fig I

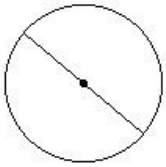


fig II

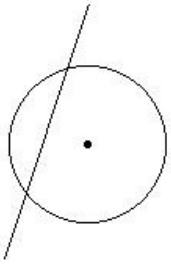


fig III

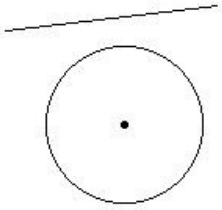


fig IV

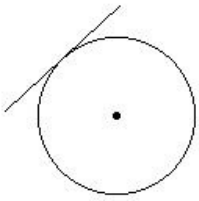


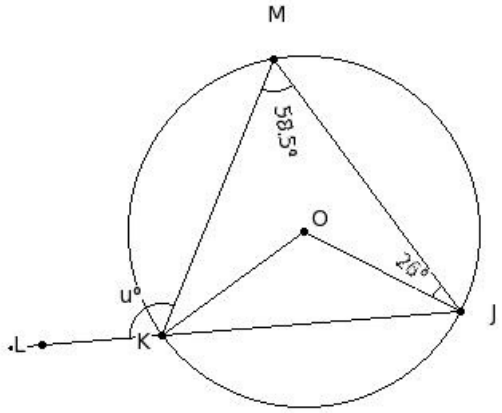
fig V

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

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

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

25. In the given figure, O is the centre of the circle. If ∠JMK = 58.5° and ∠OJM = 26°, find ∠LKM



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

Assignment Key

1) (i)	2) (iv)	3) (ii)	4) (i)	5) (v)	6) (ii)
7) (iv)	8) (i)	9) (v)	10) (i)	11) (ii)	12) (i)
13) (iii)	14) (i)	15) (iii)	16) (ii)	17) (iv)	18) (ii)
19) (iv)	20) (i)	21) (iv)	22) (iv)	23) (iv)	24) (iv)
25) (v)					