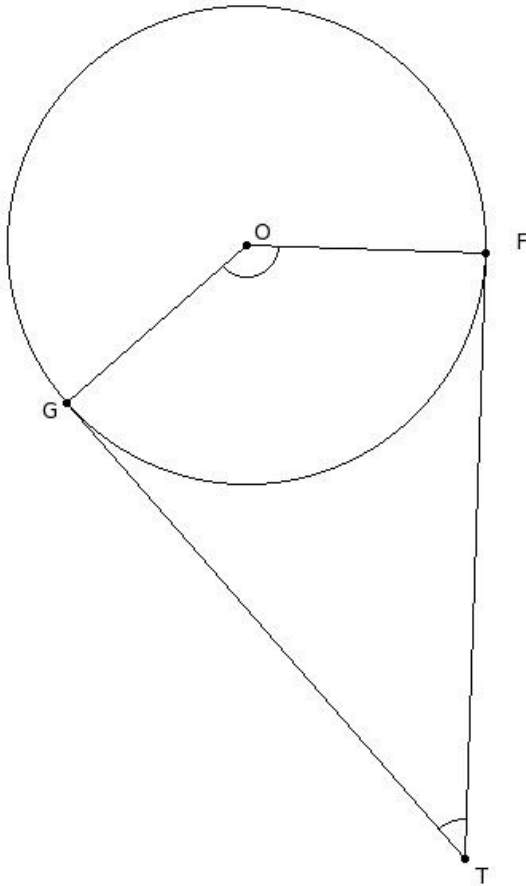


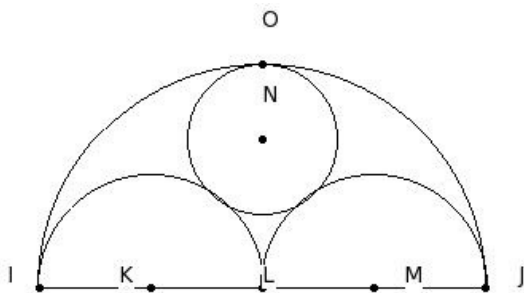


1. In the given figure, FT & GT are tangents to the circle with centre O. Given $\angle FOG = 137^\circ$, find $\angle FTG$



- (i) 48° (ii) 58° (iii) 53° (iv) 73° (v) 43°

2. IJ is a line segment and L is its mid-point. Three semi-circles are drawn with IL, LJ and IJ as diameters. K, M and N respectively are the centres of these semi-circles. A new circle is drawn touching these three semi-circles. Find its radius, given IK = 7 cm



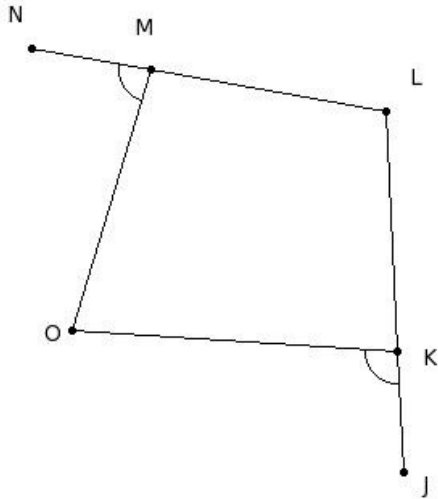
- (i) 3.67 cm (ii) 2.67 cm (iii) 4.67 cm (iv) 6.67 cm (v) 5.67 cm

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

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

4. In the given figure, KLMO is a cyclic quadrilateral where LM and LK are produced to N and J respectively. If $\angle JKO = 96^\circ$, find $\angle NMO$



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

5. Which of the following statements are true?

- a) Atmost two common tangents can be drawn touching any two circles.
 b) Atmost three common tangents can be drawn touching two circles which touch each other.
 c) A maximum of four common tangents can be drawn touching any two circles.
 d) Atmost one common tangent can be drawn for any two concentric circles.

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

6. The perimeter of a circle is called

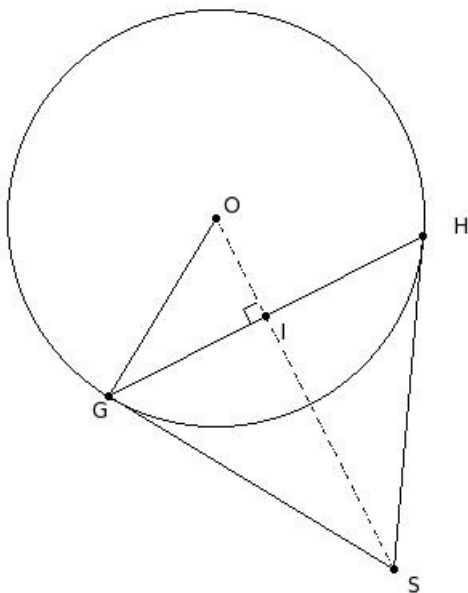
- (i) chord (ii) diameter (iii) circumference (iv) radius (v) segment

7. The distance between the centres of two circles is d .

- If the radii are r_1 and r_2 , the length of their transverse common tangent is

- (i) $\sqrt{d^2 + (r_1 - r_2)^2}$ (ii) None of these (iii) $\sqrt{d^2 - (r_1 - r_2)^2}$ (iv) $\sqrt{d^2 - (r_1 + r_2)^2}$ (v) $\sqrt{d^2 + (r_1 + r_2)^2}$

8. In the given figure, GS & HS are tangents to the circle with centre O. Given $OG = 13$ cm and $GH = 22$ cm, find GS



- (i) 21.64 cm (ii) 22.64 cm (iii) 20.64 cm (iv) 18.64 cm (v) 19.64 cm

9. Which of the following figures represent a secant ?

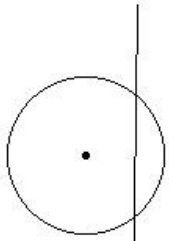


fig I

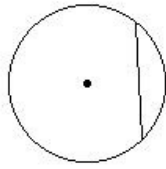


fig II

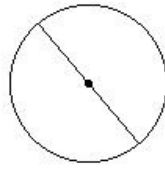


fig III

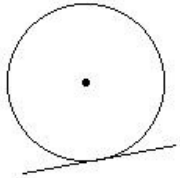


fig IV

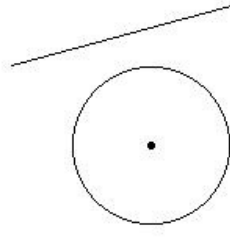
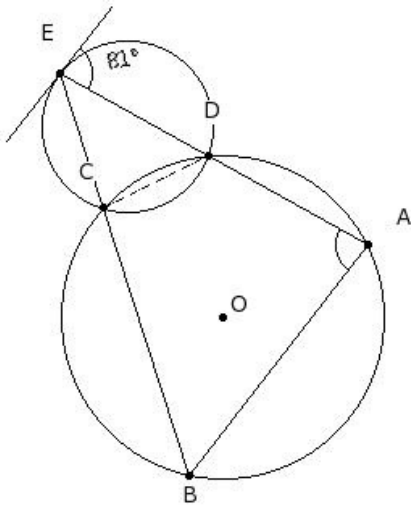


fig V

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

10. In the given figure, two circles intersect at points C & D. A tangent is drawn at point E. From the same point, two lines are drawn passing through points C & D. They meet the other end of the second circle at B & A. Given $\angle E = 81^\circ$, find $\angle BAD$

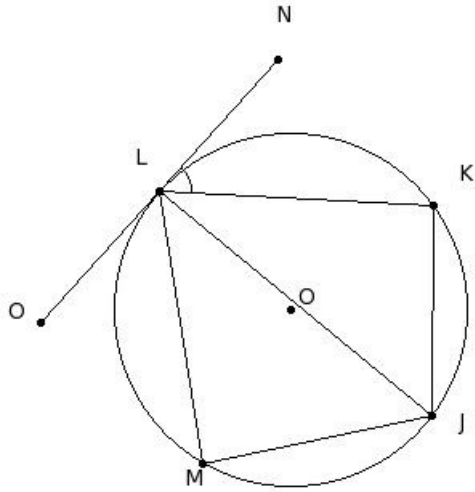


(i) 86° (ii) 81° (iii) 96° (iv) 91° (v) 111°

11. Circles having common centre are called

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

12. In the given figure, JKLM is a cyclic quadrilateral such that LJ bisects $\angle MJK$ and NO is the tangent at L. If $\angle LJK = 51^\circ$, find $\angle NLK$



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

13. Which of the following figures represent a diameter ?

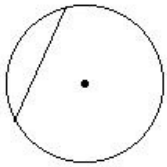


fig I

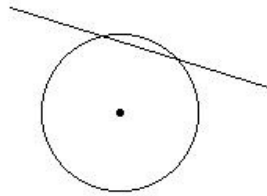


fig II

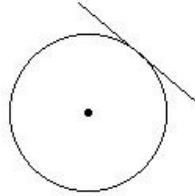


fig III

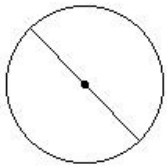


fig IV

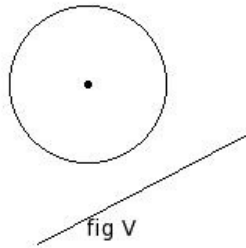
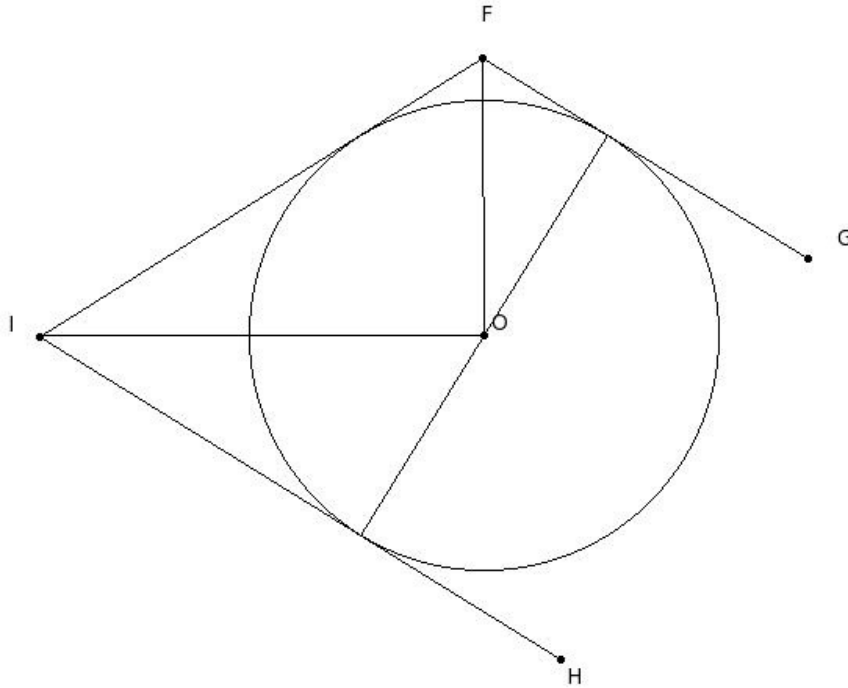


fig V

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

14. In the given figure, FG and HI are parallel tangents to the circle with centre O. FI is another tangent meeting FG and HI at F and I. Find $\angle FOI$



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

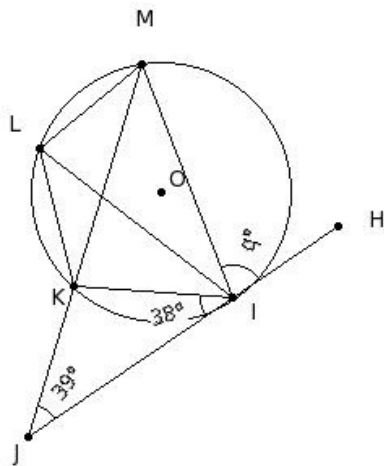
15. Two circles with radii R and r touch internally. If the distance between their centres is d, then

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

16. If two circles touch externally, the number of their common tangents is

- (i) 6 (ii) 3 (iii) 4 (iv) 1 (v) 2

17. In the given figure, O is the centre of the circle and HJ is the tangent at I. If $\angle IJK = 39^\circ$, $\angle JIK = 38^\circ$, find $\angle MIH$



- (i) 82° (ii) 107° (iii) 87° (iv) 92° (v) 77°

18. Which of the following figures represent a tangent ?

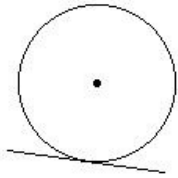


fig I

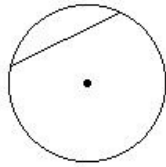


fig II

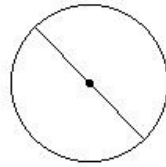


fig III

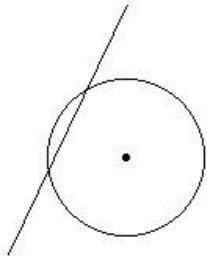


fig IV

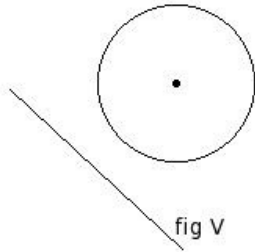


fig V

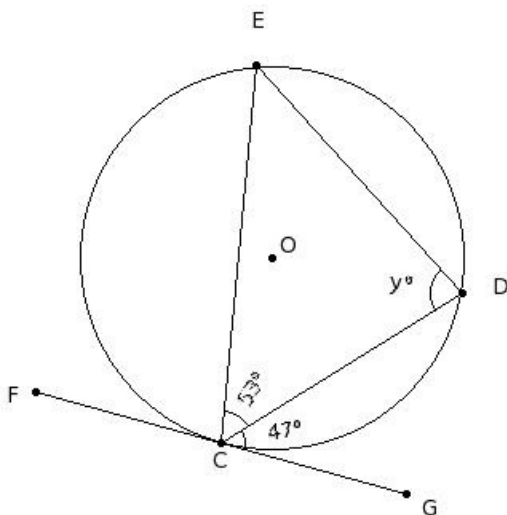
(i) fig III (ii) fig II (iii) fig IV (iv) fig V (v) fig I

19. Which of the following statements are true?

- a) Every circle has a unique diameter.
- b) A line can meet a circle at most at two points.
- c) Each radius of a circle is also a chord of the circle.
- d) Every circle has a unique centre.
- e) A circle consists of an infinite number of points.

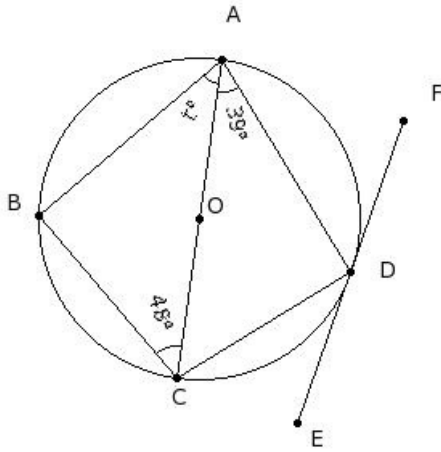
(i) {a,b,d} (ii) {a,c,e} (iii) {c,d} (iv) {a,b} (v) {b,d,e}

20. In the given figure, O is the centre of the circle and FG is the tangent at C. If $\angle ECD = 53^\circ$ and $\angle DCG = 47^\circ$, find $\angle EDC$



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

21. In the given figure, O is the centre of the circle and EF is the tangent at D. If $\angle CAD = 39^\circ$ and $\angle ACB = 48^\circ$, find $\angle CAB$



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

22. 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) quadrant (ii) secant (iii) tangent (iv) major segment (v) circumference

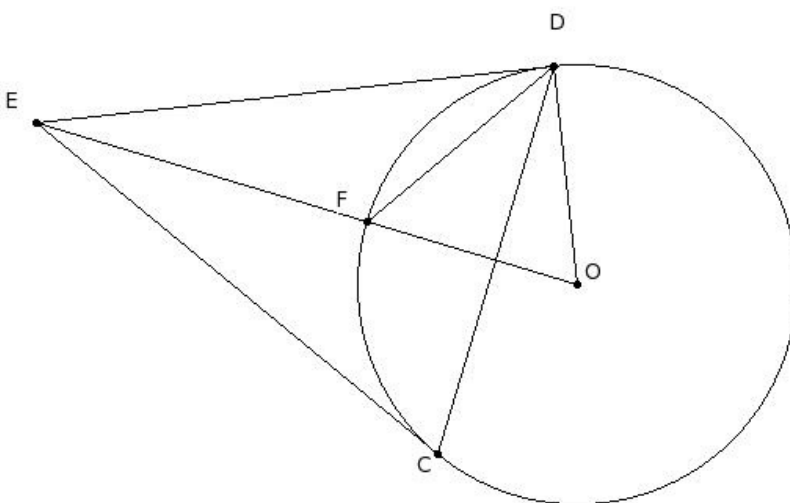
23. Which of the following are cyclic quadrilaterals?

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

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

24. A line which touches a circle at only one point is called a
 (i) radius (ii) centre (iii) quadrant (iv) major segment (v) tangent

25. In the given figure, EC and ED are tangent segments to the circle with centre O. Given $\angle DEF = 23^\circ$, find $\angle CDO$



- (i) 33° (ii) 28° (iii) 23° (iv) 38° (v) 53°

Assignment Key

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