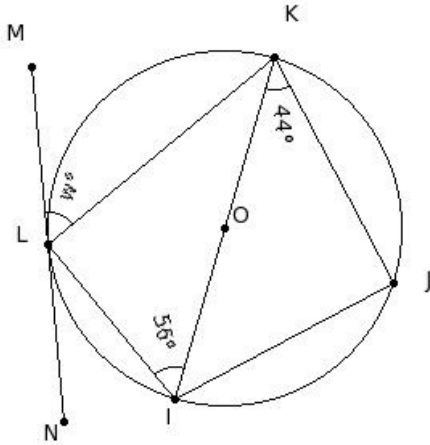


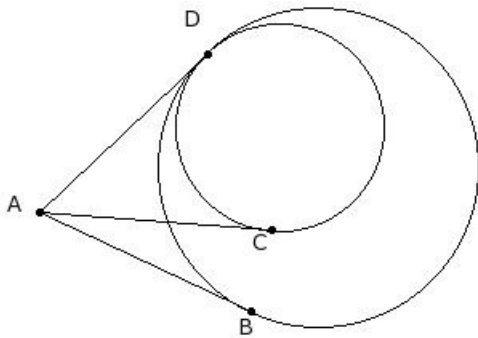


1. In the given figure, O is the centre of the circle and MN is the tangent at L. If  $\angle KIL = 56^\circ$  and  $\angle IKJ = 44^\circ$ , find  $\angle MLK$



- (i)  $56^\circ$  (ii)  $66^\circ$  (iii)  $71^\circ$  (iv)  $61^\circ$  (v)  $86^\circ$

2. In the given figure, AD is the common tangent to the two circles. AB & AC are also tangents. Given  $AB = 14$  cm, find AC

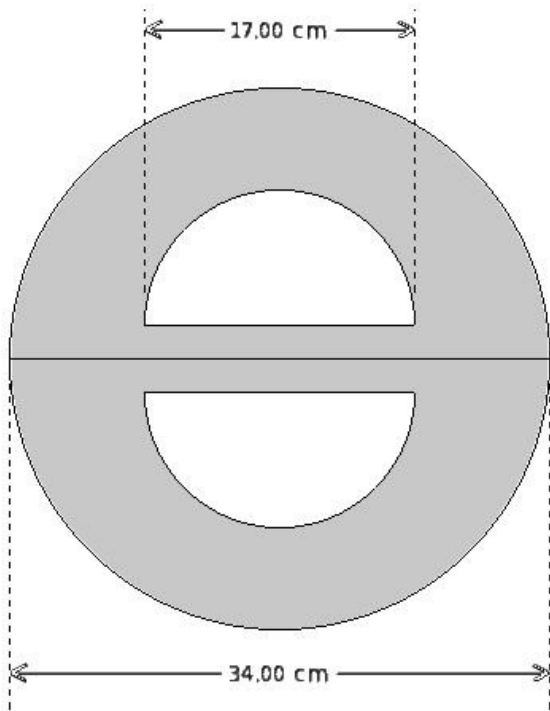


- (i) 14 cm (ii) 12 cm (iii) 13 cm (iv) 15 cm (v) 16 cm

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

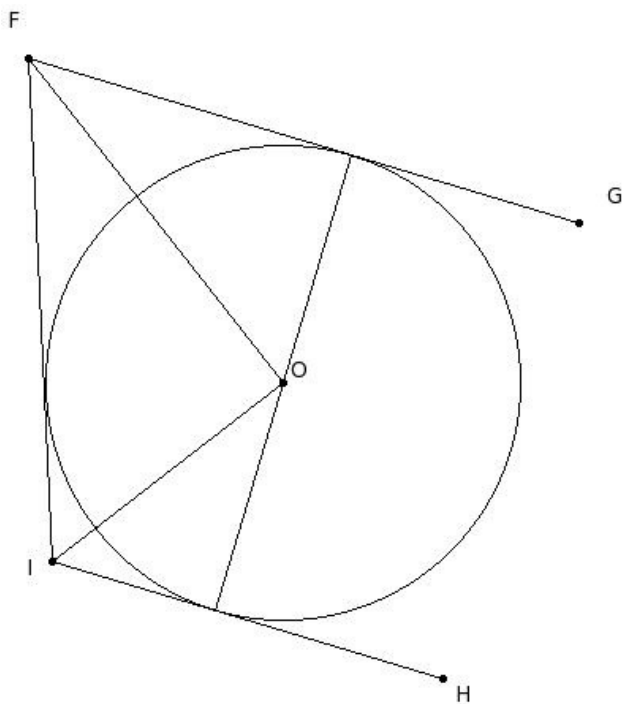
- (i)  $d > R - r$  (ii)  $d = R + r$  (iii)  $d < R + r$  (iv)  $d < R - r$  (v)  $d = R - r$

4. In the given figure, find the area of the shaded region



- (i) 681.21 sq.cm (ii) 654.21 sq.cm (iii) 666.21 sq.cm (iv) 697.21 sq.cm

5. 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  $\angle FOI$

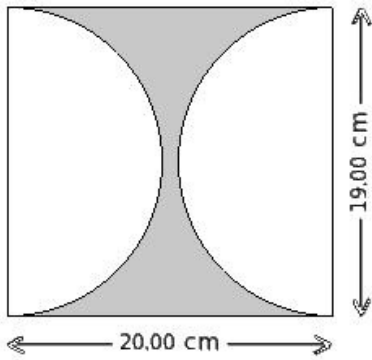


- (i)  $105^\circ$  (ii)  $120^\circ$  (iii)  $95^\circ$  (iv)  $100^\circ$  (v)  $90^\circ$

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

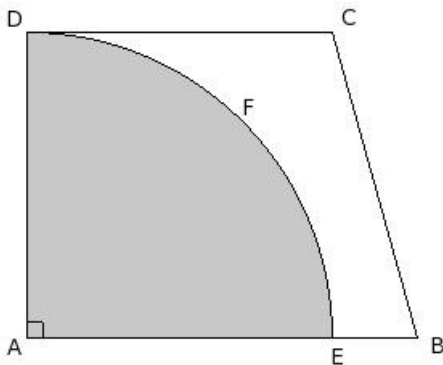
- (i) 0 (ii) 3 (iii) 6 (iv) 4 (v) 2

7. Find the area of the shaded region



- (i) 96.36 sq.cm (ii) 99.36 sq.cm (iii) 101.36 sq.cm (iv) 91.36 sq.cm (v) 93.36 sq.cm

8. In the given figure, ABCD is a trapezium. A quarter circle AEF is removed from the trapezium. If  $AD = CD = 19$  and  $EB = 5.3$ , find the area of the remaining portion



- (i) 145.71 sq.cm (ii) 99.71 sq.cm (iii) 127.71 sq.cm (iv) 134.71 sq.cm (v) 122.71 sq.cm

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

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

10. Which of the following statements are true?

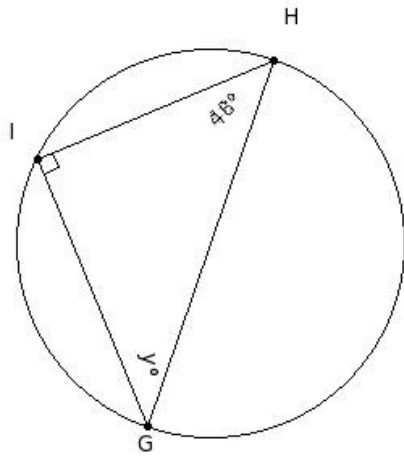
- If two circles touch internally, the square of the distance between their centres is the difference of the squares of their radii.
- If two circles touch externally, their centres and the point of contact form an isosceles triangle.
- If two circles touch externally, the distance between their centres is the sum of their radii.
- If two circles touch internally, their centres and the point of contact form a scalene triangle.
- If two circles touch externally, the square of the distance between their centres is the sum of the squares of their radii.
- If two circles touch internally, the distance between their centres is the difference of their radii.

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

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

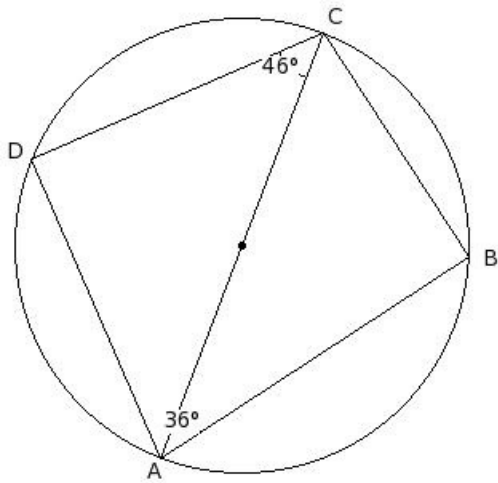
- (i) right angle triangle (ii) acute angled triangle (iii) obtuse angled triangle (iv) equilateral triangle

12. Find the missing angle in the following figure?



- (i)  $52^\circ$  (ii)  $57^\circ$  (iii)  $42^\circ$  (iv)  $47^\circ$  (v)  $72^\circ$

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



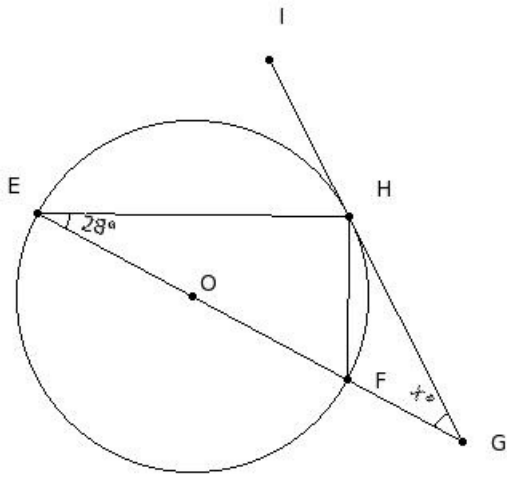
- (i)  $A = 81^\circ, B = 90^\circ, C = 99^\circ, D = 90^\circ$  (ii)  $A = 79^\circ, B = 90^\circ, C = 101^\circ, D = 90^\circ$   
 (iii)  $A = 80^\circ, B = 90^\circ, C = 100^\circ, D = 90^\circ$  (iv)  $A = 82^\circ, B = 90^\circ, C = 98^\circ, D = 90^\circ$   
 (v)  $A = 78^\circ, B = 90^\circ, C = 102^\circ, D = 90^\circ$

14. Which of the following statements are true?

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

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

15. In the given figure, O is the centre of the circle and GI is the tangent at H . If  $\angle FEH = 28^\circ$ , find  $\angle FGH$



- (i)  $44^\circ$  (ii)  $34^\circ$  (iii)  $49^\circ$  (iv)  $39^\circ$  (v)  $64^\circ$

16. The segment of the circle containing the centre of the circle is called

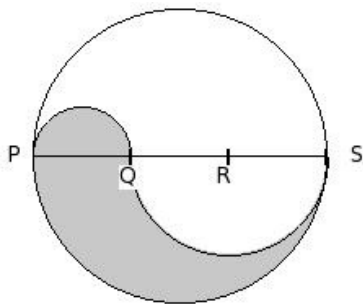
- (i) diameter (ii) major segment (iii) centre (iv) circumference (v) segment

17. Which of the following statements are true?

- If two tangents to a circle intersect, their points of contact with the circle together with their point of intersection form an isosceles triangle.
- If two tangents are parallel, the distance between them is equal to the diameter of the circle.
- Two different tangents can meet at a point on the circle.
- If two tangents are perpendicular, they form a right angled triangle with their points of contact with the circle and their point of intersection.
- A line parallel to a tangent is a secant.

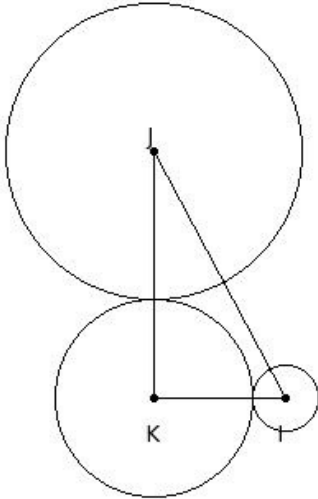
- (i) {e,b} (ii) {c,a,b} (iii) {a,b,d} (iv) {c,e,d} (v) {c,a}

18. In the given figure ,PQRS is the diameter of the circle of radius 15.00 cm and  $PQ = QR = RS$ . Find the area of the shaded region



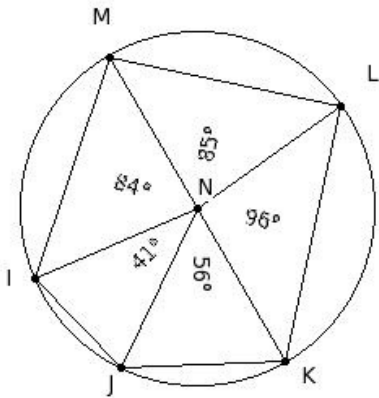
- (i) 207.71 sq.cm (ii) 243.71 sq.cm (iii) 235.71 sq.cm (iv) 219.71 sq.cm (v) 262.71 sq.cm

19. 'I' and 'J' are centres of circles of radii 2 cm and 9 cm such that  $IJ = 17$  cm and 'K' is the centre of the circle of radius 'r' cm which touches the above circles externally. If  $\angle IKJ = 90^\circ$ , find 'r'



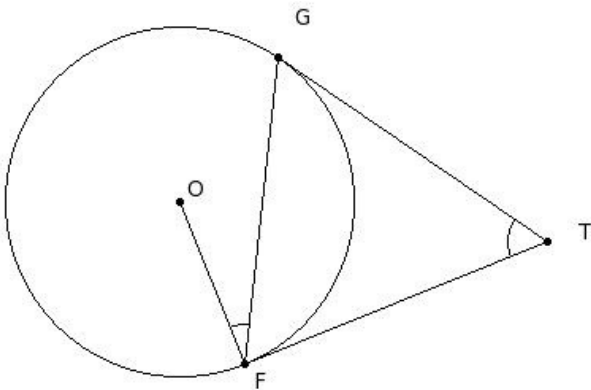
- (i) 4 cm (ii) 5 cm (iii) 8 cm (iv) 7 cm (v) 6 cm

20. The diameters of the circle are



- (i)  $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}, \overline{KM}$  (ii)  $\overline{KM}$  (iii)  $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}$  (iv)  $\overline{IJ}, \overline{JK}, \overline{KL}, \overline{LM}, \overline{MI}, \overline{KM}$  (v)  $\overline{NI}, \overline{NJ}, \overline{NK}, \overline{NL}, \overline{NM}$

21. In the given figure, FT & GT are tangents to the circle with centre O. Given  $\angle T = 56^\circ$ , find  $\angle F$



- (i)  $33^\circ$  (ii)  $58^\circ$  (iii)  $43^\circ$  (iv)  $28^\circ$  (v)  $38^\circ$

22. The angle between a tangent to a circle and the radius drawn at the point of contact is

- (i)  $120^\circ$  (ii)  $100^\circ$  (iii)  $105^\circ$  (iv)  $90^\circ$  (v)  $95^\circ$

23. Which of the following figures represent a secant ?

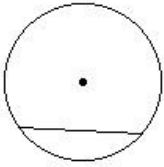


fig I

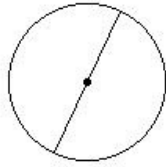


fig II

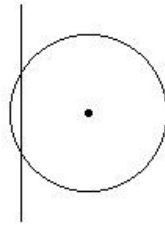


fig III

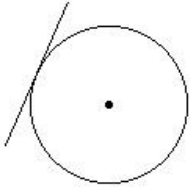


fig IV

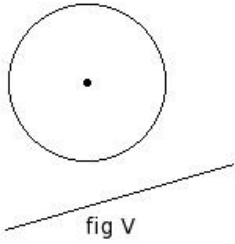
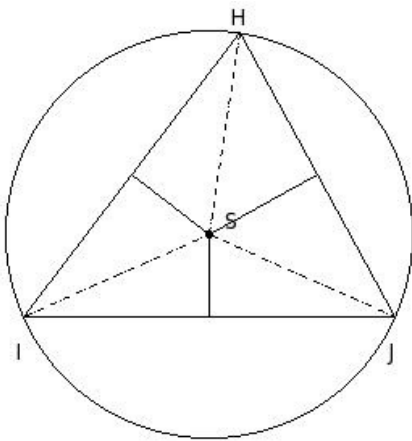


fig V

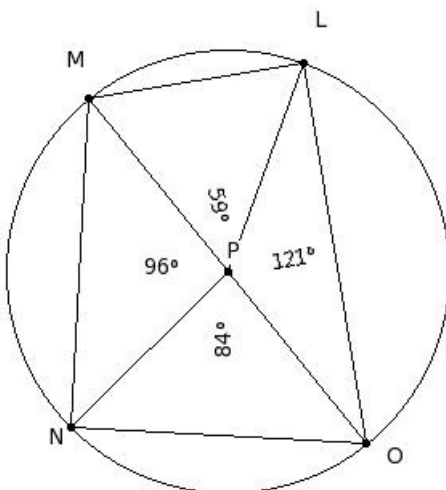
- (i) fig II (ii) fig V (iii) fig I (iv) fig III (v) fig IV

24. In the given triangle S is the circumcentre. If  $SH = 12.60$  cm, find the circumference of the circumcircle



- (i) 78.2 cm (ii) 79.2 cm (iii) 81.2 cm (iv) 77.2 cm (v) 80.2 cm

25. The centre of the circle is



- (i) P (ii) L (iii) N (iv) O (v) M

## Assignment Key

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