EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Tangents and Secants to a Circle

Grade : SSC Grade X

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

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

2. Which of the following statements are true?

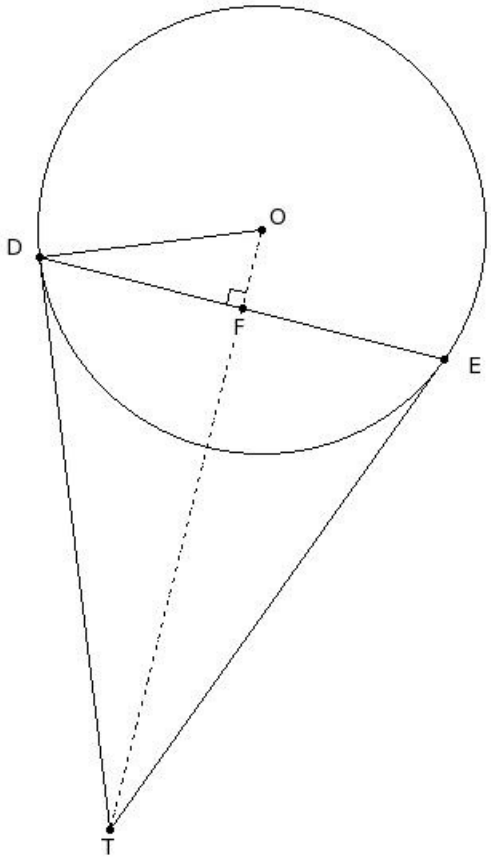
   a) Atmost three common tangents can be drawn touching two circles which touch each other.
   b) A maximum of four common tangents can be drawn touching any two circles.
   c) Atmost two common tangents can be drawn touching any two circles.
   d) Atmost one common tangent can be drawn for any two concentric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

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

3. Circles having common centre are called

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

4. In the given figure, DT & ET are tangents to the circle with centre O. Given OD = 14 cm and DE = 26 cm, find DT

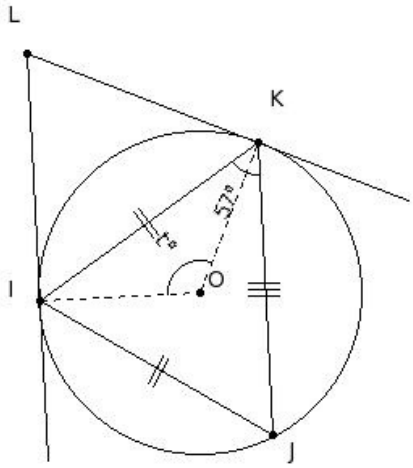


   (i) 37.03 cm (ii) 36.03 cm (iii) 34.03 cm (iv) 33.03 cm (v) 35.03 cm

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

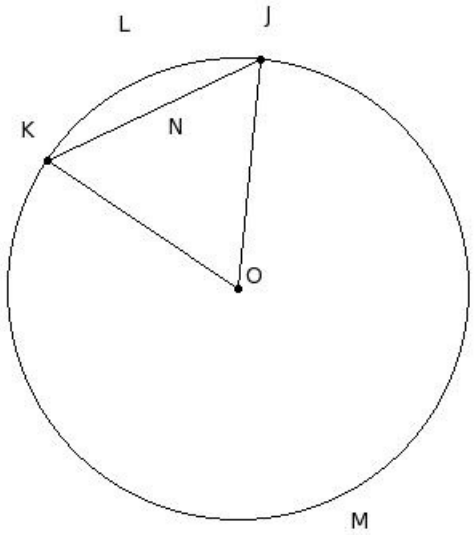
   (i) acute angled triangle (ii) right angle triangle (iii) equilateral triangle (iv) obtuse angled triangle

6. In the given figure, O is the centre of the circle and the tangents IL and KL meet at point L. If ∠JKI = 57°, find ∠IOK



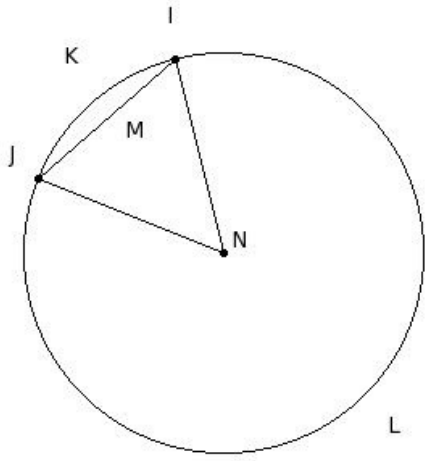
(i) 124° (ii) 119° (iii) 144° (iv) 129° (v) 114°

7. The minor arc of the circle is



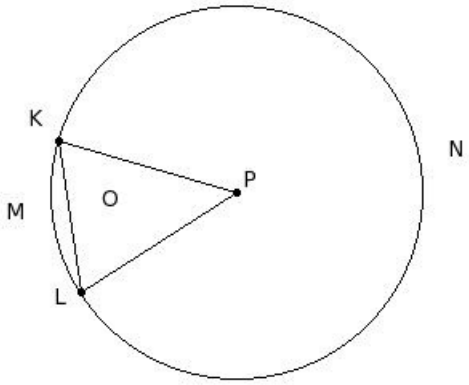
(i) JLK (ii) OJMKO (iii) JLKNJ (iv) OJLKO (v) JMK

8. The minor segment of the circle is



(i) NILJN (ii) ILJMI (iii) IKJMI (iv) NIKJN (v) ILJ

9. The major segment of the circle is



(i) KNL (ii) PKMLP (iii) PKNLP (iv) KML (v) KNLOK

10. Which of the following statements are true?

a) Infinite circles can be drawn passing through three collinear points.
b) Only one circle can be drawn passing through two points.
c) Exactly two tangents can be drawn parallel to a secant.
d) Only one circle can be drawn with a centre.
e) Atmost one circle can be drawn passing through three non-collinear points.

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

11. Which of the following figures represent a diameter ?

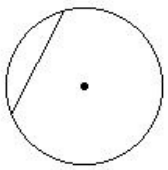


fig I

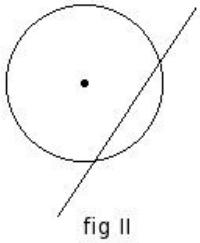


fig II

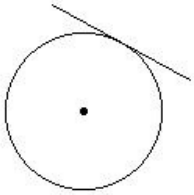


fig III

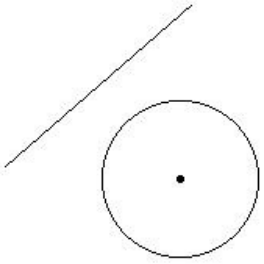


fig IV

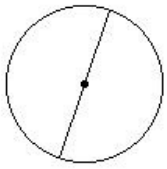
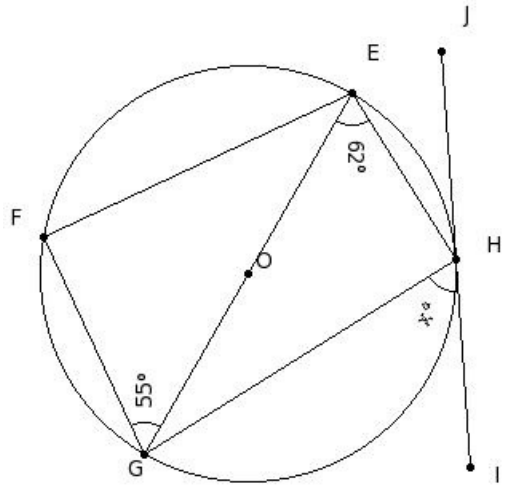


fig V

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

12. In the given figure, O is the centre of the circle and IJ is the tangent at H. If ∠GEH = 62° and ∠EGF = 55°, find ∠IHG

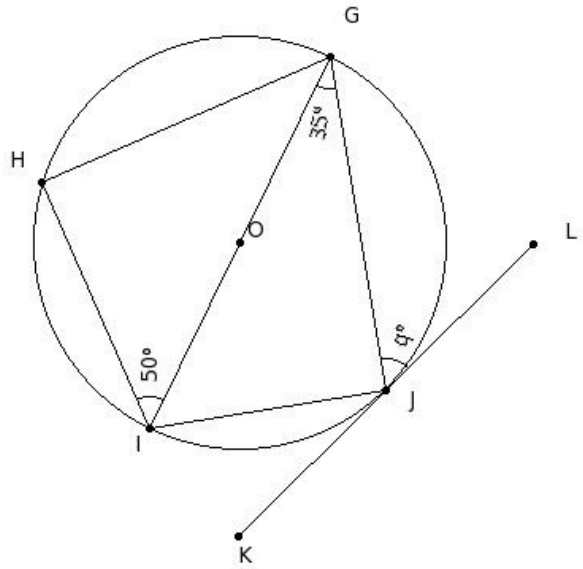


(i) 72° (ii) 62° (iii) 77° (iv) 67° (v) 92°

13. If the diameter of a circle is 98 cm, what is its radius?

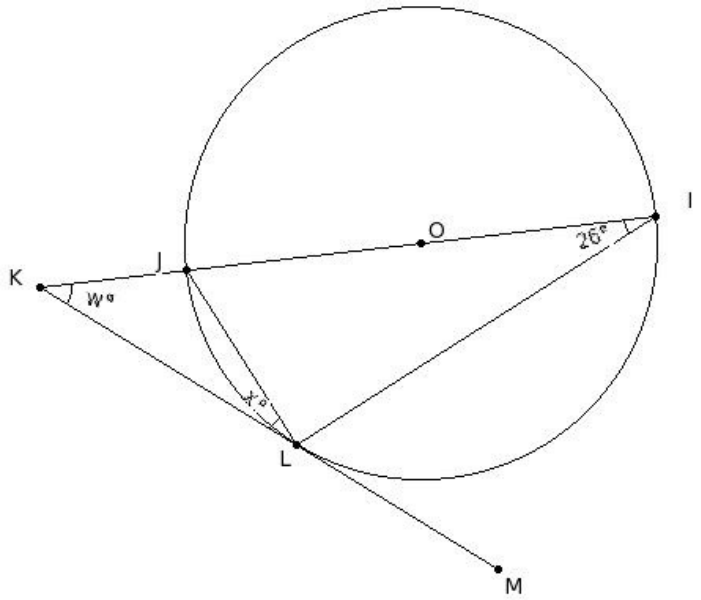
(i) 51 cm (ii) 47 cm (iii) 48 cm (iv) 50 cm (v) 49 cm

14. In the given figure, O is the centre of the circle and KL is the tangent at J. If ∠IGJ = 35° and ∠GIH = 50°, find ∠LJG



(i) 65° (ii) 70° (iii) 55° (iv) 60° (v) 85°

15. In the given figure, O is the centre of the circle and KM is the tangent at L. If ∠JIL = 26°, find ∠JKL + ∠JLK



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

16. Which of the following figures represent a secant ?

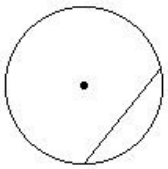


fig I

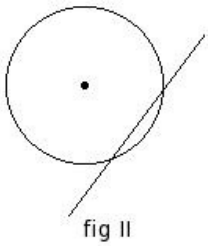


fig II

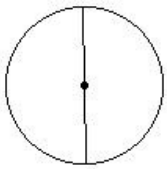


fig III

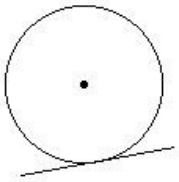


fig IV

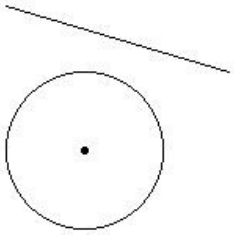
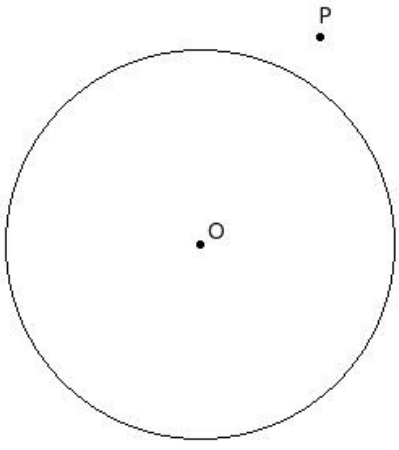


fig V

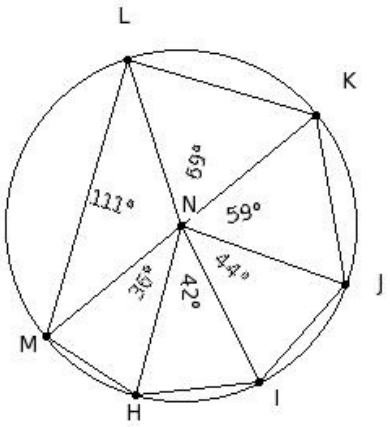
(i) fig II (ii) fig IV (iii) fig III (iv) fig I (v) fig V

17. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If $\overline{OP}$ > r,then P is



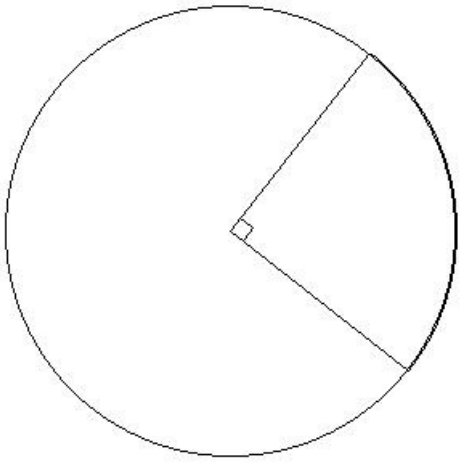
(i) outside the circle (ii) on the circle (iii) inside the circle

18. The centre of the circle is



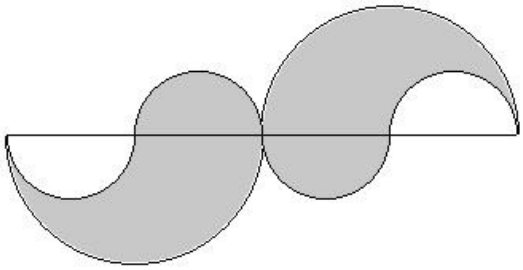
(i) K (ii) N (iii) J (iv) I (v) H

19. In the given figure, the radius of the circle is 14 cm. Find the area of the major sector



(i) 462.00 sq.cm (ii) 479.00 sq.cm (iii) 474.00 sq.cm (iv) 450.00 sq.cm (v) 447.00 sq.cm

20. The given figure consists of four small semi-circles of equal radii and two big semi-circles of equal radii. The radius of each big semi-circle is 8.00 cm which is the same as the diameter of the small semi-circle. Find the area of the shaded region

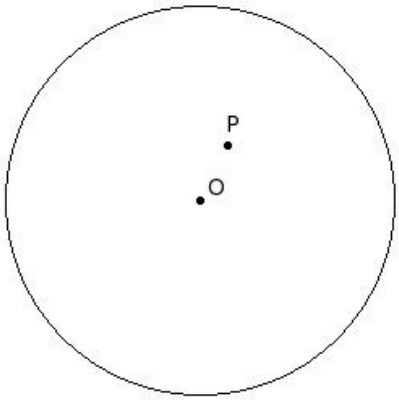


(i) 176.14 sq.cm (ii) 201.14 sq.cm (iii) 197.14 sq.cm (iv) 215.14 sq.cm (v) 229.14 sq.cm

21. A chord of a circle divides the whole circular region into two parts, each called a

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

22. 'O' is the centre of a circle of radius 'r' and 'P' is any point in its plane. If $\overline{OP} < r$, then P is



(i) inside the circle (ii) on the circle (iii) outside the circle

23. Which of the following statements are true?

a) All chords of a circle are diameters.

b) $\frac{22}{7}$ is a rational number.

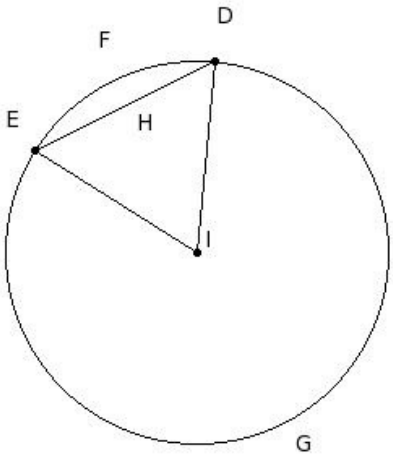
c) π is a rational number.

d) A circle divides the plane into three mutually disjoint sets of points.

e) All diameters of a circle are chords.

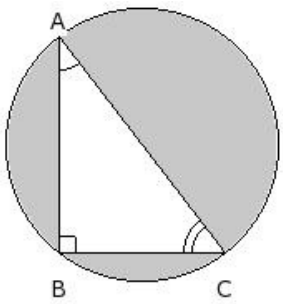
(i) {b,d,e} (ii) {a,b} (iii) {a,c,e} (iv) {c,d} (v) {a,b,d}

24. The minor sector of the circle is



(i) IDGEI (ii) DGEHD (iii) IDFEI (iv) DGE (v) DFE

25. In the given figure, BC = 10 cm and AB = 13 cm. Find the area of the shaded region



(i) 161.36 sq.cm (ii) 130.36 sq.cm (iii) 122.36 sq.cm (iv) 164.36 sq.cm (v) 146.36 sq.cm

Assignment Key

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