EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Tangents and Secants to a Circle

Grade : SSC Grade X

1. The distance around the circle is called

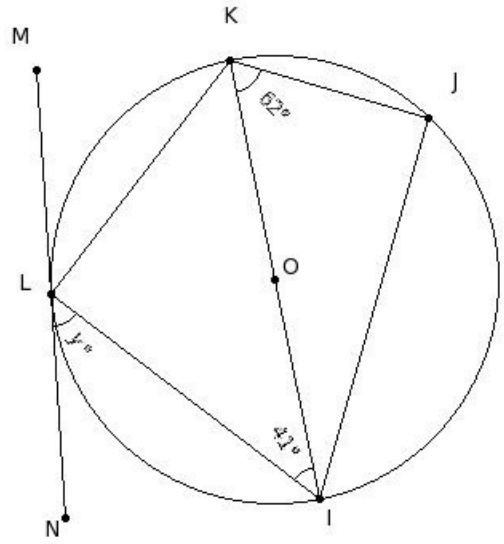
   (i) circumference (ii) radius (iii) chord (iv) diameter (v) arc

2. Which of the following statements are true?

   a) If two circles intersect, then two common tangents can be drawn.
   b) If two circles touch each other internally, there is only one common tangent.
   c) If two circles touch each other externally, there is only one common tangent.
   d) There exists four common tangents for any two non-intersecting circles.

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

3. In the given figure, O is the centre of the circle and MN is the tangent at L. If ∠KIL = 41° and ∠IKJ = 62°, find ∠NLI



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

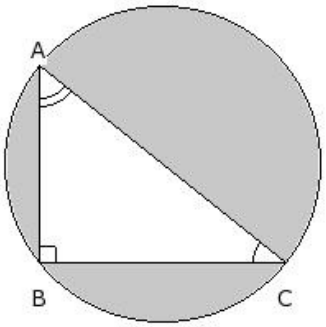
4. The mid-point of the diameter of a circle is called

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

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

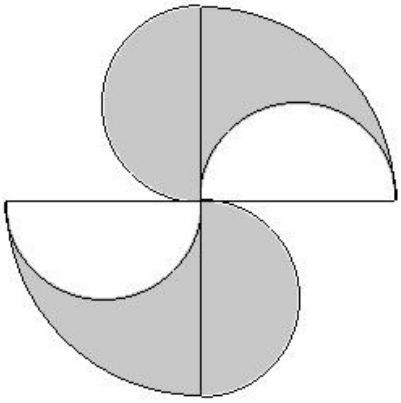
   (i) 5 (ii) 3 (iii) 4 (iv) 1 (v) 2

6. In the given figure, BC = 15 cm and AB = 12 cm. Find the area of the shaded region



   (i) 217.93 sq.cm (ii) 181.93 sq.cm (iii) 185.93 sq.cm (iv) 199.93 sq.cm (v) 225.93 sq.cm

7. The given figure consists of two quarter circles each of radius 12.00 cm and four semi-circles each of radius 6.00 cm. Find the area of the shaded region

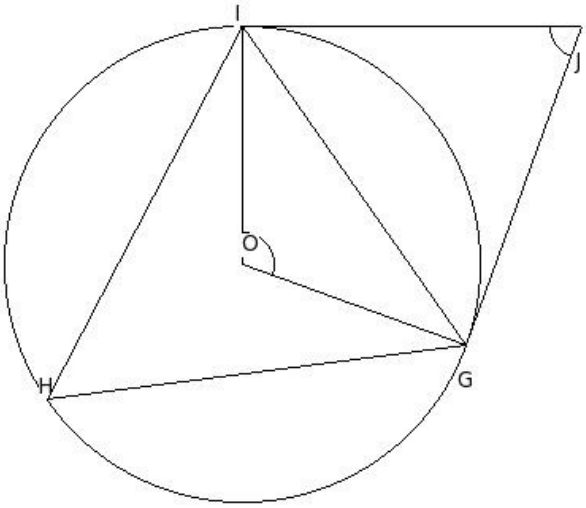


(i) 218.29 sq.cm (ii) 229.29 sq.cm (iii) 240.29 sq.cm (iv) 226.29 sq.cm (v) 211.29 sq.cm

8. A line which touches a circle at only one point is called a

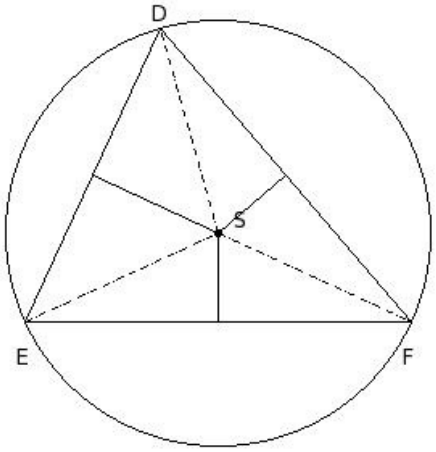
(i) major segment (ii) secant (iii) radius (iv) tangent (v) circumference

9. O is the centre of the circumcircle of △GHI. Tangents at G and I intersect at J. If ∠GJI = 70.04°, find ∠IHG



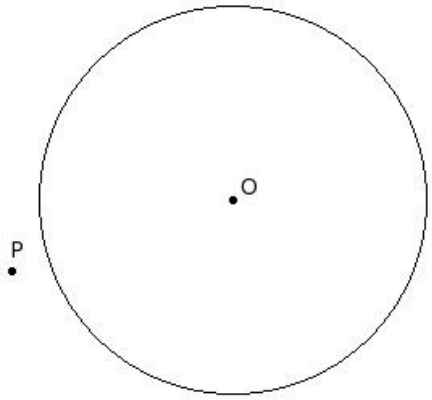
(i) 54.98° (ii) 59.98° (iii) 84.98° (iv) 64.98° (v) 69.98°

10. In the given triangle S is the circumcentre. If SD = 13.20 cm, find the circumference of the circumcircle



(i) 83.0 cm (ii) 81.0 cm (iii) 85.0 cm (iv) 84.0 cm (v) 82.0 cm

11. '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

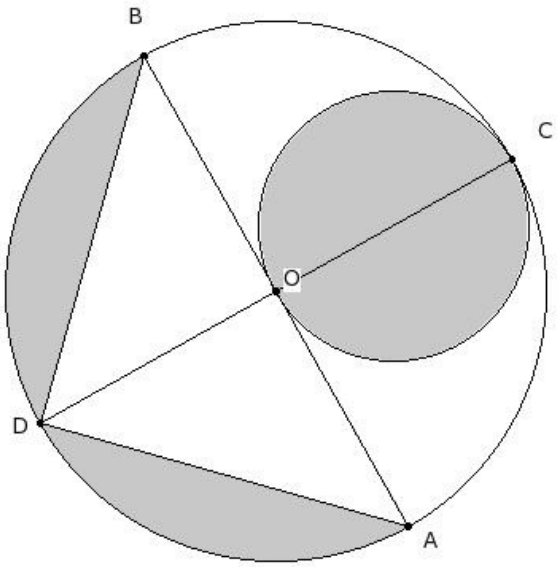
12. If two circles of radii 12 cm and 7 cm touch internally, the distance between their centres is

(i) 5 cm (ii) 7 cm (iii) 6 cm (iv) 3 cm (v) 4 cm

13. A line segment joining any point on the circle with its centre is called

(i) semi-circle (ii) chord (iii) radius (iv) major segment (v) segment

14. In the below figure, AB is the diameter of a circle with center O and OA = 17.00 cm . Find the area of the shaded region



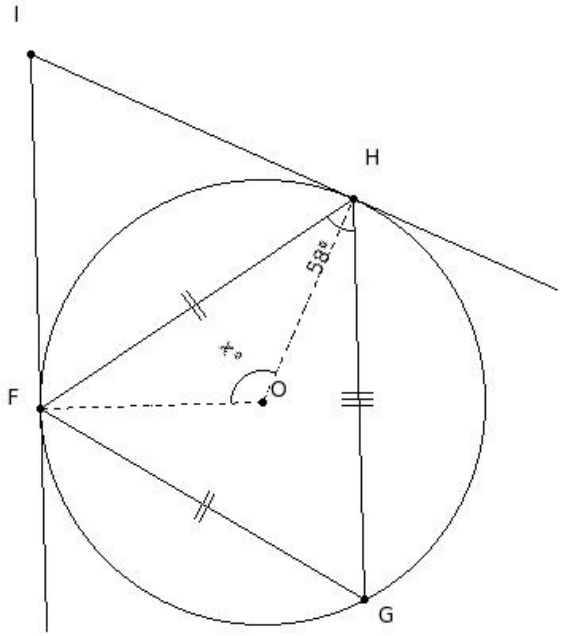
(i) 409.21 sq.cm (ii) 392.21 sq.cm (iii) 378.21 sq.cm (iv) 377.21 sq.cm

15. Which of the following statements are true?

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

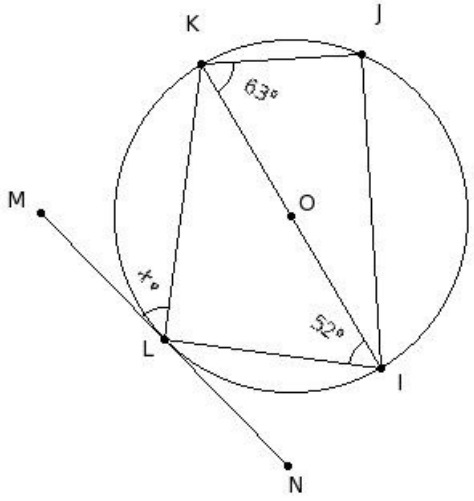
(i) {a,c,b} (ii) {d,c} (iii) {b,c} (iv) {a,b} (v) {e,f,b}

16. In the given figure, O is the centre of the circle and the tangents FI and HI meet at point I. If ∠GHF = 58°, find ∠FOH



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

17. In the given figure, O is the centre of the circle and MN is the tangent at L. If ∠KIL = 52° and ∠IKJ = 63°, find ∠MLK



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

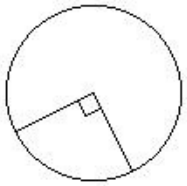
18. A chord of a circle divides the whole circular region into two parts, each called a

(i) segment (ii) major segment (iii) semi-circle (iv) radius (v) chord

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

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

20. In the given figure, the radius of the circle is 5 cm. Find the area of the minor sector



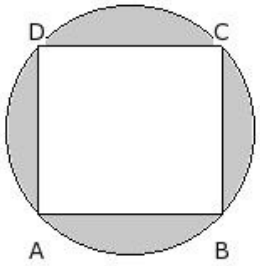
(i) 19.64 sq.cm (ii) 22.64 sq.cm (iii) 16.64 sq.cm (iv) 14.64 sq.cm (v) 24.64 sq.cm

21. Which of the following statements are true?

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

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

22. In the given figure, the circle circumscribes a rectangle with sides 11.00 cm and 10.00 cm. Find the area of the remaining portion other than the rectangle



(i) 60.64 sq.cm (ii) 68.64 sq.cm (iii) 63.64 sq.cm (iv) 58.64 sq.cm (v) 66.64 sq.cm

23. Which of the following statements are true?

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

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

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

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

25. If the radius of a circle is 14 cm, what is its circumference?

(i) 88 cm (ii) 90 cm (iii) 89 cm (iv) 86 cm (v) 87 cm

Assignment Key

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