EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Circles

Grade : CBSE Grade X

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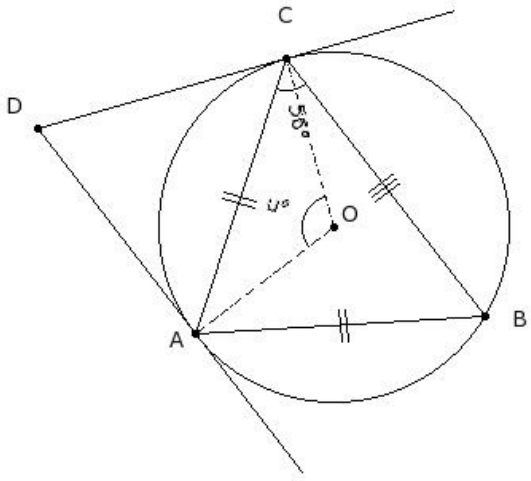
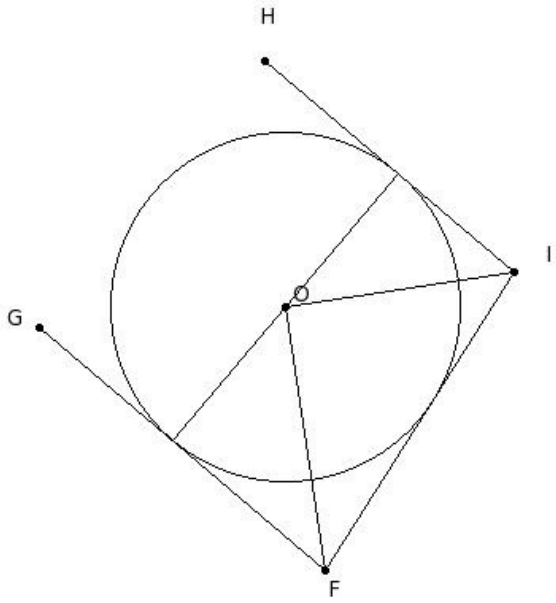
1. In the given figure, O is the centre of the circle and the tangents AD and CD meet at point D. If ∠BCA = 56°, find ∠AOC



(i) 127° (ii) 112° (iii) 142° (iv) 122° (v) 117°

2. 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 ∠FOI



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

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

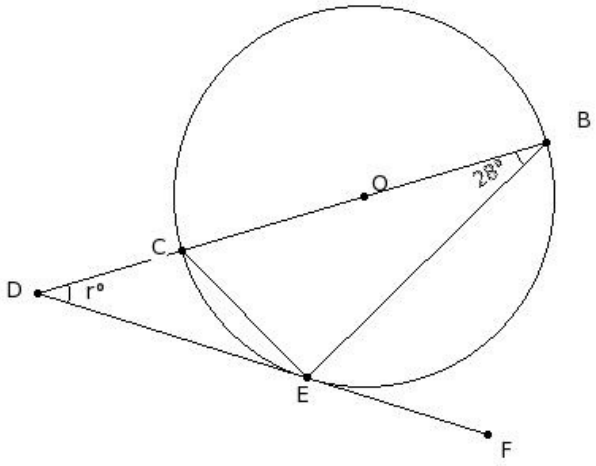
(i) major segment (ii) segment (iii) radius (iv) circumference (v) centre

4. Which of the following statements are true?

a) A chord divides a circle into two segments.
b) A chord divides a circle into two sectors.
c) Atmost one chord can be drawn on a circle with a certain length.
d) The diameter is the longest chord.
e) The radius is the shortest chord.

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

5. In the given figure, O is the centre of the circle and DF is the tangent at E . If ∠CBE = 28°, find ∠CDE



(i) 64° (ii) 39° (iii) 44° (iv) 49° (v) 34°

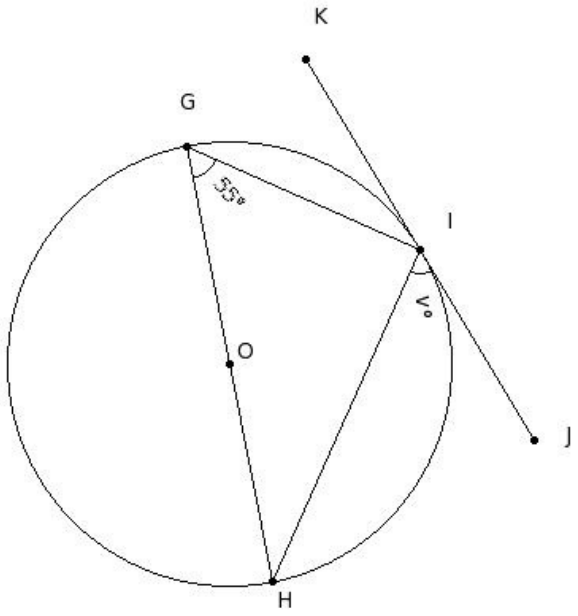
6. Two circles with radii R and r touch internally. If the distance between their centres is d, then

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

7. The angle subtended by the semicircle at the centre is

(i) 195° (ii) 185° (iii) 180° (iv) 190° (v) 210°

8. In the given figure, O is the centre of the circle and JK is the tangent at I. If ∠IGH = 55°, find ∠JIH

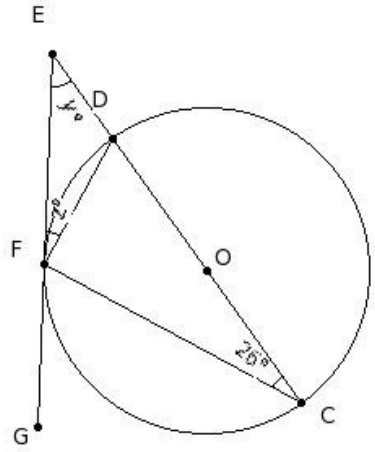


(i) 70° (ii) 85° (iii) 65° (iv) 60° (v) 55°

9. If BCDE is a cyclic parallelogram, then ∠E

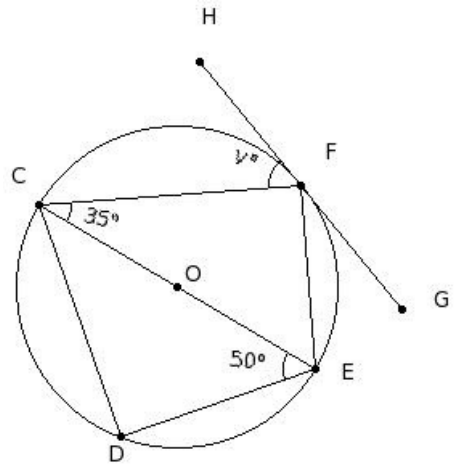
(i) 100° (ii) 120° (iii) 95° (iv) 105° (v) 90°

10. In the given figure, O is the centre of the circle and EG is the tangent at F. If ∠DCF = 26°, find ∠DEF + ∠DFE



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

11. In the given figure, O is the centre of the circle and GH is the tangent at F. If ∠ECF = 35° and ∠CED = 50°, find ∠HFC



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

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

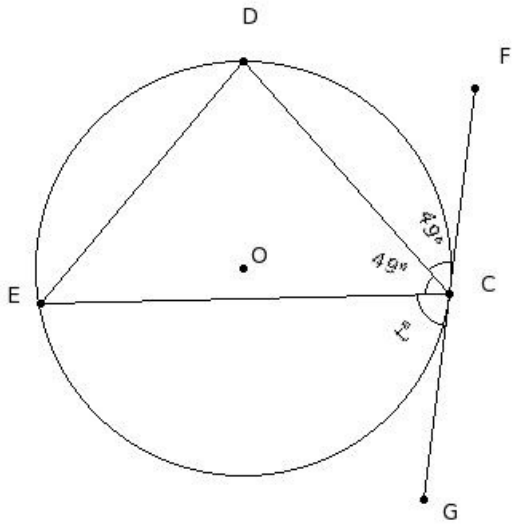
(i) 95° (ii) 100° (iii) 120° (iv) 90° (v) 105°

13. Which of the following statements are true?

a) A cyclic parallelogram is a rectangle.
b) A cyclic kite is a square.
c) A cyclic rhombus is a square.
d) A cyclic parallelogram is a rhombus.
e) A cyclic trapezium is a rectangle.

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

14. In the given figure, O is the centre of the circle and FG is the tangent at C. If ∠DCE = 49° and ∠FCD = 49°, find ∠ECG



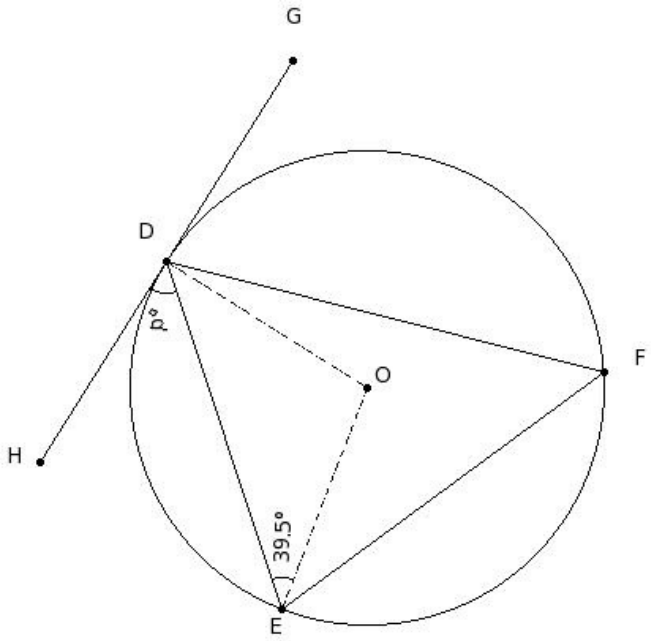
(i) 112° (ii) 92° (iii) 87° (iv) 97° (v) 82°

15. Which of the following are cyclic quadrilaterals?

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

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

16. In the given figure, O is the centre of the circle and GH is the tangent at D. If ∠OED = 39.5°, find ∠HDE



(i) 60.5° (ii) 50.5° (iii) 80.5° (iv) 65.5° (v) 55.5°

17. If DEFG is a cyclic quadrilateral and ∠D − ∠F = 16°, then ∠F

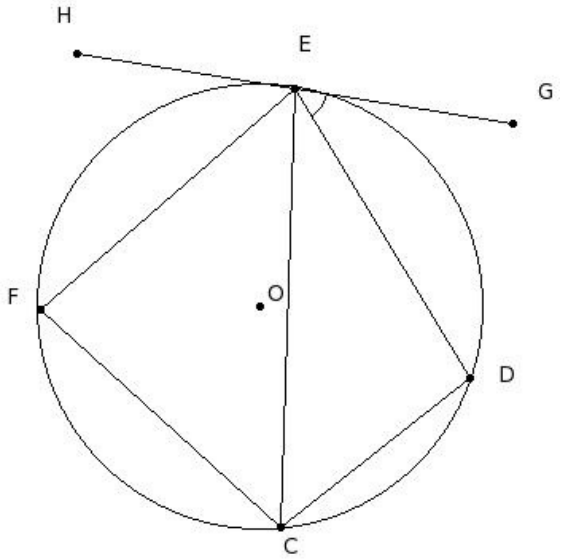
(i) 112° (ii) 92° (iii) 97° (iv) 87° (v) 82°

18. Which of the following statements are true?

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

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

19. In the given figure, CDEF is a cyclic quadrilateral such that EC bisects ∠FCD and GH is the tangent at E. If ∠ECD = 50°, find ∠GED



(i) 65° (ii) 55° (iii) 80° (iv) 50° (v) 60°

20. Two circles are of radii 3 cm and 3 cm. If the distance between their centres is 7 cm, what is the length of their direct common tangent?

(i) 6.00 cm (ii) 8.00 cm (iii) 5.00 cm (iv) 9.00 cm (v) 7.00 cm

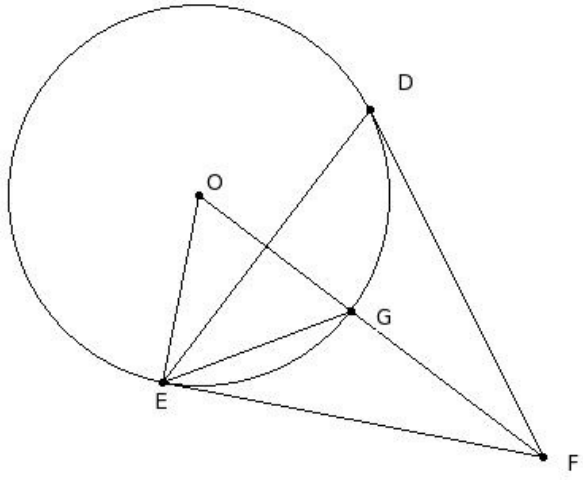
21. Points which lie on the circumference of the circle are called

(i) Similar points (ii) Cyclic points (iii) Concyclic points (iv) Concurrent points (v) Coincident points

22. The point of intersection of the angular bisectors of a triangle is

(i) centroid (ii) excentre (iii) circumcentre (iv) orthocentre (v) incentre

23. In the given figure, FD and FE are tangent segments to the circle with centre O. Given ∠EFG = 26°, find ∠DEG

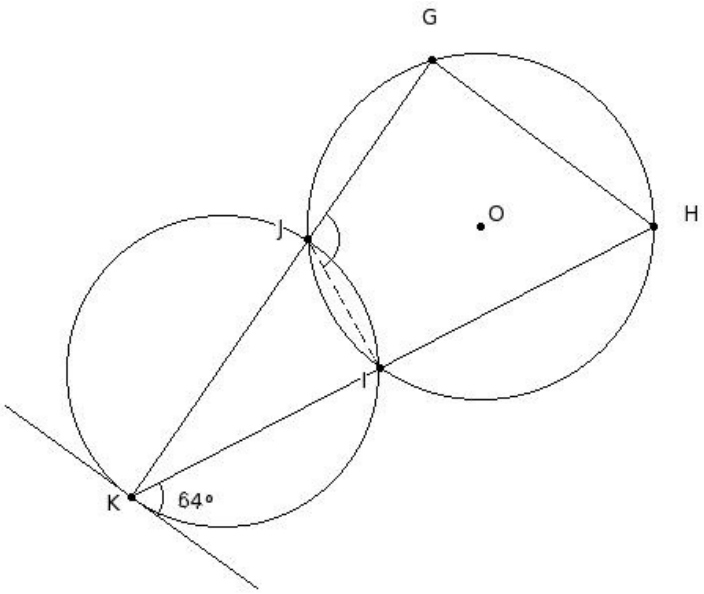


(i) 47° (ii) 37° (iii) 32° (iv) 62° (v) 42°

24. The perimeter of a circle is called

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

25. In the given figure, two circles intersect at points I & J. A tangent is drawn at point K. From the same point, two lines are drawn passing through points I & J. They meet the other end of the second circle at H & G. Given ∠K = 64°, find ∠GJI



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

Assignment Key

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

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