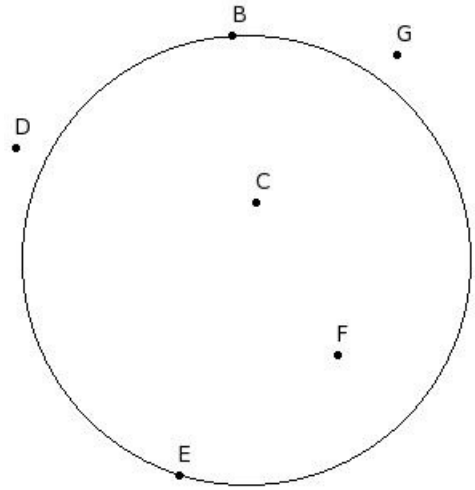
EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Circles

Grade : CBSE Grade IX

1. Find the points belonging to the outside of the circle

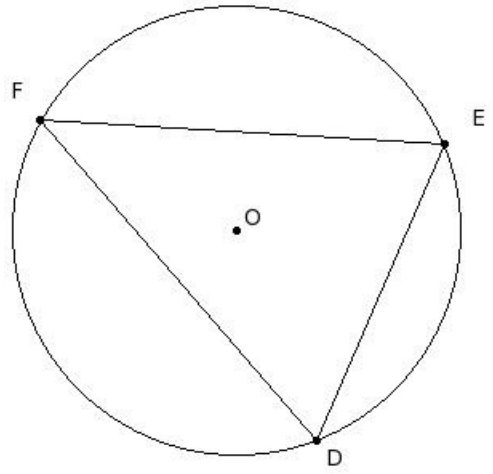


(i) {C,F} (ii) {G,E} (iii) {B,E} (iv) {G,F} (v) {D,G}

2. The opposite angles in a cyclic quadrilateral are

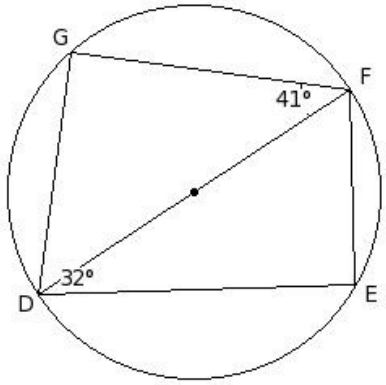
(i) complementary (ii) linear pair (iii) equal (iv) supplementary

3. O is the centre of the circle. If ∠EFD = 46°, find the angle ∠OED



(i) 59° (ii) 44° (iii) 74° (iv) 54° (v) 49°

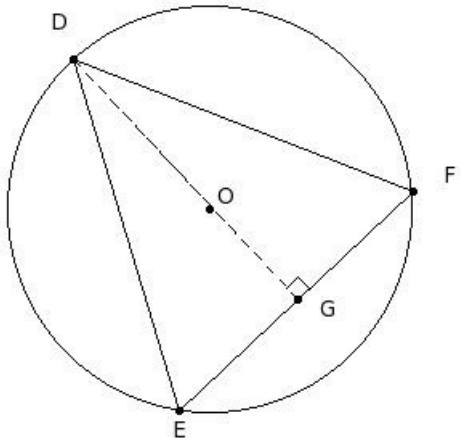
4. In the given figure, find the angles of the quadrilateral.



(i) $D=81°, E=90°, F=99°, G=90°$ (ii) $D=80°, E=90°, F=100°, G=90°$ (iii) $D=82°, E=90°, F=98°, G=90°$

(iv) $D=79°, E=90°, F=101°, G=90°$ (v) $D=83°, E=90°, F=97°, G=90°$

5. In the given figure, $\triangle DEF$ is inscribed in a circle. If DE = DF = 23 cm and EF = 20 cm, find the radius of the circle



(i) 10.77 cm (ii) 13.77 cm (iii) 12.77 cm (iv) 11.77 cm (v) 14.77 cm

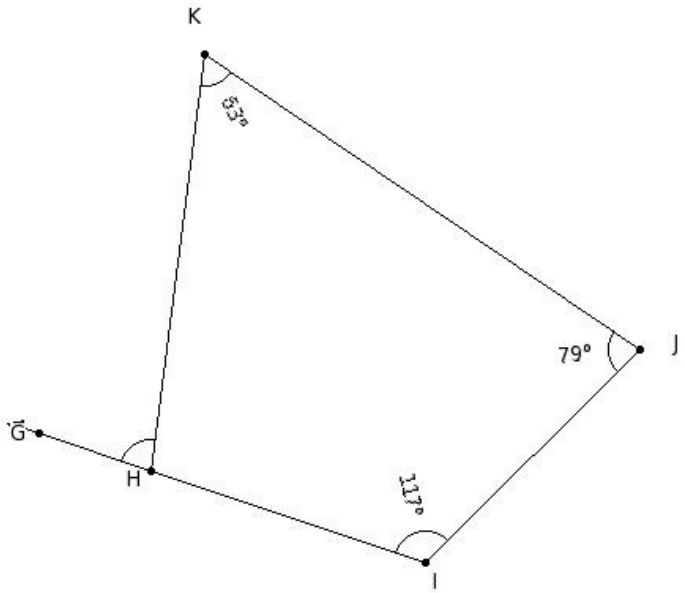
6. Two circles with equal radii are

(i) congruent (ii) concentric (iii) not similar (iv) only similar but not congruent

7. An arc subtends 132° in its alternate segment. The arc is

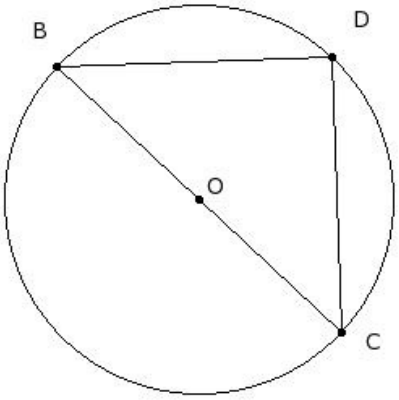
(i) major segment (ii) minor arc (iii) semi-circle (iv) quadrant (v) major arc

8. In the given figure, HIJK is cyclic quadrilateral. If $\angle IJK = 79°$, find $\angle GHK$



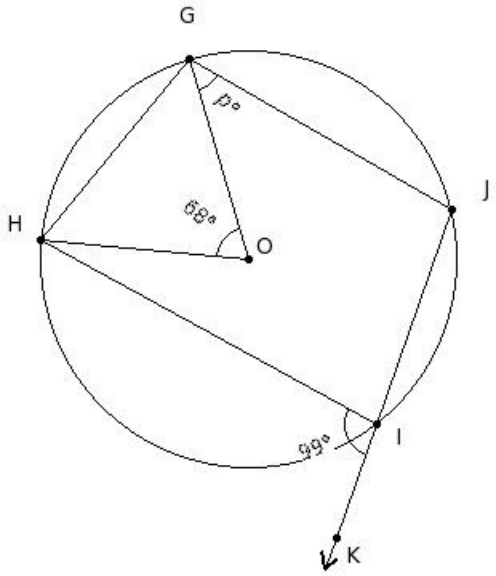
(i) 84° (ii) 79° (iii) 89° (iv) 94° (v) 109°

9. In the given figure BD & CD are equal length chords of the circle. Find ∠DBC



(i) 50° (ii) 60° (iii) 75° (iv) 45° (v) 55°

10. In the given figure, O is the centre of the circle. If ∠GOH = 68° and ∠HIK = 99°, find ∠JGO



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

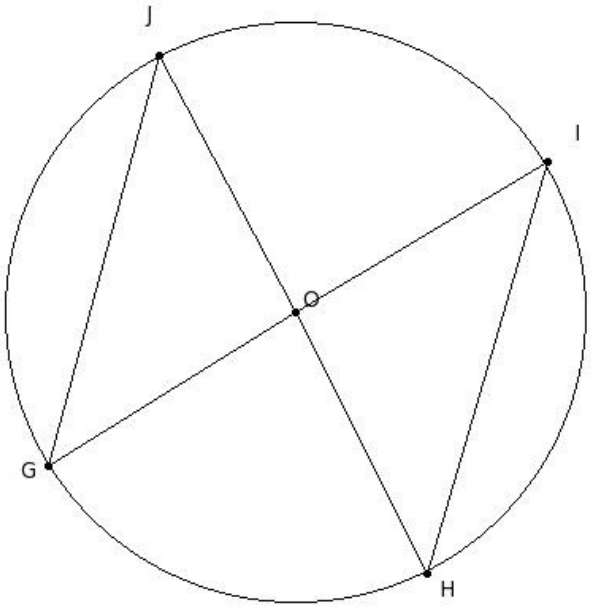
11. A chord that passes through the centre of the circle is called

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

12. A line which intersects the circle at two distinct points is called a

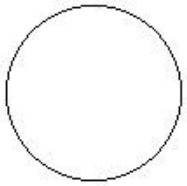
(i) quadrant (ii) radius (iii) secant (iv) centre (v) segment

13. In the given figure, GJ & HI are two chords of equal length. Given ∠OHI = 43°, find ∠GOJ



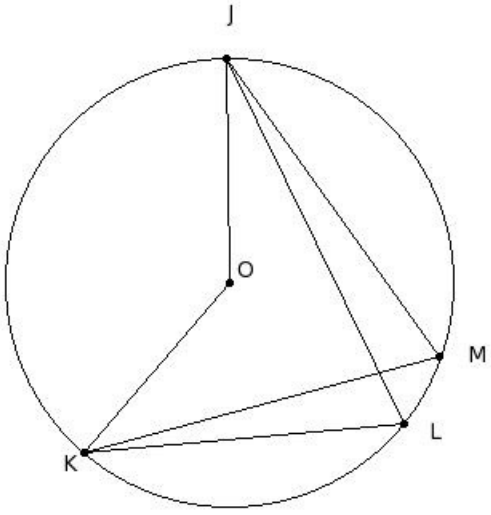
(i) 94° (ii) 104° (iii) 109° (iv) 99° (v) 124°

14. Identify the figure below



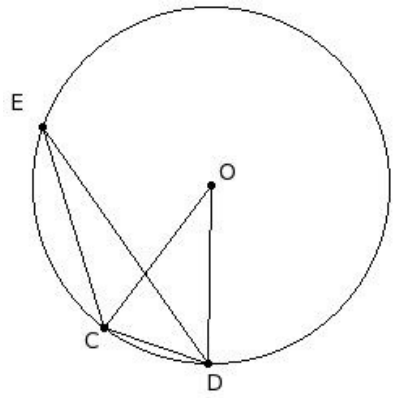
(i) hexagon (ii) pentagon (iii) circle (iv) octagon (v) angle

15. O is the centre of the circle. If ∠JOK = 139°, find the angle ∠L



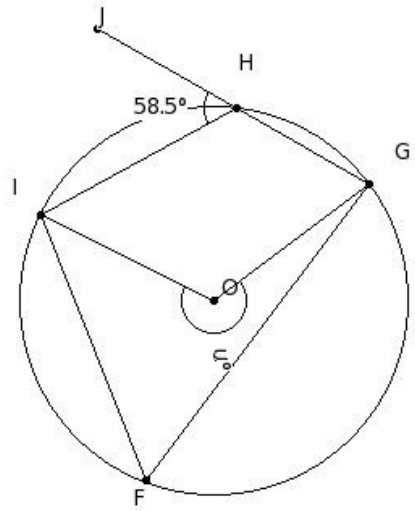
(i) 74.5° (ii) 99.5° (iii) 69.5° (iv) 79.5° (v) 84.5°

16. In the given figure, CD is a side of regular 5-sided polygon and CE is a side of regular 10-sided polygon inscribed in a circle with centre O. Find ∠COD



(i) 102° (ii) 72° (iii) 82° (iv) 87° (v) 77°

17. In the given figure, O is the centre of the circle. If ∠JHI = 58.5°, find reflex ∠IOG



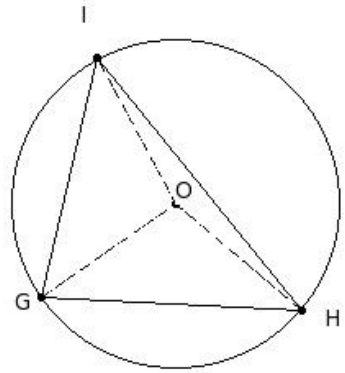
(i) 248° (ii) 253° (iii) 243° (iv) 258° (v) 273°

18. If two circles are concentric, then

(i) their perimeters are same (ii) their radii are same (iii) their centres are same

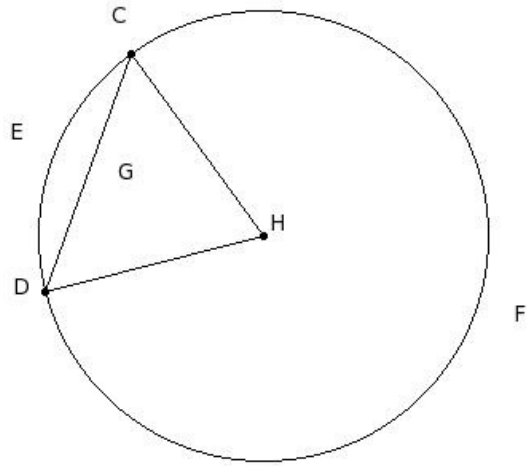
(iv) their diameters are same

19. △GHI is inscribed in a circle with centre O. If ∠GOH = 105° and ∠HOI = 158°, find ∠GHI



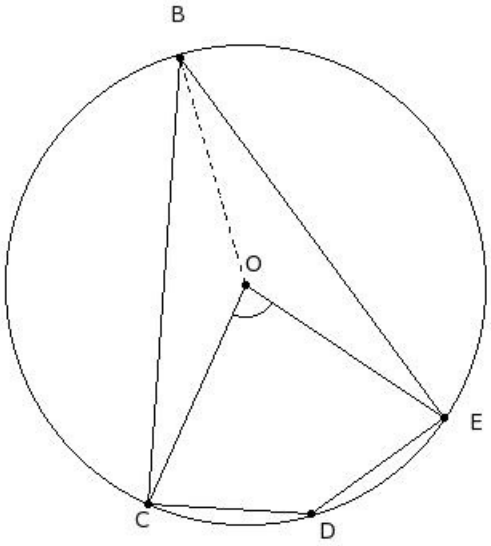
(i) 58.5° (ii) 78.5° (iii) 48.5° (iv) 53.5° (v) 63.5°

20. The minor arc of the circle is



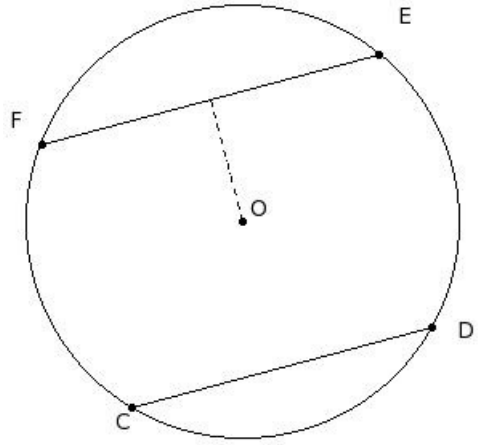
(i) HCEDH (ii) CFD (iii) HCFDH (iv) CED (v) CEDGC

21. O is the centre of the circle. If ∠COE = 80°, find ∠B



(i) 70° (ii) 55° (iii) 50° (iv) 40° (v) 45°

22. In the given figure, CD ∥ EF. Length of chords CD = 19 cm and EF = 22 cm.
If the distance between the chords is 17 cm, find the radius of the circle



(i) 15.37 cm (ii) 13.37 cm (iii) 14.37 cm (iv) 12.37 cm (v) 11.37 cm

23. Which of the following statements are true?

a) Angles in the opposite segments are supplementary.
b) Angles in the opposite segments are complementary.
c) Angles in the same segment are equal.
d) Angles subtended by equal length arcs in two circles are equal.

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

24. Which of the following statements are true?

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

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

25. An arc subtends 57° in its alternate segment. The angle made by its corresponding major arc at the centre is

(i) 251° (ii) 276° (iii) 261° (iv) 256° (v) 246°

Assignment Key

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