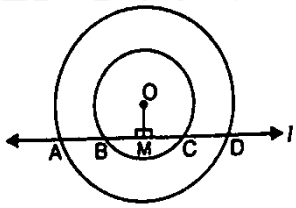
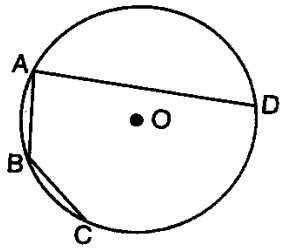
CIRCLE

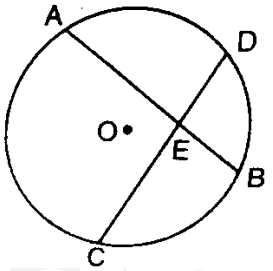
1. The distance between two points A and B is 3 cm. A circle of radius 1.7 cm is drawn to pass through these points. Find the distance of AB from the centre of the circle.
2. Find the length of a chord which is at a distance 5 cm from the centre of a circle of radius 13 cm
3. AB, CD are parallel chords of a circle, 3cm of a circle, 3cm apart, If AB =4 cm, Cd =10 cm, find the radius of the circle.
4. AB and CD are two parallel chords of a circle such that AB =16 cm and CD = 30 cm. If the chords are on the opposite sides of the centre and the distance between them is 23 cm, find the radius of the circle.
5. In a circle of radius 5 cm, AB and AC are two chords such that AB = AC = 6 cm . Find the length of the chord BC.
6. If a line l intersects two concentric circles at points A,B, C and D as shown in the figure, prove that AB =CD. OR Prove that two concentric circles intercept equal portions on any straight line that cuts them



7. Prove that the line joining the mid-points of two equal chords of a circle makes equal angles with the chords
8. Two equal chords AB and CD of a circle with centre O, when produced meet at point P outside the circle prove that (i) PB = PD and (ii) PA= PC
9. In an equilateral triangle, prove that the centroid and centre of the circum-circle(circum-center) coincide.
10. In fig chord AB = chord BC
    i. What is the relation between arc AB and arc BC?
    ii. What is the relation between ∠AOB and ∠BOC ?
    iii. If arc AD > arc ABC, what is the relation between chord AD and chord AC?



11. In equal circles with centres O and p, $\widehat{AB} = \widehat{DE}$. find m ∠DPE.
12. In the fig two equal chords AB and CD of a circle with centre O, intersect each other at E. Prove that AD=CB.



13. A, B, C,D are four consecutive points on a circle such that AB = CD. Prove that AC = BD.
14. In ∆ABC, the perpendiculars from vertices A and V on their opposite sides meet (when produced) the circum- circle of ∆ABC at point D and E respectively. Prove that arc CD = arc CE.