ATOMIC ENERGY CENTRAL SCHOOL- KAKRAPAR

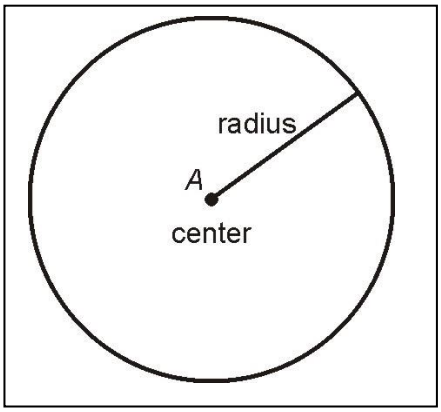
CLASS-10

CHAPTER-10, CIRCLE

MODULE-1

What is circle?

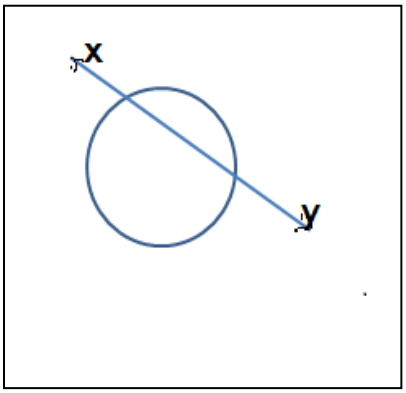
Circle is a collection of all points in a plane which are at a constant distance (radius) from a fixed point (centre).



Secant-

In geometry, a **secant** of a curve is a line that intersects the curve at a minimum of two distinct points. The word **secant** comes from the Latin word secare, meaning to cut.

In the following fig XY is a Secant of a circle.



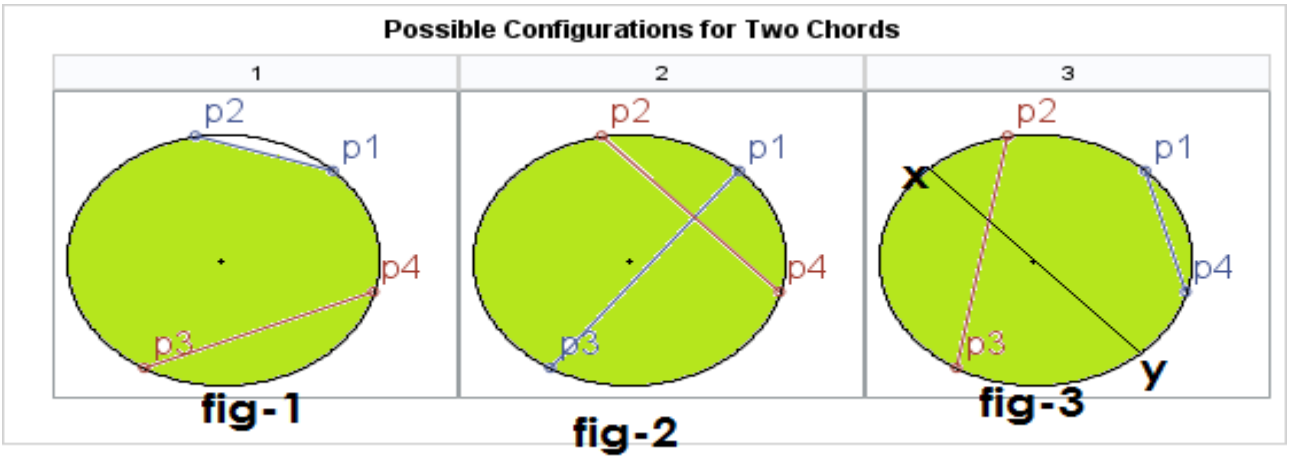
Chord of a circle-

Chord of a circle is a straight line segment whose endpoints both lie on the **circle**. More generally, a **chord** is a line segment joining two points on any curve, for instance, an ellipse.

In fig-1, p1p2 and p3p4 are two chord circle

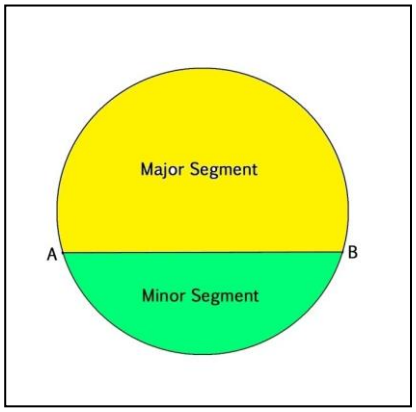
Similarly in fig-2 p1p3 and p2p4 are two chord of circle

In fig-3, p1p4, p2p3 and XY are three chords of circle in which XY is a diameter of circle , also known as longest chord of circle.



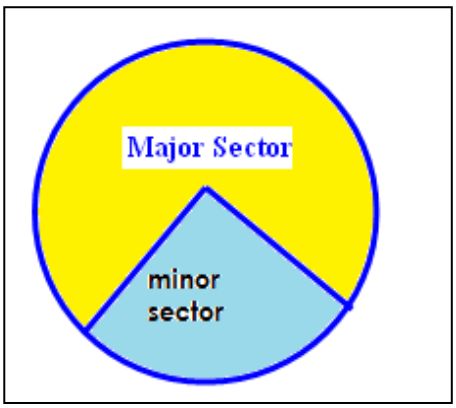
Segment of a circle-

The **segment of a circle** is the region bounded by a chord and the arc subtended by the chord.



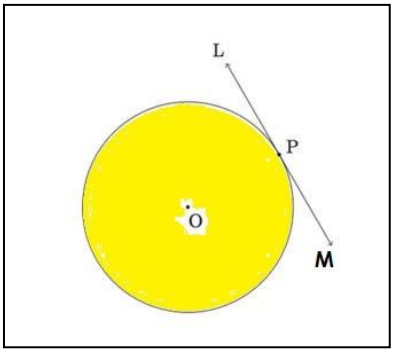
Sector of a circle-

A **sector of a circle** is a portion of the circle made of its arc and two radii.



T**angent** to a **circle-**

A **tangent** to a **circle** is a line that touches the **circle** at exactly one point, never entering the **circle's** interior.



- Remember the following points about the properties of tangents-
- The tangent line never crosses the circle, it just touches the circle.
- At the point of tangency, it is perpendicular to the radius.

From the same external point, the tangent segments to a circle are equal

in figure:

AC=BC as well as angle A and angle B will be 90^0