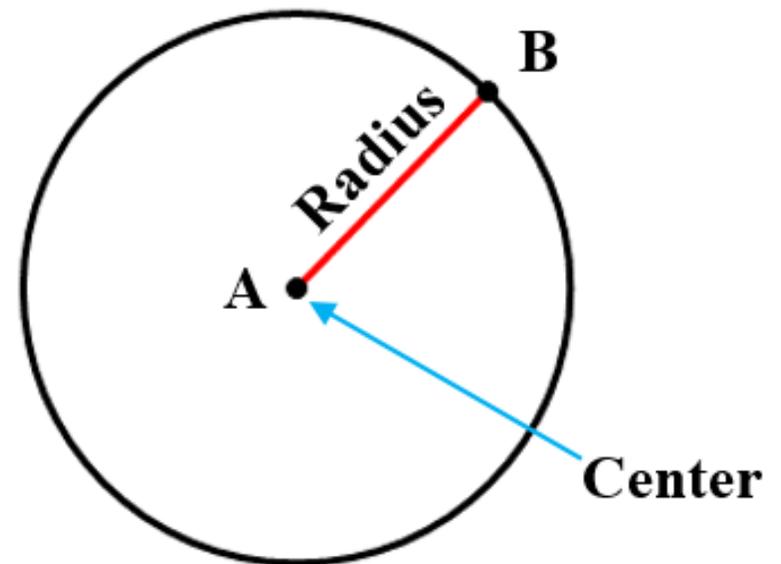


Circle

A **circle** is the set of all points in a plane at a given distance, the **radius**, from a given point, the **center**.

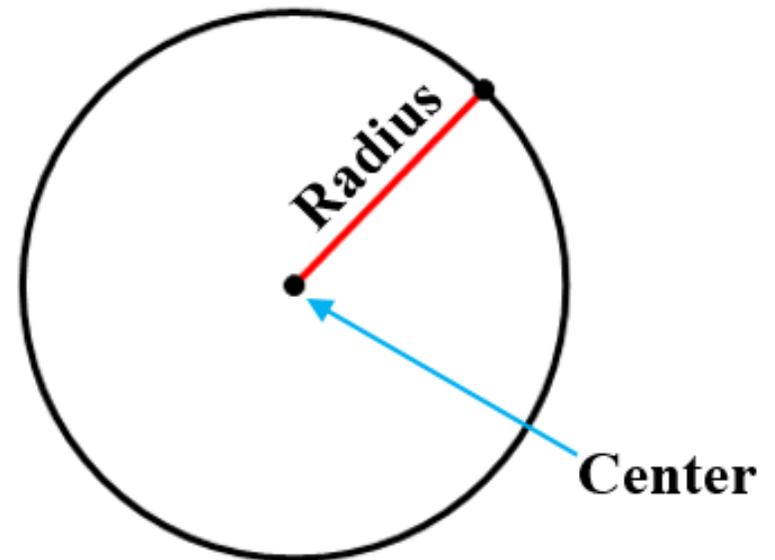
Notes:

- A circle is named by its center.
- \overline{AB} is a radius
- Point A is the center



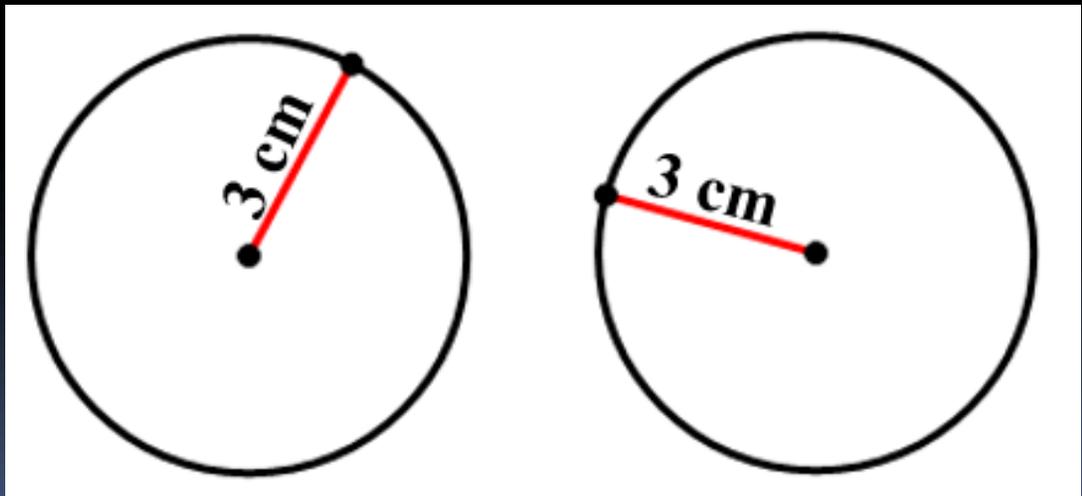
Radius

A **radius** of a circle is any segment with one endpoint on the circle and the other endpoint at the center of the circle. The **radius** can also mean the length of this segment.



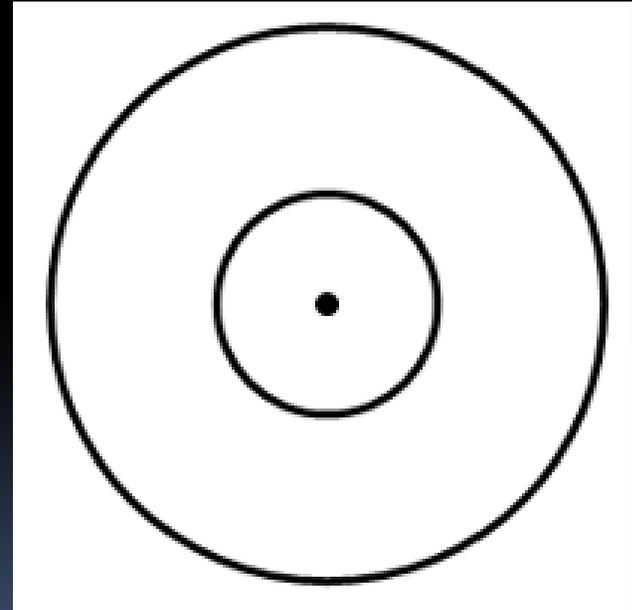
Congruent Circles

Congruent circles are circles whose radii are congruent.



Concentric Circles

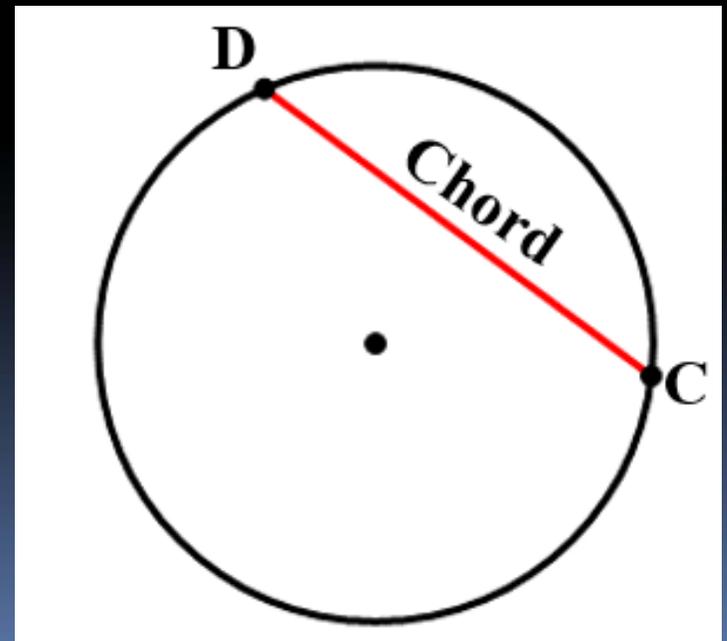
Concentric circles lie in the same plane and have the same center.



Chord

A **chord** of a circle is a segment whose endpoints are on the circle.

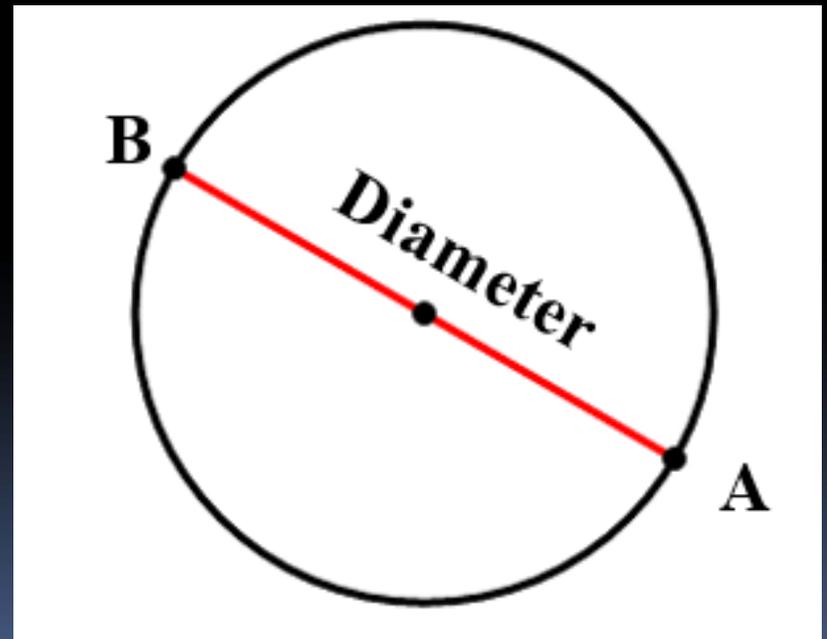
\overline{DC} is a chord



Diameter

A **diameter** of a circle is a segment that contains the center of the circle and whose endpoints are on the circle. The term **diameter** can also mean the length of this segment.

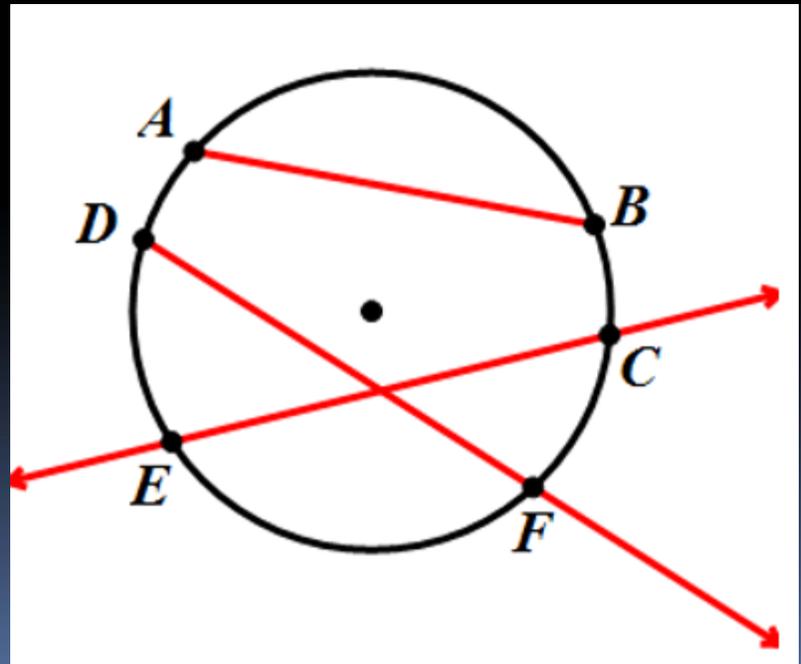
\overline{AB} is a diameter



Secant

A **secant** is a line, ray or segment that intersects a circle at two points.

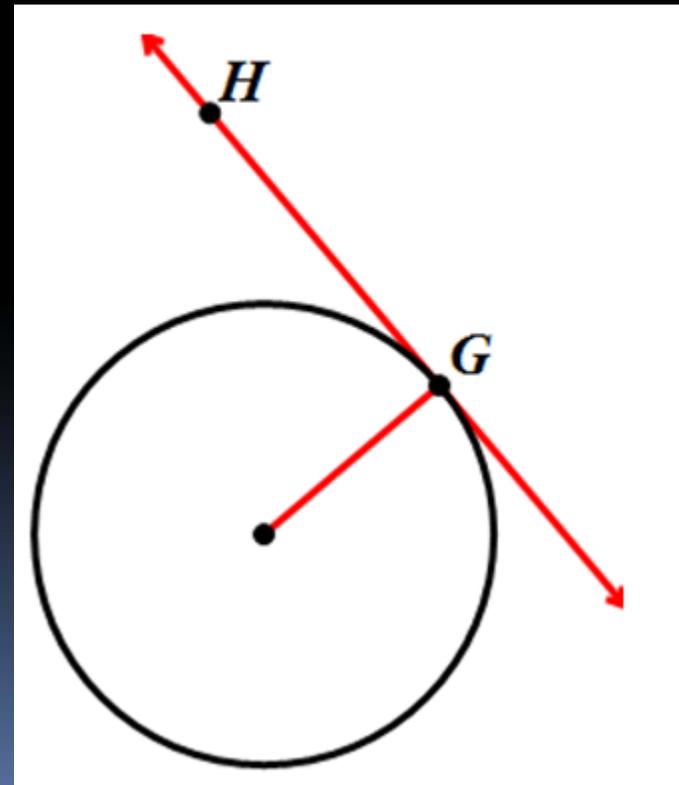
- \overline{AB} is a secant
- \overrightarrow{DF} is a secant
- \overleftrightarrow{EC} is a secant



Tangent

A **tangent** to a circle is a line, segment, or ray in the plane of the circle that intersects the circle in exactly one point. That point is the **point of tangency**.

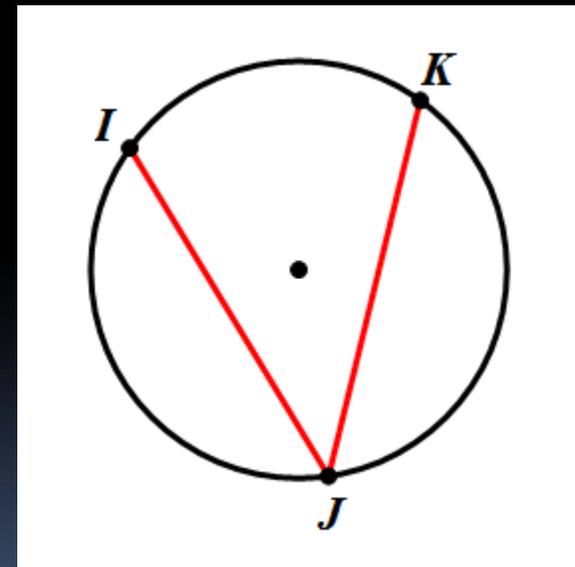
- \overleftrightarrow{HG} is a tangent
- Point G is the point of tangency



Inscribed Angle

An angle is **inscribed** in a circle if the vertex of the angle is on the circle and the sides of the angle are chords of the circle.

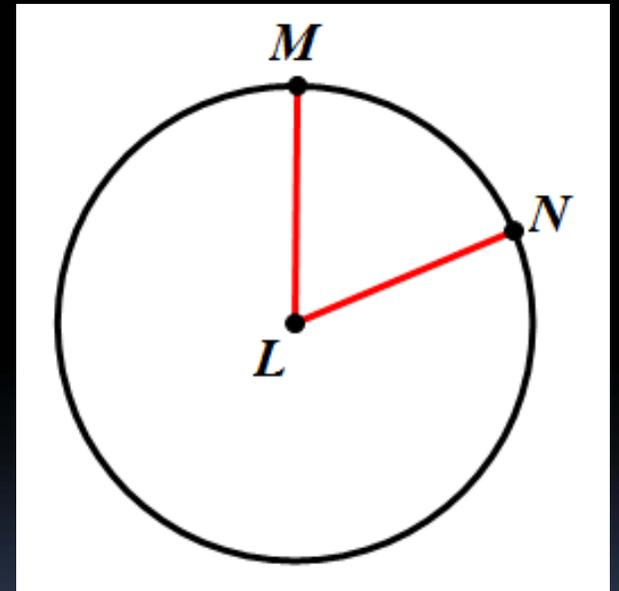
$\angle IJK$ is an inscribed angle



Central Angle

A **central** angle of a circle is an angle whose vertex is the center of the circle.

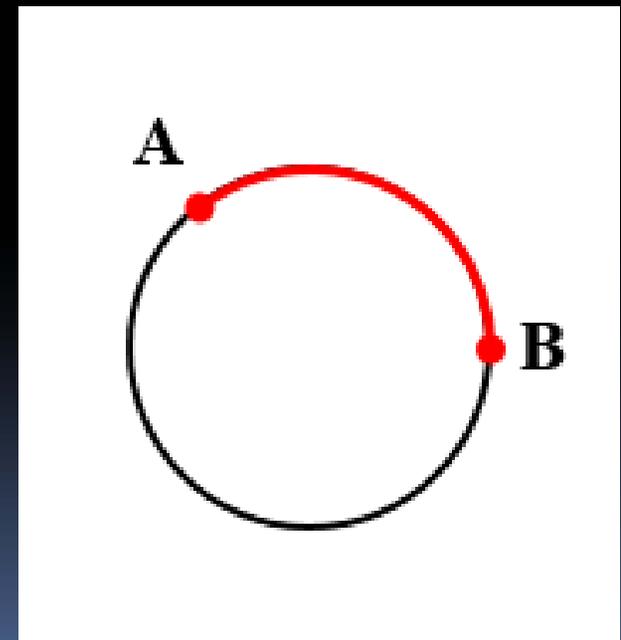
$\angle MLN$ is a central angle



Arc

Two points on a circle and the continuous (unbroken) part of the circle between the two points is called an **arc**. The two points are called **endpoints**.

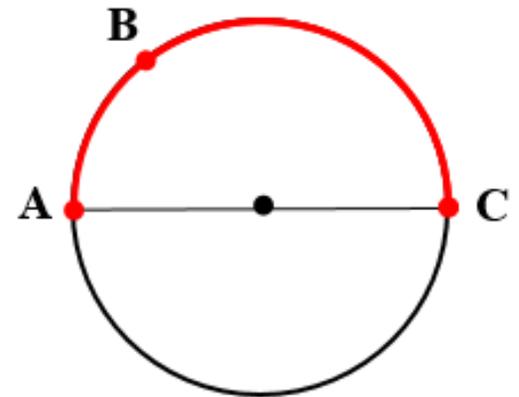
\widehat{AB} is an arc with endpoints A and B.



Semicircle.

A **semicircle** is half a circle.

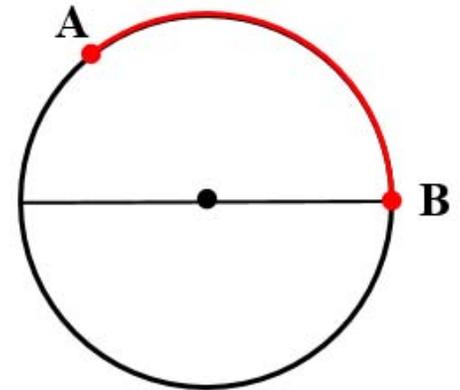
\widehat{ABC} is a semicircle with endpoints
A and C on the side that includes point B.



Minor Arc

A **minor** arc is an arc that is smaller than a semicircle.

\widehat{AB} is a minor arc with endpoints A and B.



Major Arc

A **major** arc is an arc that is larger than a semicircle.

\widehat{ABC} is a major arc with endpoints A and C.

