WELCOME

Warm-Up

Chapter 9 Section 1

Circle Vocabulary

Chap 9 Section 1 Learning Target

Identifying characteristics and key vocabulary of Circles.

Circle Basics

The set of all points that are equidistant from a given point, called the center of the circle.

Radius:

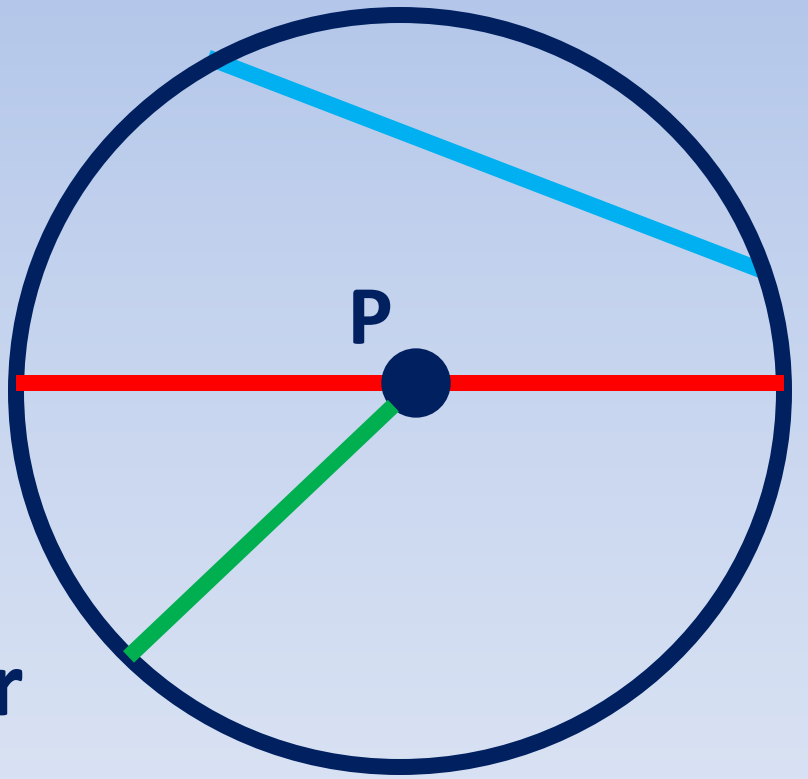
center to the side

Chord:

Connects two sides

Diameter:

Connects sides through center



A circle with center P is called “circle P”, or ⊙P.

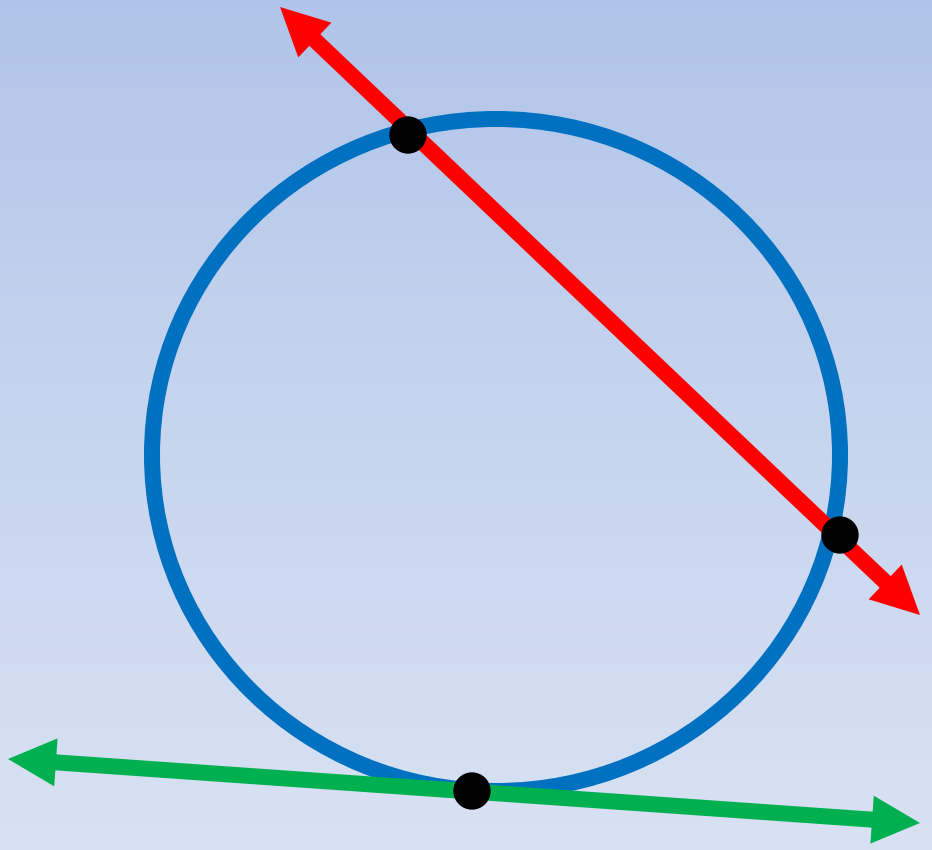
Circles with Lines

Secant:

A line that intersects a circle in two different places.

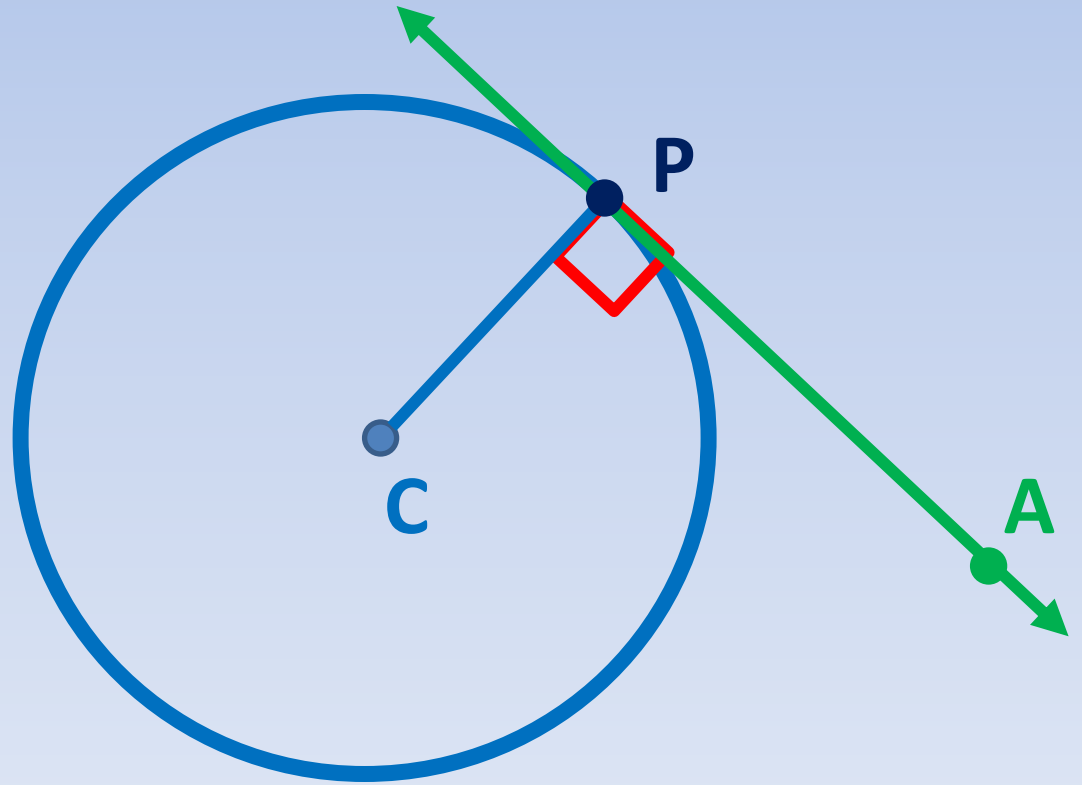
Tangent:

A line that intersects a circle in only one place.

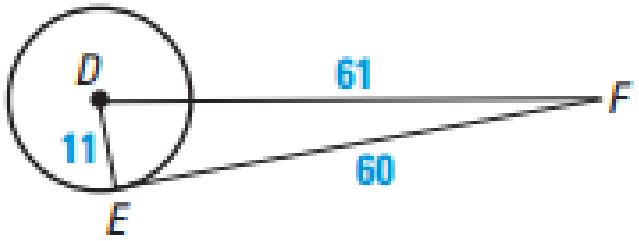


Point of Tangency

A line is tangent to a circle IFF it is perpendicular to the line that connects the center and point of tangency



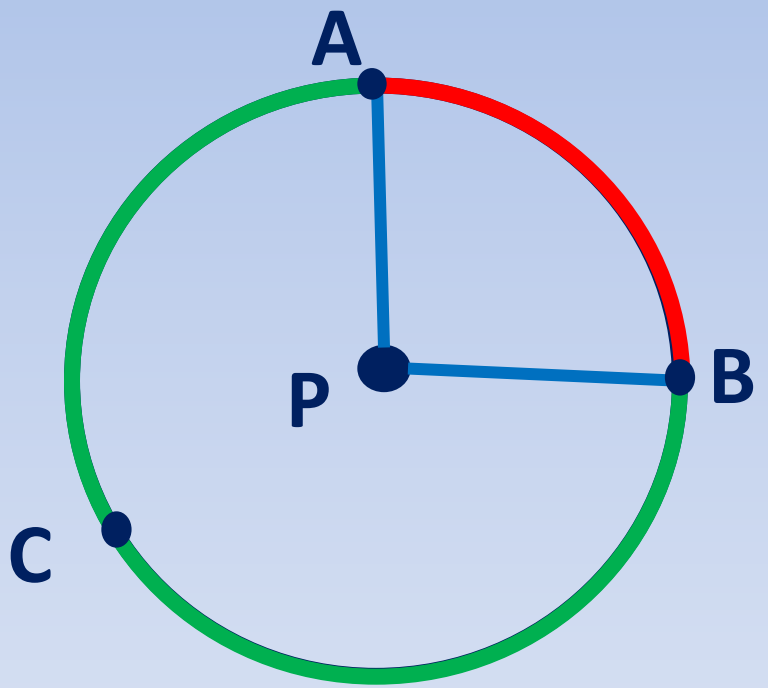
You can use the Converse of the Pythagorean Theorem to tell whether $\overleftrightarrow{EF}$ is tangent to $\odot D$.



Central ∠ and Arcs

An arc is defined by the points where a central ∠ hits the circle.

(A central ∠ has its vertex at the center.)



Major Arc

An arc with interior angle greater than or equal to 180°

In ⊙P $\overset{\frown}{BCA}$ is major

Central ∠

∠APB

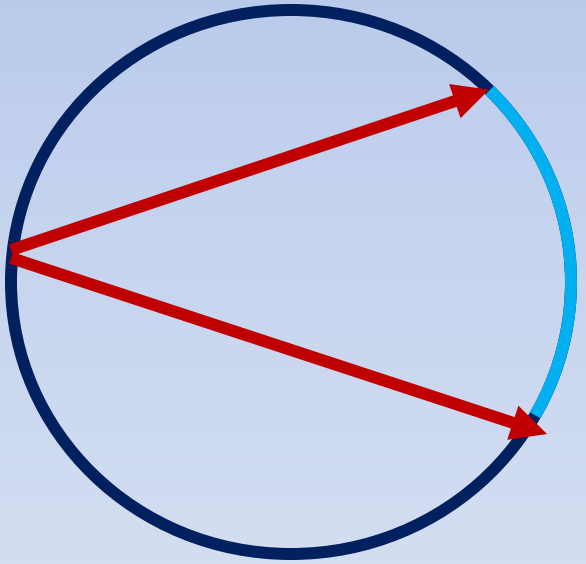
Minor Arc

An arc with interior angle less than 180°

In ⊙P $\overset{\frown}{AB}$ is minor

Inscribed Angles

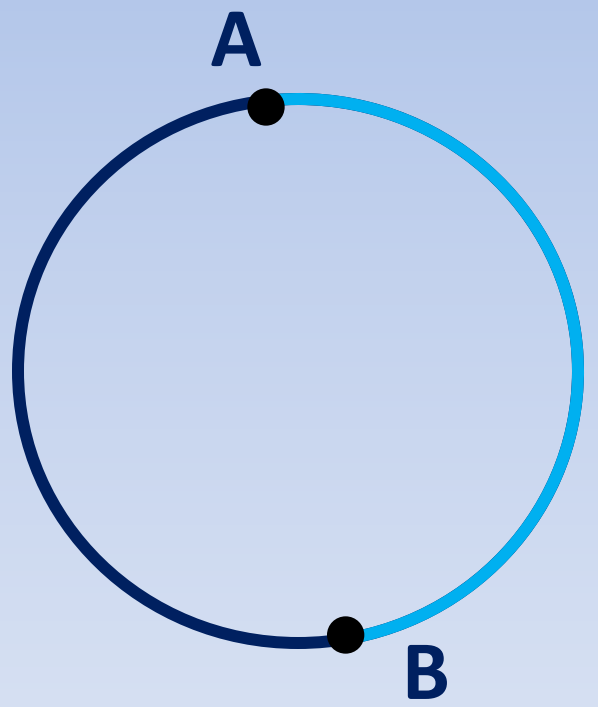
An angle whose vertex is on the side of a circle and whose sides are chords of the circle.



The arc that lies in the interior of an inscribed angle is called the Intercepted Arc.

Semi Circle

An Arc that makes up Exactly half the circle (180°)



$\overset{\frown}{AB}$ *is a Semicircle*