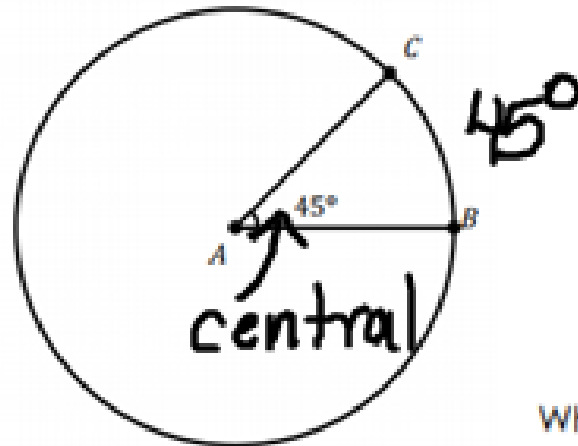
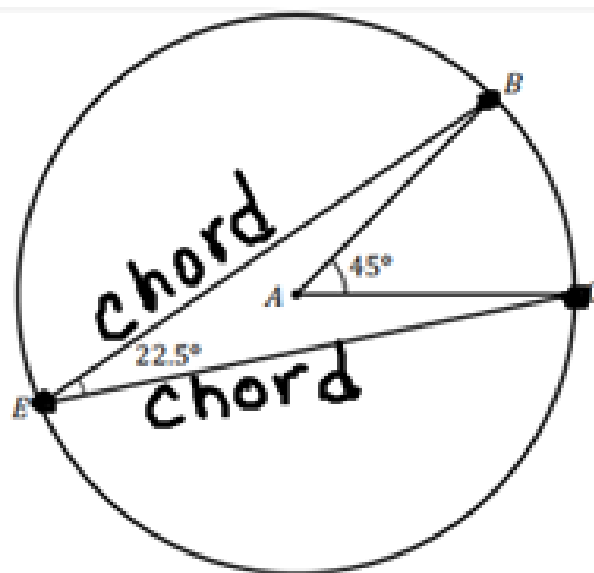


The measure of an arc on a circle is equal to the degree measure of the central \angle that intercepts the arc.



What is $m\widehat{BC}$? 45°

Consider the figure below. $\angle E$ is an Inscribed angle. \widehat{BC} is an intercepted arc by both the central angle $\angle A$ and the Inscribed angle.



Define the Inscribed angle.

An \angle made up of chords that is $1/2$ the central \angle

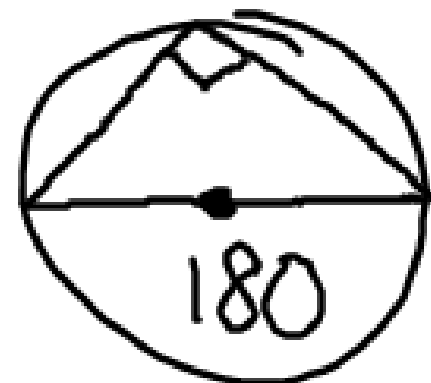
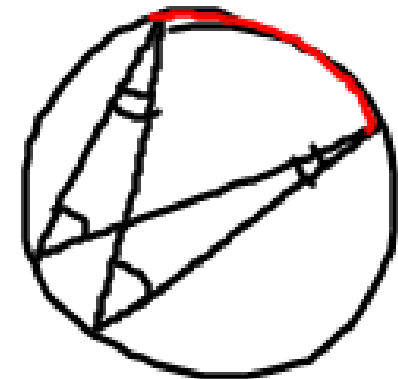
Compare and contrast the inscribed angle and the intercepted arc.

Inscribed < Conjectures

In a circle, the measure of an inscribed angle is $\frac{1}{2}$ the measure of the central angle with the same intercepted arc.

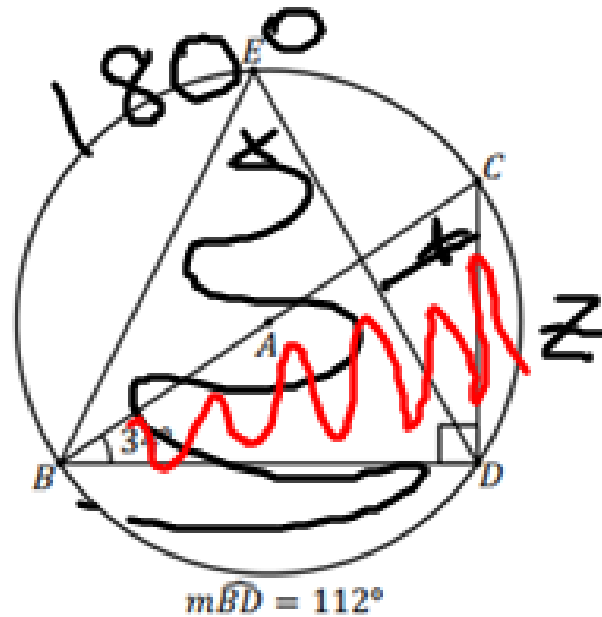
In a circle, two inscribed angles with the same intercepted arc are congruent.

Any angle inscribed in a semicircle is a Right angle.



Practice:

Consider circle A in the following figure, and find $m\angle BED$, $m\angle BCD$, & $m\widehat{CD}$.



$$\begin{aligned} &= 34(2) \\ &= 68^\circ \end{aligned}$$

$$\begin{aligned} m\angle BCD &= 56^\circ \\ m\angle BED &= 56^\circ \end{aligned}$$

$$\begin{array}{r} 90 \\ + 34 \\ \hline 124 \\ 180 \\ - 124 \\ \hline 56^\circ \end{array}$$