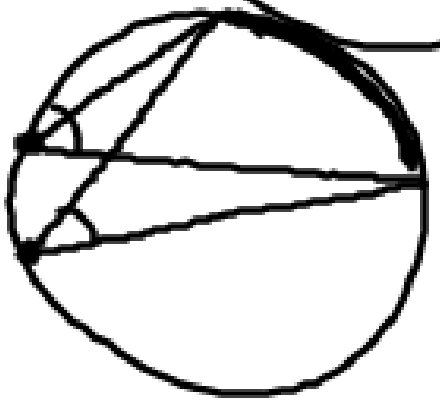
Compare and contrast the central angle and the intercepted arc.

In a circle, the measure of an inscribed angle is 1/2 the measure of the central angle with the same intercepted arc.

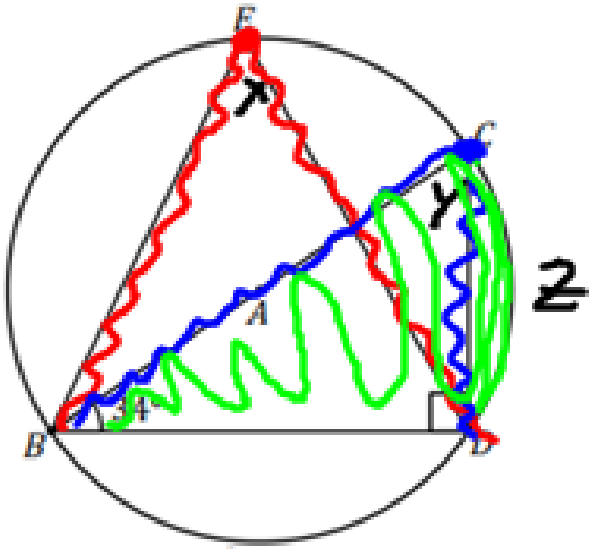
In a circle, two inscribed angles with the same intercepted arc are congruent



Any angle inscribed in a semicircle is a Right angle.

Practice:

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



$\frac{112}{2} = 56°$

$m\angle BED = 56°$

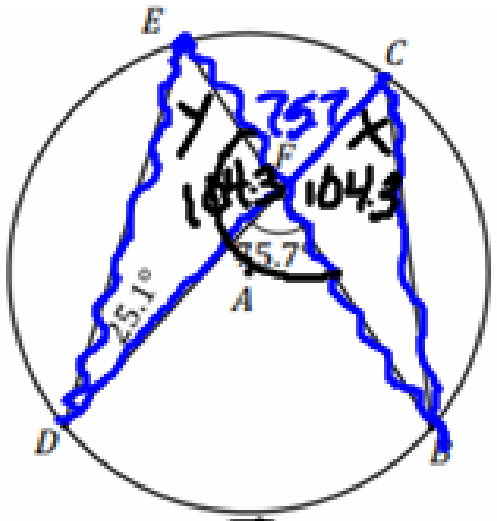
$m\angle BCD = 56°$

$34(2) = m\widehat{CD}$

$= 68°$

Your turn:

Consider circle A in the following figure, and find $m\angle BCF, m\overset{\frown}{BED}, \& \; m\overset{\frown}{DB}$.



$$\begin{array}{r} 180 \\ -\ 75.7 \\ \hline 104.3 \end{array}$$

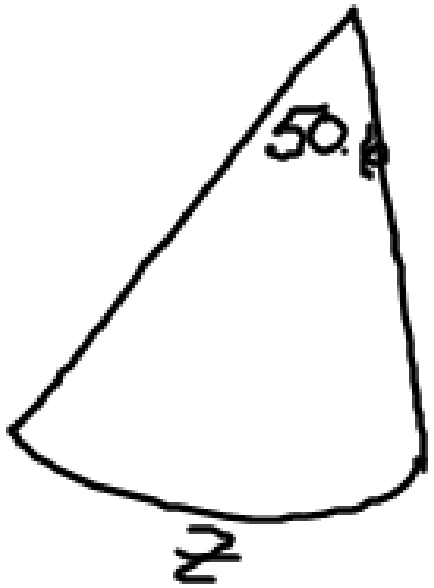
$$\begin{array}{r} 104.3 \\ +\ 25.1 \\ \hline 129.4 \end{array}$$

$180 - 129.4$

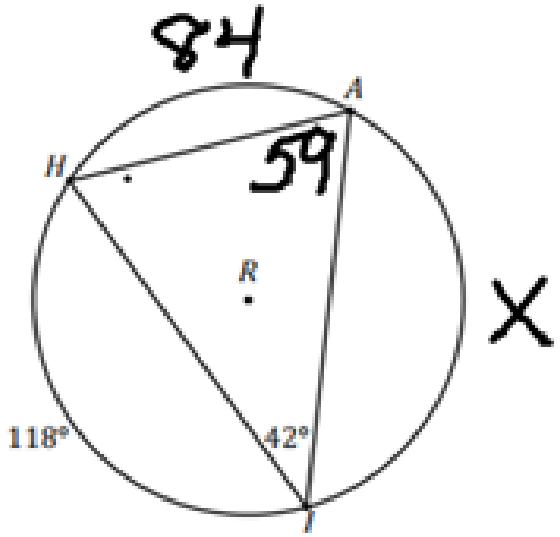
$50.6 = m\angle BCF \cong m\angle BED$

$m\overset{\frown}{BD} = 2(50.6)$

$= 101.2$



Informal Assessment:



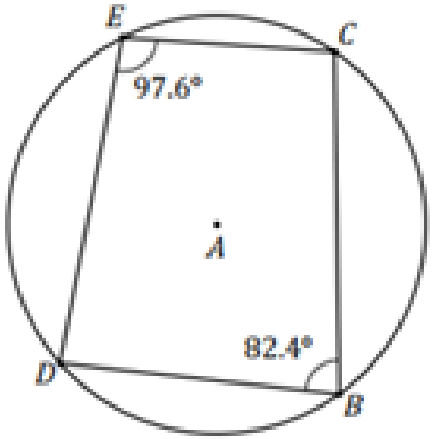
$$\begin{array}{r} 84 \\ +118 \\ \hline 202 \end{array}$$

$$\begin{array}{r} 360 \\ -202 \\ \hline 158 \end{array}$$

Which of the following is the measure of $\overset{\frown}{AI}$?

Ⓐ 118°
● 158°
Ⓒ 160°
Ⓓ 202°

Consider the figure below that represents an inscribed polygon.



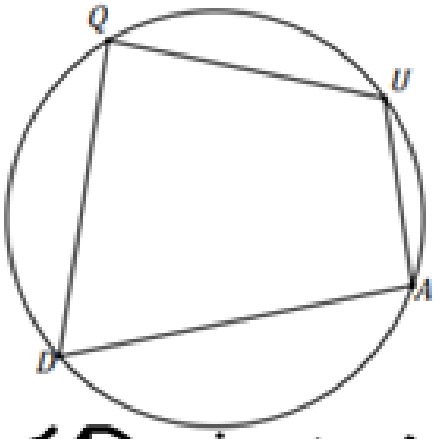
What figure is inscribed in the circle? quadrilateral

What do you notice about the angles? Supplementary

A polygon is inscribed in a circle when all vertices of the polygon lie on the circle. The circle is circumscribed about the polygon.

In a inscribed quadrilateral every vertex is on the circumference of a circle, and the opposite angles of the quadrilateral are supplementary

Which pair of angles are supplementary?



$\angle D \cong \angle U$

$\angle Q \cong \angle A$