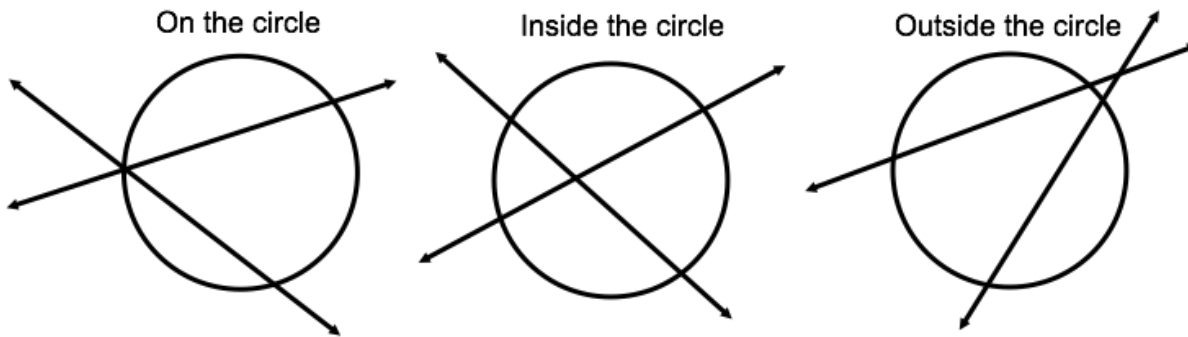


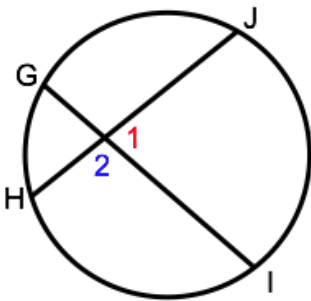
The next two theorems deal with two lines intersecting a circle. When that is the case, there are three places the lines can intersect:



We have a previous theorem for the first situation, when the lines intersect *on the circle*. In this case, the angle is an inscribed angle.

THEOREM 6.12: Angles Inside the Circle Theorem

If two chords intersect *inside a circle*, then the measure of each angle is equal to one half the sum of the measures of the arcs intercepted by the angle and its vertical angle.



In other words,

$$m\angle 1 = \frac{1}{2} (m\widehat{JI} + m\widehat{GH})$$

$$m\angle 2 = \frac{1}{2} (m\widehat{HI} + m\widehat{GJ})$$