**Activity 5.4.1 Exploring Circles and Secants**

Definitions:

A **tangent** to a circle is a line that intersects the circle in exactly one point.

A **secant** to a circle is a line that intersects the circle in two points.

In the diagrams below $\overbar{AB}$ is the radius of a circle and $\overleftrightarrow{BC}$ is a secant. Point *C* is on the circle and is moving towards point *B*. Use your protractor to measure $∠$ *ABC* in each diagram



1. What is the measure of $∠$ *ABC*?\_\_\_\_\_\_\_\_\_\_\_



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2.  What is the measure of $∠$ *ABC*?\_\_\_\_\_\_\_\_\_\_\_



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2. If you were to continue moving *C* towards *B*, what do you thing would happen to the measure of the angle that the line through *B* makes with the radius $AB$?
3. Restate your answer to question 7 as a conjecture :