

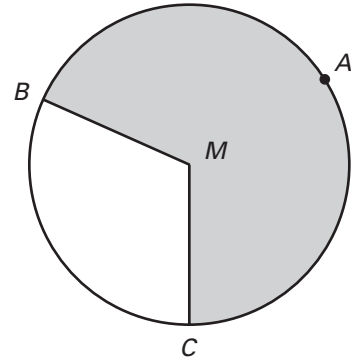
Alternative Assessment and Math Journal

For use after Chapter 10

- JOURNAL** 1. Draw a circle O with a diameter of 3 inches. Label the horizontal diameter \overline{AC} . Draw radius \overline{OF} to form a minor arc \widehat{CF} . Draw a tangent to circle O at point C . Find the measure of the angle formed by the tangent and \overline{AC} . Draw chord \overline{MN} . Draw secant \overleftrightarrow{AF} . Using circle O , add another circle so the two circles are concentric.

MULTI-STEP PROBLEM

2. You are swimming in a circular pool shown at the right. The ladder is at C . You are standing in the middle of the pool at M . Your friend is standing next to the side of the pool at B . There is a basketball hoop at A . The measure of $\angle CMB$ is 114° .



- Find $m\widehat{CB} = \underline{\quad? \quad}$. \widehat{CB} is a $\underline{\quad? \quad}$ arc.
 - Find $m\widehat{CAB} = \underline{\quad? \quad}$. \widehat{CAB} is a $\underline{\quad? \quad}$ arc.
 - Draw $\angle BAC$. Find $m\angle BAC$.
 - The distance between you and the ladder is 12 feet. Write an equation to model the outside of the pool. Assume you are standing at the origin.
 - Write an equation to model the outside of the pool if you are standing at the point $(5, -7)$.
3. **Critical Thinking** Use the diagram from Exercise 2.
- Everyone is out of the pool. The basketball is the only thing left in the pool. The basketball is floating at a point D . \overline{WY} and \overline{XZ} are chords that intersect at D . $WD = 4$, $YD = 5$, and $XD = 2$. Find the length of \overline{ZD} .
 - You are standing outside of the pool. You form a tangent segment with the ladder and a secant segment with the basketball hoop. You are 12 feet from the ladder and 6 feet from the edge of the pool along a direct path to the basketball hoop. How far are you from the basketball hoop?
4. **Writing** When two lines intersect a circle, there are three places in relation to the circle where the lines intersect each other. Represent each case with a diagram and the appropriate labels. Explain how to find the angle measure for each case.