NAME _____ DATE _____

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 $\overset{\frown}{CF}$. 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   **2.** You are swimming in a circular pool
PROBLEM   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 ∠*CMB* is 114°.
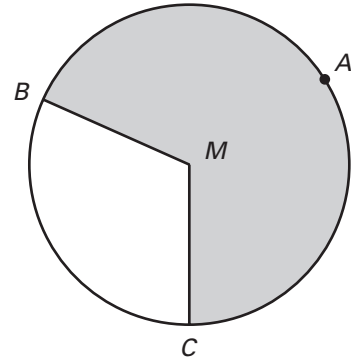
   a. Find $m\overset{\frown}{CB}$ = ___?___. $\overset{\frown}{CB}$ is a _____?_____ arc.

   b. Find $m\overset{\frown}{CAB}$ = ___?___. $\overset{\frown}{CAB}$ is a ___?___ arc.

   c. Draw ∠*BAC*. Find *m*∠*BAC*.

   d. 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.

   e. 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.

   a. 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 $\overline{ZD}$.

   b. 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.

Review and Assess

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Geometry
Chapter 10 Resource Book

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