ESSENTIAL QUESTION(S): What are concentric circles? What are the 5 types of lines we can construct inside of a circle? What is the difference between a central angle and an inscribed angle?

REVIEW:

Example 1:

A. Are Circle A and Circle B similar? Why or why not?

B. Without knowing any measures, what is the scale factor between Circle A and Circle B?

C. Using a straight-edge, find the center of dilation between the two circles by constructing one secant line and one additional tangent line. Label all points where your guiding lines intersect the circles. Identify your secant and tangent lines below.

D. Using only existing points, construct all similar segments and polygons inside your circles. Be sure to construct and identify at least three central angles and three inscribed angles.

E. In the space below, identify at least five proportional segments and use them to create ONE proportionality statement.
F. Identify any special triangles (isosceles or right) that you constructed in your circles. How do you know they are this type of triangle?

Example 2:

A. Consider the following proportion:

\[
\frac{\text{Circumference of } A}{\text{Diameter of } A} = \frac{\text{Circumference of } B}{\text{Diameter of } B}
\]

Is this true? Why or why not?

B. Consider the following proportion:

\[
\frac{\text{Area of } A}{\text{Area of } B} = \frac{\text{Circumference of } A}{\text{Circumference of } B}
\]

Is this true? Why or why not?