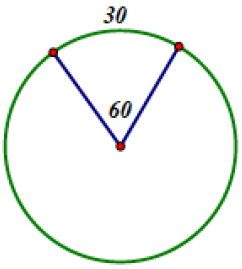
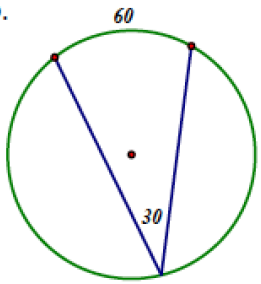
Geometry – Circles and their Properties **Name** _____
15c Homework: Inscribed and Circumscribed Angles **Pd** _____ **Date** _____

1. Which diagram below is accurately labeled with the correct degree measurements for the angle and arc that are labeled?

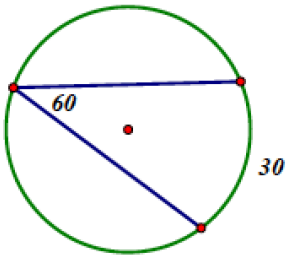
a.



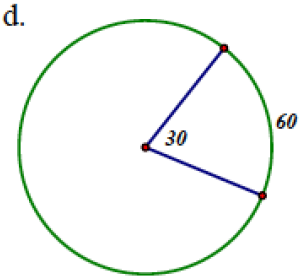
b.



c.



d.

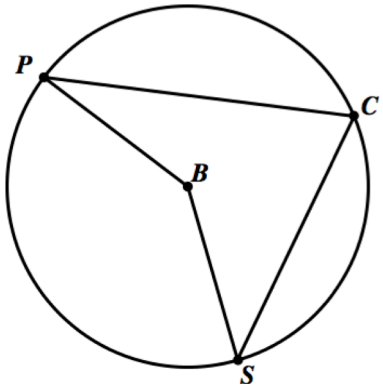


2. In circle B, $m\widehat{PS} = 165°$. Determine the following measures:

A. $m\angle PBS =$ _____

B. $m\angle PCS =$ _____

C. $m\widehat{PCS} =$ _____

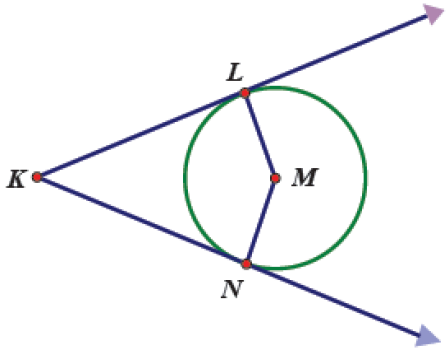


3. In question #2 above, the figure provided for option C is incorrectly labeled. Explain why it is incorrect and explain how you would revise it so that the circle is labeled correctly.

4. In circle M, $m\angle LKN = 35°$. Determine the following measures:

A. $m\angle LMN =$ _____

B. $m\widehat{LN} =$ _____



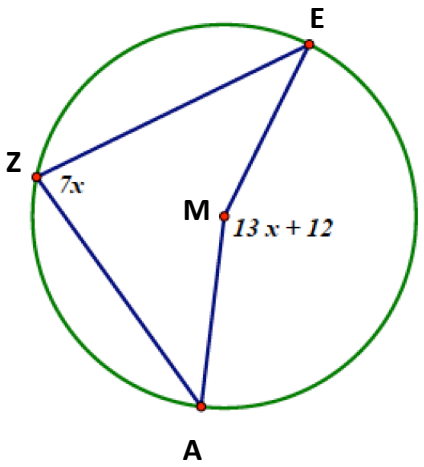
5. Use the given information provided in circle M to set up an equation that represents the relationship between $m\angle EZA$ and $m\angle EMA$. Then solve your equation and use your solution to determine the following measures:

A. $m\angle EZA =$ _____

B. $m\angle EMA =$ _____

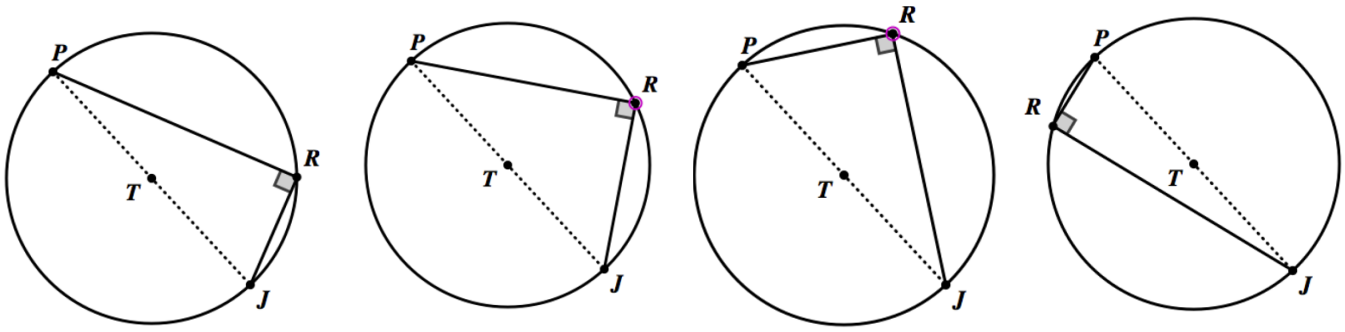
C. $m\widehat{EA} =$ _____

D. $m\widehat{EZA} =$ _____



6. Circle T is shown four times, but in each case, point R is in a different location on the circle. The inscribed angle shown in each circle, $\angle PRJ$, is a right angle.

A. In each circle, what is the measure of $\widehat{PJ}$?



B. Based on your answer to Part A, make a few conjectures about what else appears to be true when an inscribed angle has a measure of 90°.