Name: _____ # _____

Geometry: Period _____
Ms. Pierre
Date: _____

Tangents Part I

Today's Objective

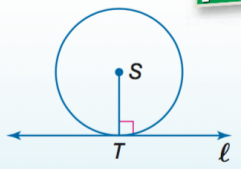
SWBAT use properties of tangents to identify tangent lanes and find he lengths of missing segments.

The shortest distance from a tangent to the center of a circle is the radius drawn to the point of tangency

Theorem 10.10 — For Your FOLDABLE

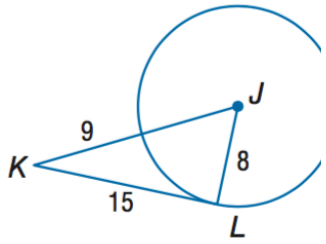
Words In a plane, a line is tangent to a circle if and only if it is perpendicular to a radius drawn to the point of tangency.

Example Line ℓ is tangent to $\odot S$ if and only if $\ell \perp \overline{ST}$.



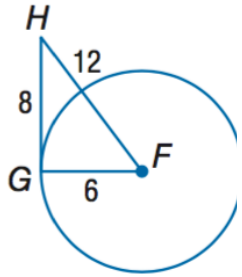
Example 1

$\overline{JL}$ is a radius of $\odot$J. Determine whether $\overline{KL}$ is tangent to $\odot$J. Justify your answer.



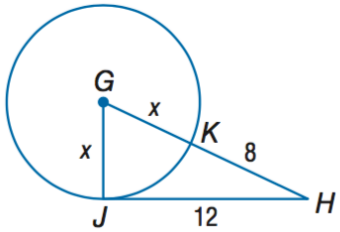
☑ Check for Understanding

Determine whether $\overline{GH}$ is tangent to $\odot$F. Justify your answer



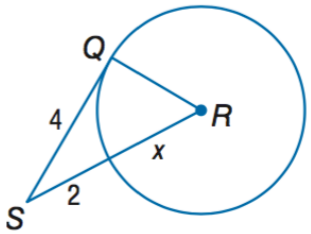
Example 2

$\overline{JH}$ is tangent to ⊙G at J. Find the value of x.



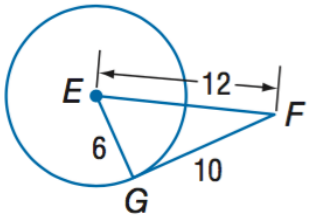
☑ Check for Understanding

Find the value of x. Assume that segments that appear to be tangent are tangent.

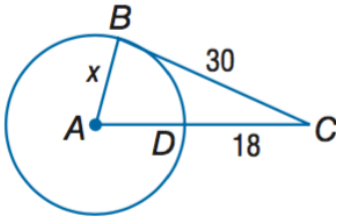


Guided Practice

1. Determine whether $\overline{FG}$ is tangent to ⊙E. Justify your answe



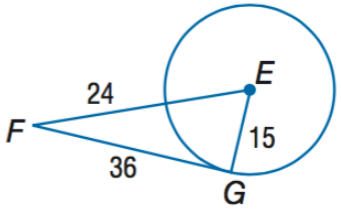
2. Find the value of x. Assume that segments that appear to be tangent are tangent.



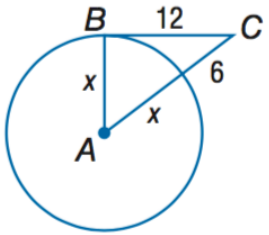
Independent Practice

Determine whether $\overline{FG}$ is tangent to ⊙E. Justify your answer.

1.



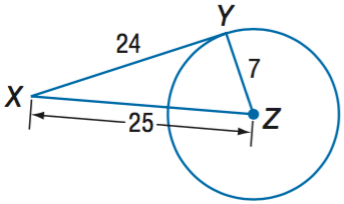
2. Find the value of x. Assume that segments that appear to be tangent are tangent.



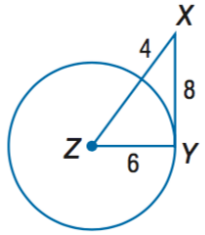
Home Work

Determine whether $\overline{XY}$ is tangent to the given circle. Justify your answer.

1.

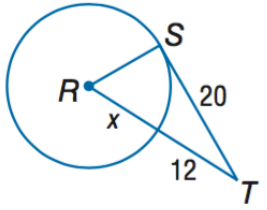


2.



Find the value of x. Assume that segments that appear to be tangent are tangent.

3.



4.