10-2 Additional Practice
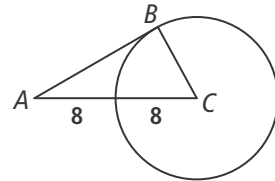
Lines Tangent to a Circle

In Exercises 1 and 2, segment $\overline{AB}$ is tangent to ⊙C. Find each value.
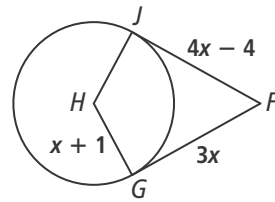
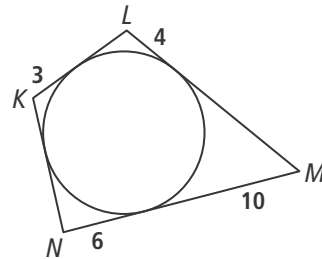1. AB **√192** or **13.86**

2. $m\angle ABC$
   90°

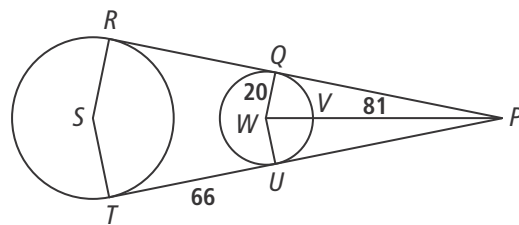**In Exercises 3–5, find each value.**

3. $\overline{JF}$ and $\overline{GF}$ are tangent to ⊙H. What is HJ?
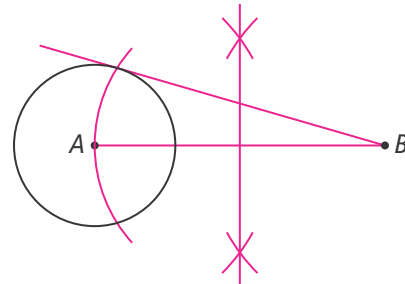   **5**

4. $\overline{KL}$, $\overline{LM}$, $\overline{MN}$, and $\overline{KN}$ are tangent to the circle. What is the perimeter of $KLMN$?
   46

5. $\overline{RP}$ and $\overline{TP}$ are tangent to ⊙S and ⊙W. What is RP?
   144

6. Construct a tangent to ⊙A that passes through B.

7. If two segments share an endpoint and are tangent to the same circle at their other endpoints, what must be true of the segments?
   The two segments are the same length, or the two segments are congruent.

8. A marble with radius r rolls in a L-shaped track. How far is the center of the marble from the corner of the track?
   √2r