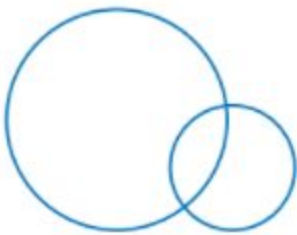Recall the definition of **Tangent:**

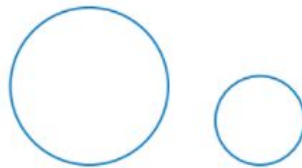**Common Tangent:**

1. Determine how many common tangents the circles below could contain:
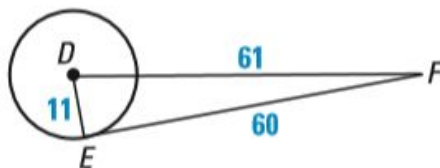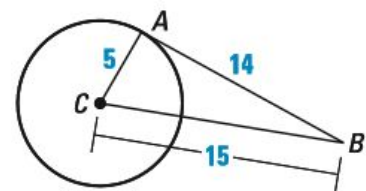   a.   b.   c.

Theorem 10.10	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.	

2. Verify if the segment is tangent to the circle.

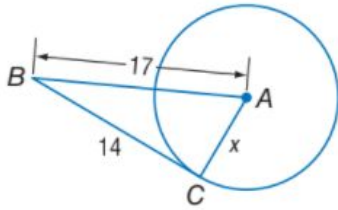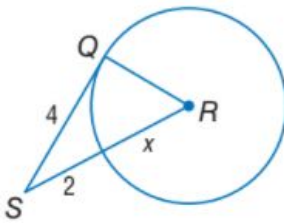   a.   b.

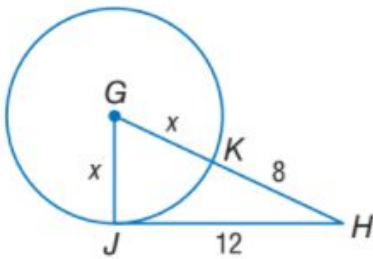3. Find the value of x. Assume the segments that appear to be tangent are tangent.

    a.

    B ⟵——17——→ A
    14   x
    C

    b.

    Q
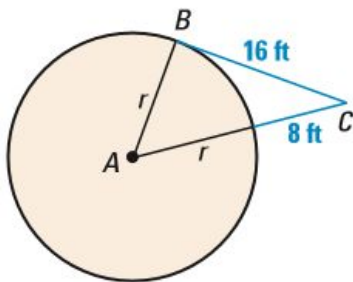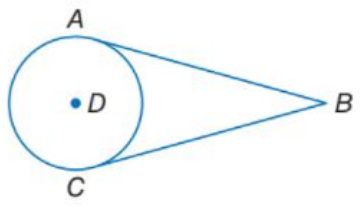   4   R
      x
    2
    S

4. $\overline{JH}$ is a tangent to $\odot G$ at J. Find the value of x.
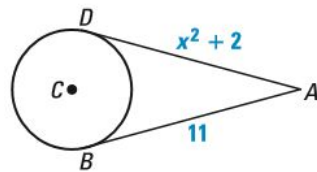
    G
      x
       K   8
    x
    J   12   H

5. You are standing at C, 8 feet from a grain silo. The distance from you to a point of tangency on the tank is 16 feet. What is the radius of the silo?
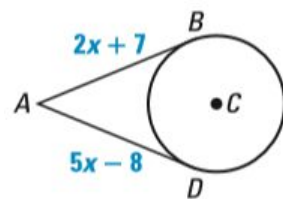
    B
       16 ft
    r
       8 ft C
    A   r

Theorem 10.11	If two segments from the same exterior point are tangent to a circle, then they are congruent.	

6. Find the value of x below applying Theorem 10.3:

a.

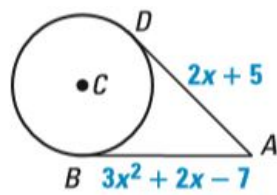b.

c.

d.