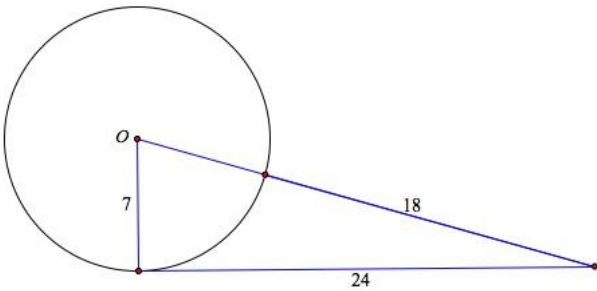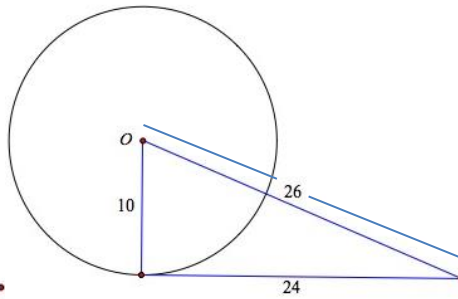Name_____ Hr_____ 12.8 Tangent Lines

A. Tangent lines are _____ to the radius of a circle at the point of tangency.
B. If a line is perpendicular to a radius at its endpoint then the line is _____ to the circle.
C. If two tangent segments to a circle share a common endpoint outside the circle, then the two segments
   are_____.

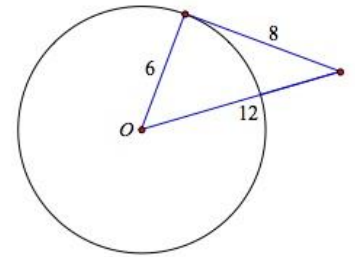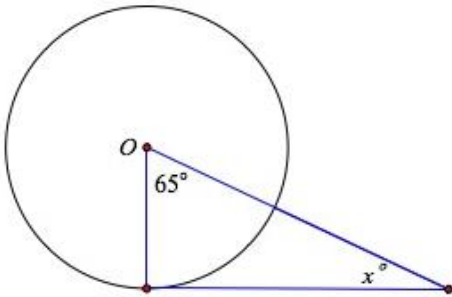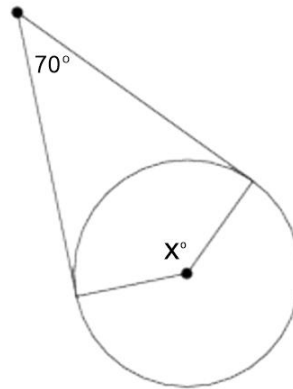Determine whether each segment is tangent to the given circle:

1.

2.

3.

Find the measure of angle x. Given that the line that appears to be tangent, is tangent.

4.

5.

6.
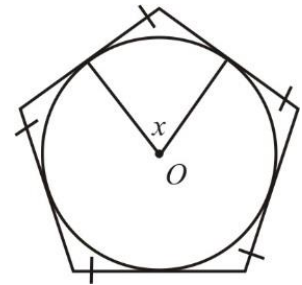
7.

8.

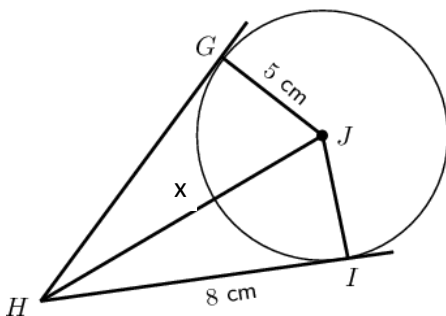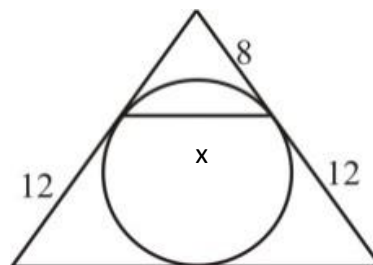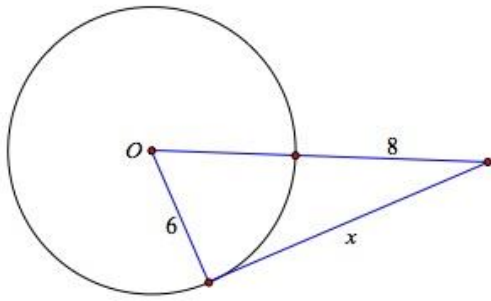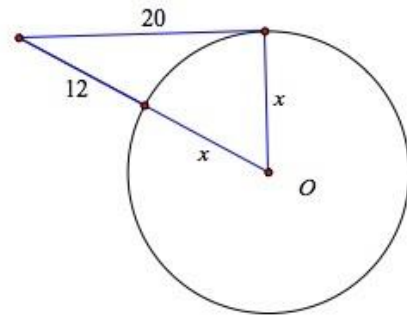Find the missing length given that the line that appears to be tangent, is tangent.
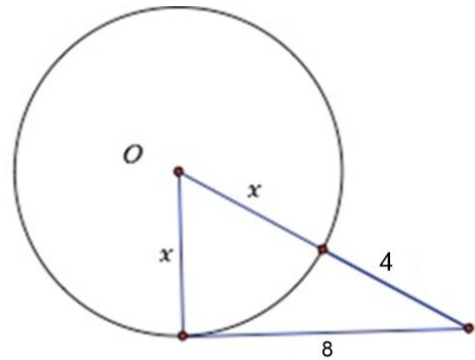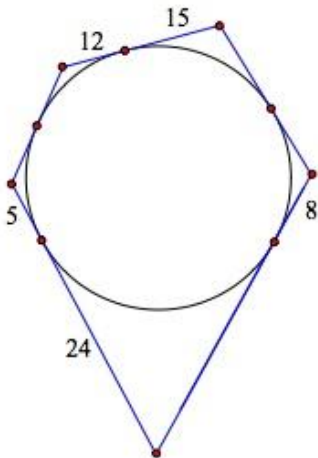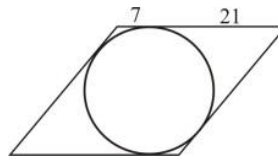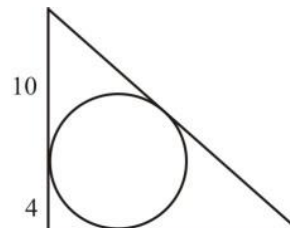
9.

10.

11.
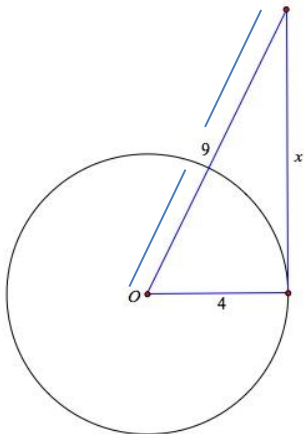
12.

13. Find the perimeter of the pentagon:

14. Find the perimeter of the parallelogram:

15. Find the perimeter of the **right triangle**:

16. Find the perimeter of the polygon: