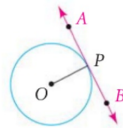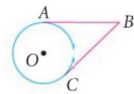### Theorem 12-1

If a line is tangent to a circle, then the line is perpendicular to the radius drawn to the point of tangency.

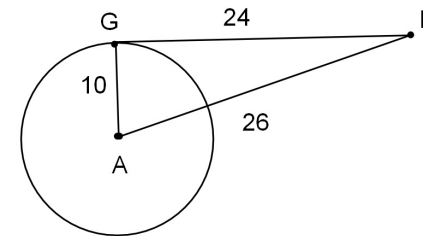$$\overleftrightarrow{AB} \perp \overline{OP}$$

Theorem 12-3

The two segments tangent to a circle from a point outside the circle are congruent.
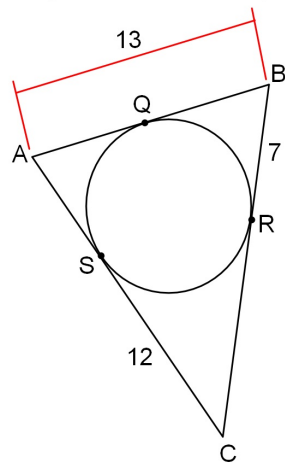
$$\overline{AB} \cong \overline{CB}$$

1. Is the line tangent to circle A?

G   24   P

10

26

A

2. Find the perimeter of triangle ABC. The sides of the triangle are tangent to the circle at points Q, R, and S.

13

B

Q

A

7

R

S

12

C

3. Use coordinate geometry to find the best name for quadrilateral LMNP

L (30,18)   M(36,-12)   N(-24,-24)   P(-30,6)