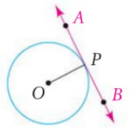
**Theorem 12-1**

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

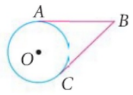
$\overleftrightarrow{AB} \perp \overline{OP}$




**Theorem 12-3**

The two segments tangent to a circle from a point outside the circle are congruent.

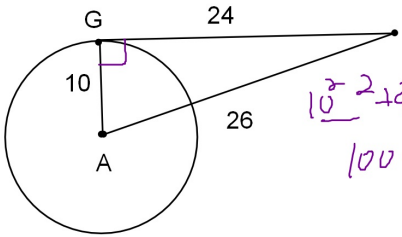
$\overline{AB} \cong \overline{CB}$




Bellwork Monday, June 9, 2014

1. Is the line tangent to circle A?

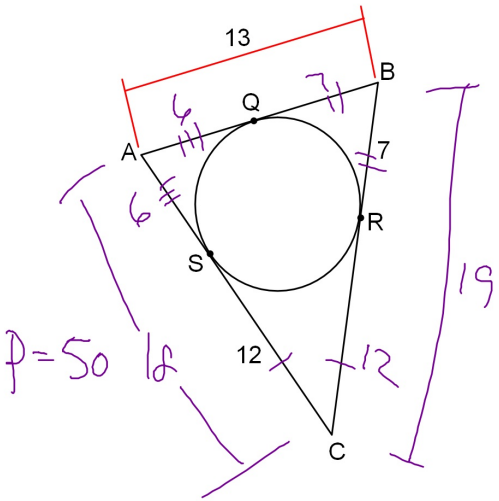
Yes




$10^2 + 24^2 = 26^2$

$100 + 576 = 676$ ✓

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




P = 50 18

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

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

SIDES slope

LM $\frac{30}{-6} = -5$ ⊥

MN $\frac{12}{60} = \frac{1}{5}$ ⊥

NP $\frac{30}{-6} = -5$ ⊥

PL $\frac{12}{60} = \frac{1}{5}$ ⊥

DISTANCE

$\sqrt{(-6)^2 + 30^2} = \sqrt{936}$

$\sqrt{60^2 + 12^2} = \sqrt{3744}$

RECTANGLE