Name: _____ Period: _____ Date: _____

Read and answer each question carefully. Show all necessary work in order to receive full credit.

1) Draw circle O with radius PO and tangent TA passing through the point of tangency P.

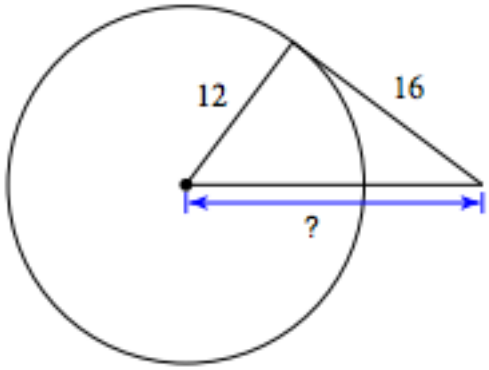
2) What is the measure of the angle formed by the radius of a circle and a tangent to that circle? Explain your reasoning.

3) Line segment AB is tangent to circle O at A. Which type of triangle is always formed when points A, B, and O are connected? Explain your reasoning.

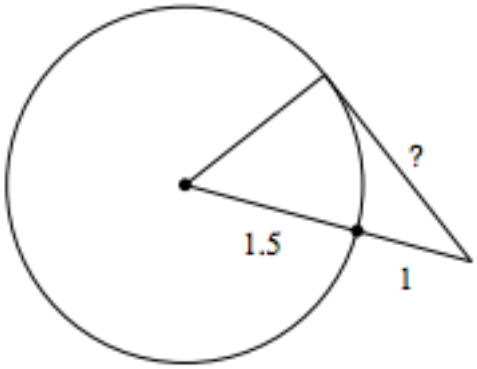
Name: _____ Period: _____ Date: _____

4) Find the length of the side indicated. Justify your answer.

a)



b)



5) Karen wants to determine the radius of a circular pool without getting wet. She is located at point K, which is 4 feet from the pool and 12 feet from the point of tangency, as shown in the accompanying diagram. What is the radius of the pool? Justify your answer.