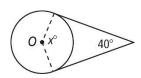
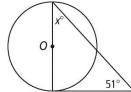
**Directions:** Assume that lines that appear to be tangent are tangent. *O* is the center of each circle. What is the value of *x?* 

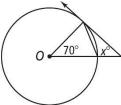
1.



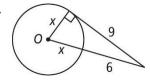
2.

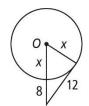


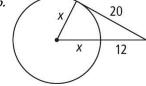
3.



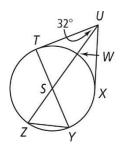
**Directions:** In each circle, what is the value of *x* to the nearest tenth?





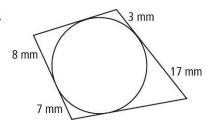


7.  $\overline{TY}$  and  $\overline{ZW}$  are diameters of  $\bigcirc S$ .  $\overline{TU}$  and  $\overline{UX}$  are tangents of  $\bigcirc S$ . What is  $m \angle SYZ$ ?

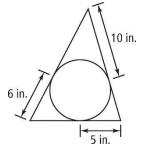


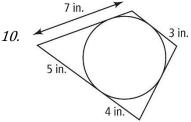
**Directions:** Each polygon circumscribes a circle. What is the perimeter of each polygon?

8.

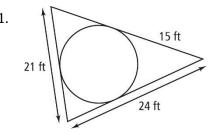


9.

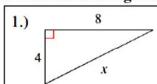




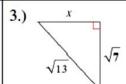
11.



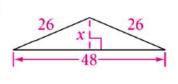
I. Find the missing side length x. Keep answers in simplified radical form. Must show work!!



 $2.) \qquad 2\sqrt{3}$ 



4.)



 $5.) 4\sqrt{5}$ 

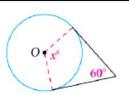
6.)

II. State if the three side lengths form an acute, obtuse, or right triangle. Must show work!!

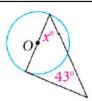
9.) 9, 
$$2\sqrt{10}$$
, 12

III. Find the value of angle x. Must show work!

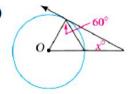
10.)



11.)

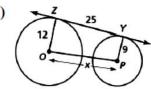


12.)

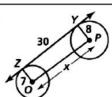


IV. In each diagram,  $\overrightarrow{ZY}$  is tangent to circles O and P. Find the value of x. Must show work!

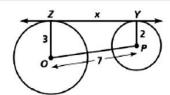
13.)



14.)

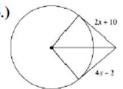


15.)

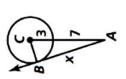


V. In each diagram,  $\overrightarrow{AB}$  is tangent to circle C. Find the value of x. Must show work!

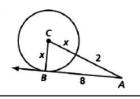
16.)



17.)

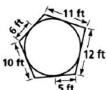


18.)



VI. In each diagram, a polygon is circumscribes a circle. Find what is asked.

19.) What is the perimeter of the polygon?



20.) Circle B is inscribed in a triangle, which has a perimeter of 76 in. What is the value of x?

