

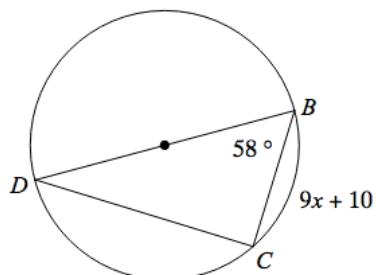
Geometry Honors  
 Unit 9: Circles  
 9.2 Day 2 Angles in a Circle

Mathematician: \_\_\_\_\_  
 Period: \_\_\_\_\_

**LEVEL: EMERGING**

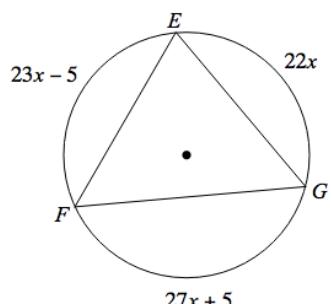
Directions: Find the value of  $x$ .

1)



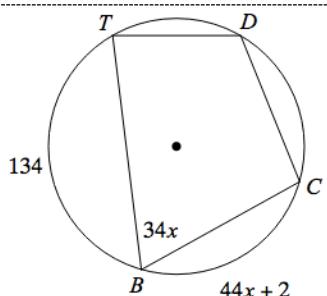
$$x = \underline{\hspace{2cm}}$$

2)



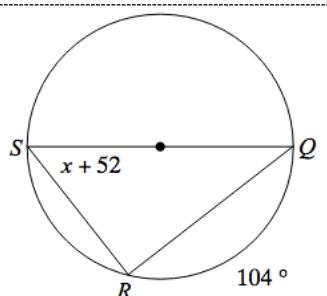
$$x = \underline{\hspace{2cm}}$$

$$3)$$



$$x = \underline{\hspace{2cm}}$$

4)

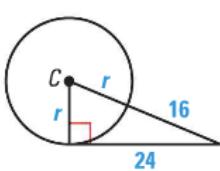


$$x = \underline{\hspace{2cm}}$$

**LEVEL: PROFICIENT**

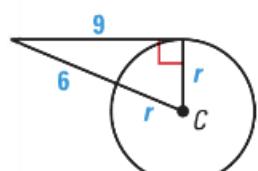
Directions: Find the value of the variable  $r$  that would make the line tangent.

5)



$$x = \underline{\hspace{2cm}}$$

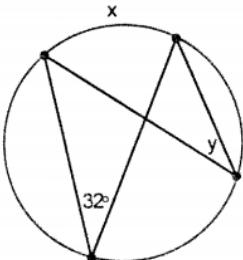
6)



$$x = \underline{\hspace{2cm}}$$

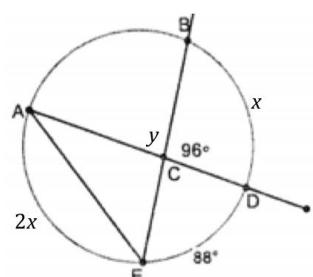
Directions: Find the value of  $x$  and  $y$ , then find their sum.

7)



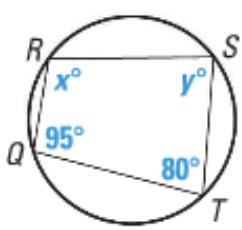
$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad \text{SUM} = \underline{\hspace{2cm}}$$

8)



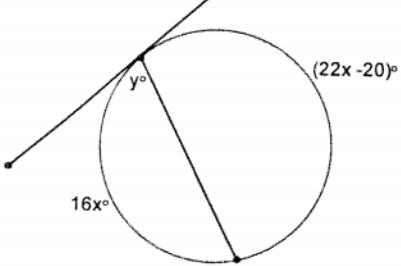
$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad \text{SUM} = \underline{\hspace{2cm}}$$

9)



$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad \text{SUM} = \underline{\hspace{2cm}}$$

10)



$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad \text{SUM} = \underline{\hspace{2cm}}$$

# LEVEL: MASTERY

- 11) Given:  $\overrightarrow{WV}$  is tangent to circle P and  $\widehat{WE} = 140^\circ$ . Find the following numbered angles.

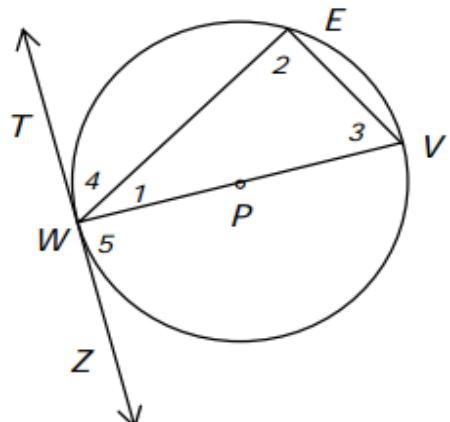
a)  $m\angle 1 = \underline{\hspace{2cm}}$

b)  $m\angle 2 = \underline{\hspace{2cm}}$

c)  $m\angle 3 = \underline{\hspace{2cm}}$

d)  $m\angle 4 = \underline{\hspace{2cm}}$

e)  $m\angle 5 = \underline{\hspace{2cm}}$



- 12) Given:  $\overrightarrow{TW}$  is tangent to circle P,  $\widehat{SK} = 80^\circ$ , and  $\angle 2 = 70^\circ$ . Answer the following questions.

a)  $m\angle 1 = \underline{\hspace{2cm}}$

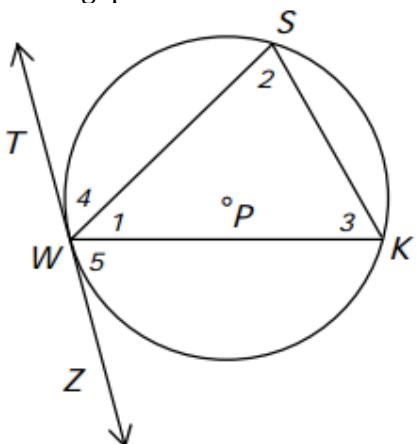
b)  $m\angle 3 = \underline{\hspace{2cm}}$

c)  $m\angle 4 = \underline{\hspace{2cm}}$

d)  $m\angle 5 = \underline{\hspace{2cm}}$

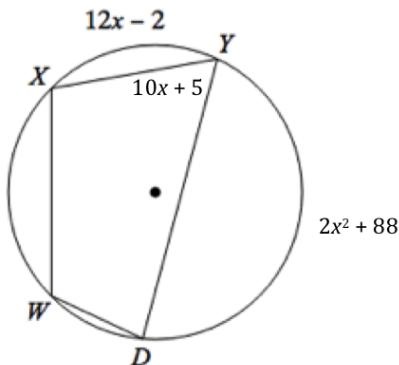
e)  $m\widehat{SW} = \underline{\hspace{2cm}}$

f)  $m\widehat{WSK} = \underline{\hspace{2cm}}$



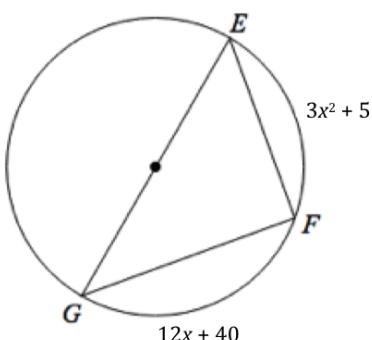
Directions: Find the indicated values.

13)



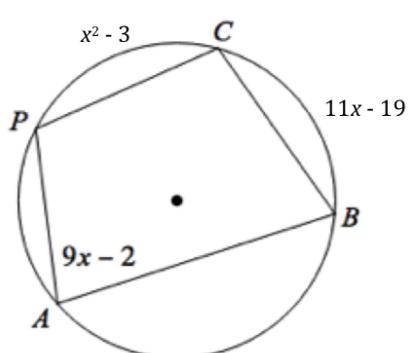
$$m\widehat{XY} = \underline{\hspace{2cm}}$$

14)



$$m\angle GEF = \underline{\hspace{2cm}}$$

15)



$$m\angle PAB = \underline{\hspace{2cm}}$$