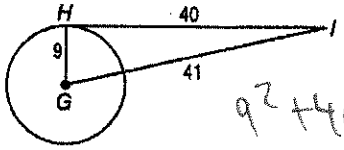
NAME _____ DATE _____ PERIOD _____

10-5 Skills Practice

Tangents

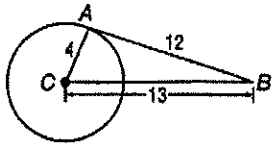
Determine whether each segment is tangent to the given circle. Justify your answer.

1. $\overline{HI}$



$9^2+40^2=41^2$
$81+1600=1681$
yes!

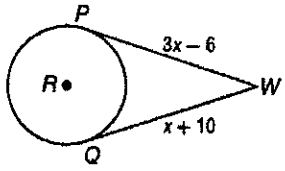
2. $\overline{AB}$



4^2+12^2
$16+144 \neq 169$
Nope!

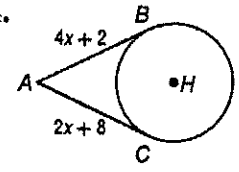
Find x. Assume that segments that appear to be tangent are tangent. Round to the nearest tenth if necessary.

3.



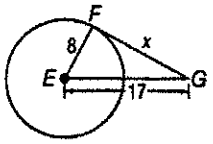
$3x-6=x+16$
$-x \quad -x$
$2x-6=10$
$+6 \quad +6$
$2x=16$
$\frac{2x}{2}=\frac{16}{2}$
$x=8$

4.



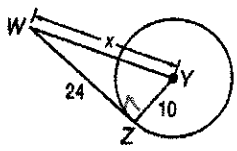
$4x+2=2x+8$
$-2x \quad -2x$
$2x+2=8$
$-2 \quad -2$
$2x=6$
$\frac{2x}{2}=\frac{6}{2}$
$x=3$

5.



$8^2+x^2=17^2$
$64+x^2=289$
$x^2=225$
$x=15$

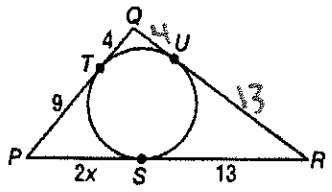
6.



$x^2=10^2+24^2$
$x^2=100+576$
$\sqrt{x^2}=\sqrt{676}$
$x=26$

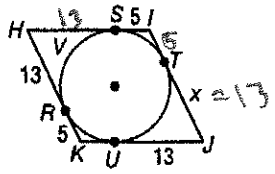
For each figure, find x. Then find the perimeter.

7.



$x=4.5$
$9+4+4+13+13+9$
52

8.



$18*4=72$

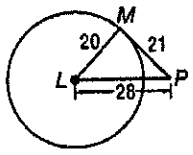
NAME _____ DATE _____ PERIOD _____

10-5 Practice

Tangents

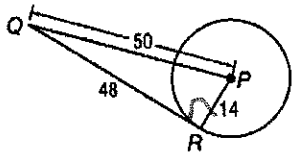
Determine whether each segment is tangent to the given circle. Justify your answer.

1. $\overline{MP}$



$20^2+21^2=28^2$
$400+441 \neq 784$
Nope!

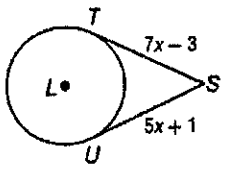
2. $\overline{QR}$



$14^2+48^2=50^2$
$196+2304=50^2$
$2500=50^2$
Yes!

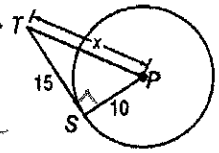
Find x. Assume that segments that appear to be tangent are tangent. Round to the nearest tenth if necessary.

3.



$7x-3=5x+1$
$-5x \quad -5x$
$2x-3=1$
$+3 \quad +3$
$2x=4$
$x=2$

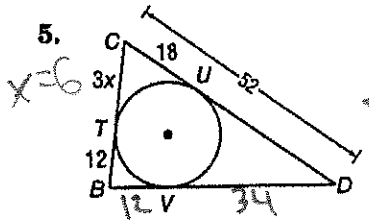
4.



$15^2+10^2=x^2$
$225+100=x^2$
$\sqrt{325}=\sqrt{x^2}$
18.0

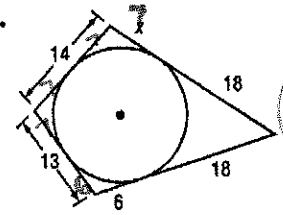
For each figure, find x. Then find the perimeter.

5.



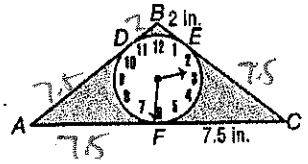
$x=6$
126

6.



76

7. **CLOCKS** The design shown in the figure is that of a circular clock face inscribed in a triangular base. AF and FC are equal.



a. Find AB. 9.5

b. Find the perimeter of the clock.

$9.5+9.5+15=34$