10.7 Name_____

1. Write the equation of each circle.

a. center (-2,0) radius=5

b. center (-3,3) radius=8

2. Complete the square.
Then name the center and the radius.
$x^2 + 4x + y^2 + 10y - 12 = 0$

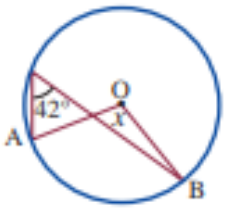
3. Name the center and the radius

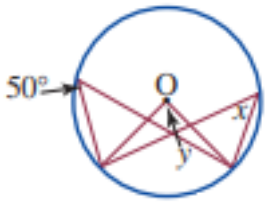
$(x+8)^2 + (y-5)^2 = 36$

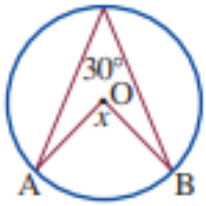
4. Draw an equilateral triangle.
Each side is 10 feet. Find the area.

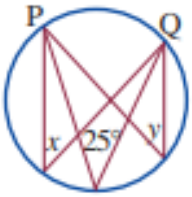
5. A rectangle has a diagonal of 15 yards.
The width is 9 yards. Find the area.

6. Find the variables

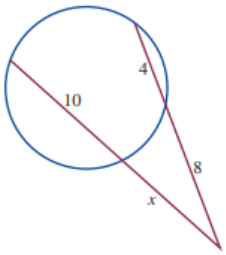


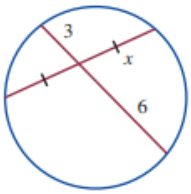


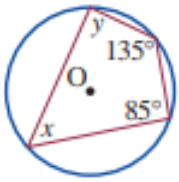


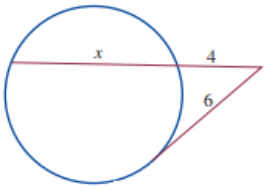


7. Find the variables

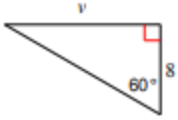


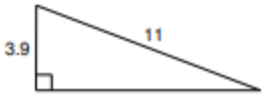


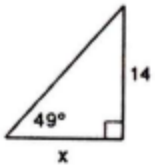




8. Find the missing side.





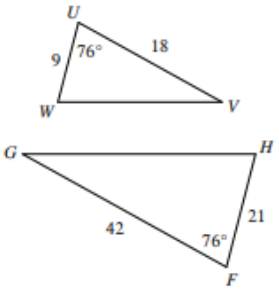


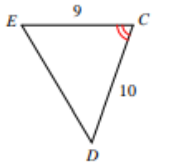
9. Simplify

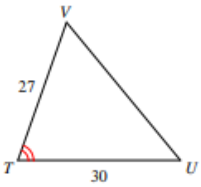
a. $\sin^{-1}(.52)$ = **b. $\cos^{-1}(.28)$=**

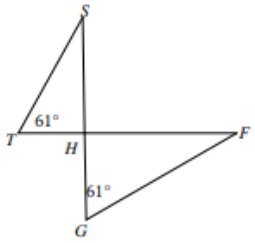
10. Superman is on top of the building looking down at his phone on the ground. The building is 300 feet tall. If the phone is 45 feet from the base of the building, find the angle of elevation of the phone to batman. Draw and label a picture. SHOW WORK!

11. Are these triangles Similar? If yes, then <u>*state the theorem*</u>. (AA, SSS, SAS)



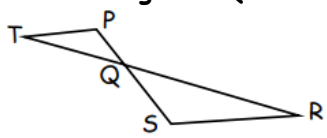






12. TP is parallel to SR

Prove triangle TPQ ~ triangle RSQ



13. The vertices of a triangle are A(-5,3), B(5,6) and C(-9,0). Name the image points after the <u>COMPOSITION</u> of

a. reflection over y=x

b. rotation of 270 degrees

c. dilation with scale factor = 3

Is the final image congruent to the preimage?