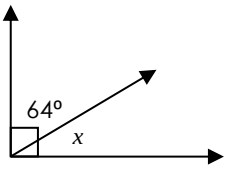
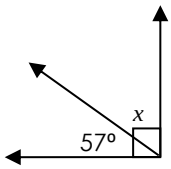
Angle Relationships & PT Are You Ready? Name: _____

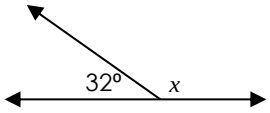
Are the angles are *complementary*, *supplementary*, or *neither*?

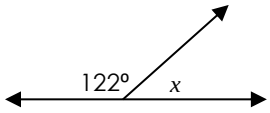
1. $m\angle 1 = 91°$, $m\angle 2 = 89°$
2. $m\angle 3 = 17°$, $m\angle 4 = 73°$
3. $m\angle 5 = 124°$ $m\angle 6 = 66°$
4. $m\angle 7 = 33°$ $m\angle 8 = 148°$
5. $m\angle 9 = 52°$ $m\angle 10 = 38°$

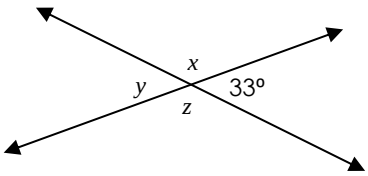
Find the missing angle measure.

6. 

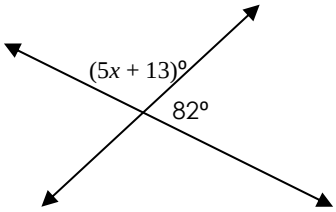
7. 

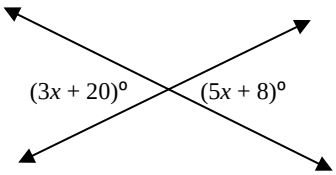
8. 

9. 

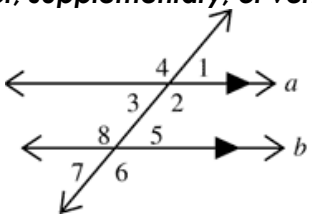
10. 

Find the value of x in the figure. <u>Then find the unknown angle measures.</u>

11. 

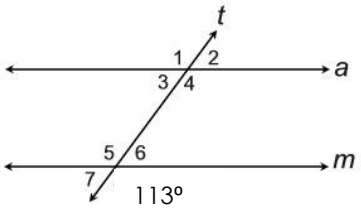
12. 

Tell whether the angles in the diagram are *corresponding, alternate interior, alternate exterior, supplementary, or vertical* angles.



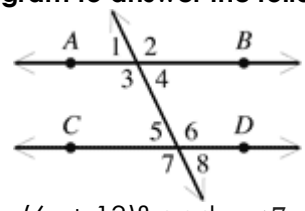
13. $\angle 4$ & $\angle 8$
14. $\angle 3$ & $\angle 5$
15. $\angle 1$ & $\angle 7$
16. $\angle 1$ & $\angle 3$
17. $\angle 1$ & $\angle 2$

18. Lines a and *m* are parallel.
Find the measure of the angles listed below.



$m\angle 1 =$
$m\angle 2 =$ $m\angle 4 =$ $m\angle 6 =$
$m\angle 3 =$ $m\angle 5 =$ $m\angle 7 =$

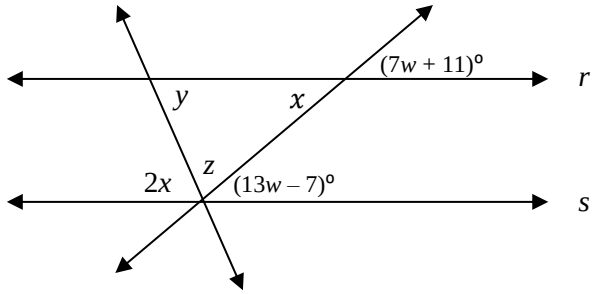
Use the diagram to answer the following questions.



13. $m\angle 3 = (6x + 13)°$ and $m\angle 7 = (3x + 67)°$
What is the value of x?

14. $m\angle 1 = (4x + 18)°$ and $m\angle 8 = (5x + 10)°$
What is the value of x?

Lines r & s are parallel. Use the diagram below to answer the following questions.



15. Find the value of w, x, y and z.

$w =$ ____

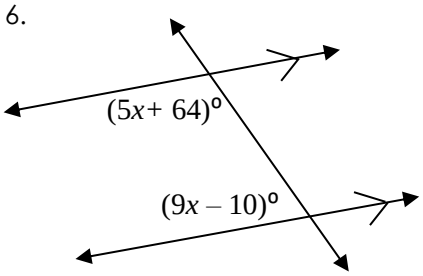
$x =$ ____

$y =$ ____

$z =$ ____

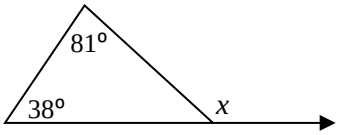
Find the value of x.

16.



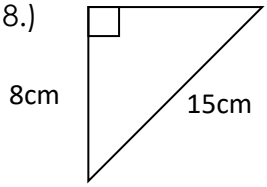
Find the value of x.

17.



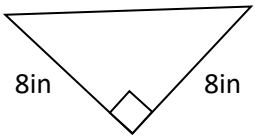
Find the length of the missing side (round to nearest tenth).

18.)



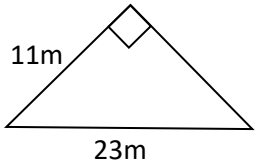
_____

19.)



_____

20.)



_____

Do the following lengths form a right triangle?

21.) 1, 2, 3 yes no

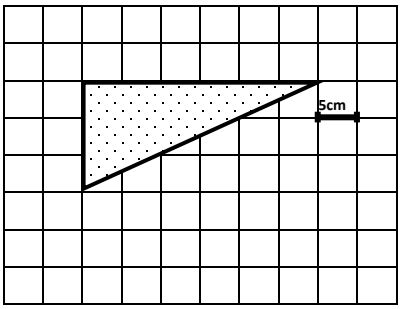
22.) 14, 28, 50 yes no

23.) 24, 32, 40 yes no

Find the length of the hypotenuse to the nearest tenth.

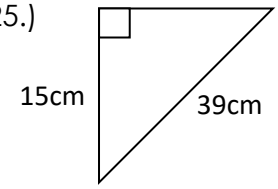
24.)

_____



Find the unknown length(s). Then find the area <u>AND</u> perimeter.

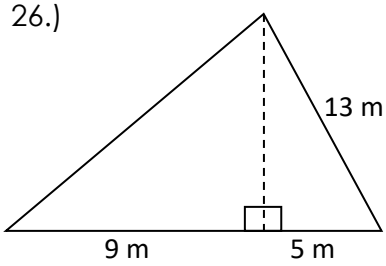
25.)



A = _____

P = _____

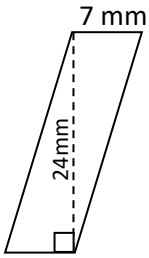
26.)



A = _____

P = _____

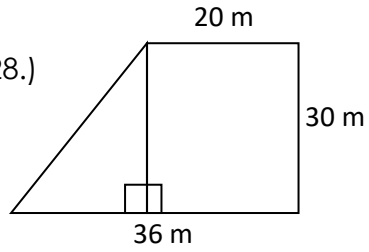
27.)



A = _____

P = _____

28.)



A = _____

P = _____

29.) A child is 40 inches tall and casts a shadow 75 inches long. Find the distance between the top of the child's head and the tip of his shadow.

30.) Haley started driving directly south at a constant speed of 60 miles per hour. Arlene left the same spot at the same time heading directly west at a constant speed of 80 miles per hour. How many miles apart are they after 1 hour?

31.) Karla is drinking out of a cone shaped cup. The diameter of the mouth of the cup is 14mm. The length of the side of the cup is 25mm. Find the height of the cup.