

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Geometry  
Unit 3  
HW 3-2

1) Which of the following are right  $\triangle$ 's?

a) 3, 4, 5

b) 4, 5, 6

c) 2, 2,  $\sqrt{8}$

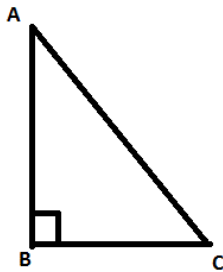
2) Find the 3<sup>rd</sup> side of a triangle if they form a right triangle (there are 2 possible answers for each problem).

a) 6, 8, ?

b) 4, 7, ?

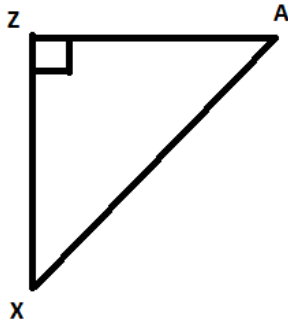
c) 10,  $\sqrt{200}$ , ?

3)



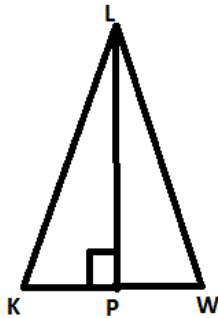
If  $AB = 6$  and  $m\angle C = 45^\circ$  find the other 2 sides

4)



If  $m\angle X = 40^\circ$  and  $XA = 16$  solve the triangle

5)



If  $LW = 40$  and  $m\angle W = 55^\circ$  find PW.

6) In isosceles  $\triangle$  KLM the vertex is K. If  $KL = 2x + 3$ ,  $LM = 2x$ , and the perimeter is 130 cm find and explain MK.

7) A 7ft tall person wants to build a room in the shape of a right triangle. When they stand in the tallest part of the room they want it to be 1 foot taller than them. When they lay down on the floor they want it to be 4 feet longer than they are tall. How long should the 3<sup>rd</sup> side of this triangle be?

8) Draw a right triangle ABC. Label the right angle C and the other two angles are A and B. Figure out the following: Sin A is always the same as Cos \_\_\_\_?

9) In a right triangle that has one angle of 45 degrees and a hypotenuse that is 16, find the length of each of the other 2 sides to the nearest tenth.

10) If you drive from town A to town B and it is 9 miles, then you turn right and drive from town B to town C and it is 12 miles. You know the distance from town A to town C is 15 miles. Did you turn exactly 90 degrees to the right when you were at town B?