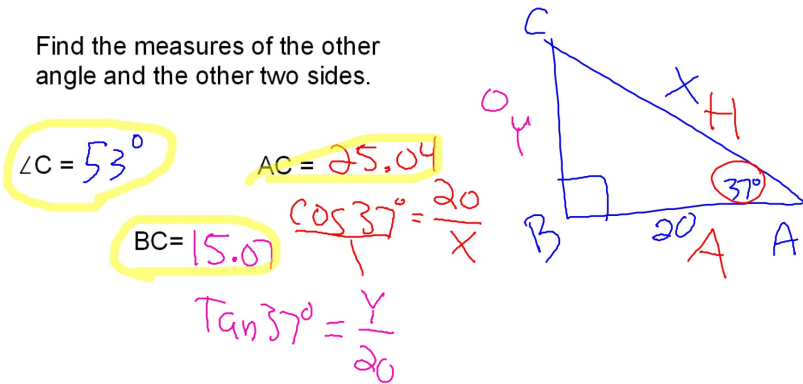


Bellwork Monday, March 24, 2014

In $\triangle ABC$ $\angle B = 90^\circ$, $\angle A = 37^\circ$, and $AB = 20$.

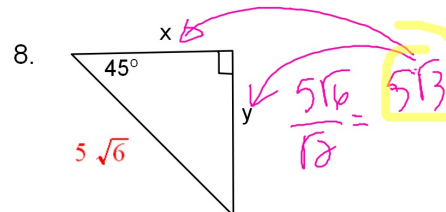
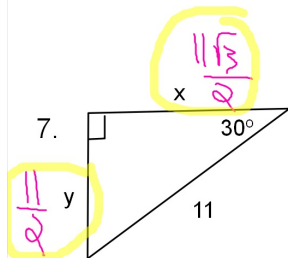
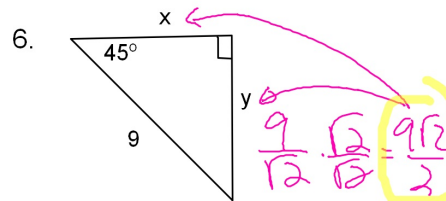
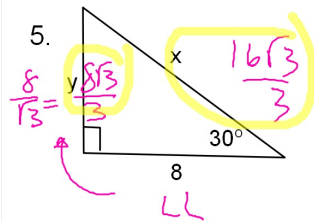
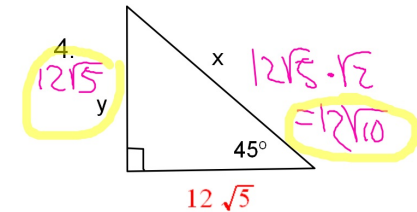
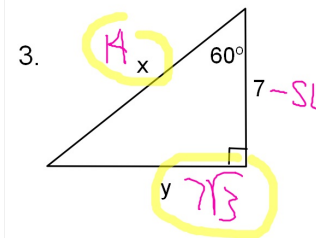
Find the measures of the other angle and the other two sides.



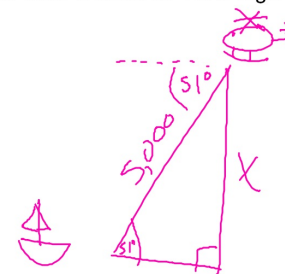
2. The sides of a right triangle are whole numbers. Find the third side of the right triangle if two sides are:

88, 137, 105

For 3 to 8 find the exact value of each variable in simplified radical form. Rationalize all denominators.



9. The engine on a boat has died and the captain has radioed for help. The Coast Guard helicopter sees the boat with an angle of depression of 51° . The line-of-sight distance from the helicopter to the boat is 5000 ft. How high above the boat is the helicopter?



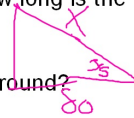
$$\sin 51^\circ = \frac{x}{5000}$$

$$x = 3885.73$$

10. A mother climbs a vertical ladder to get on a large slide at an amusement park. After the mother goes down the slide she sees her child at the top of the slide with an angle of elevation of 35° .

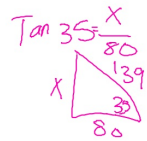
a) If the mother is 80 feet from the ladder how long is the slide?

$$x = 97.6 \text{ ft}$$



$$\cos 35 = \frac{80}{x}$$

b) How high is the top of the slide from the ground?



$$x = 56.02$$