

SOHCAHTOA

$$\sin A = \frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$$

$$\cos A = \frac{\text{leg adjacent to } \angle A}{\text{hypotenuse}}$$

$$\tan A = \frac{\text{Leg Opposite } \angle A}{\text{Leg Adjacent to } \angle A}$$

Bellwork Monday, March 29, 2019

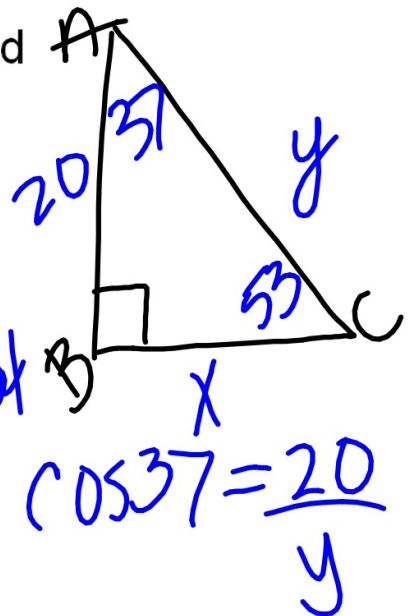
1. In $\triangle ABC$ $\angle B = 90^\circ$, $\angle A = 37^\circ$, and $AB = 20$.

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

$$\angle C = 53$$

$$AC = 25.07$$

$$BC = 15.07$$



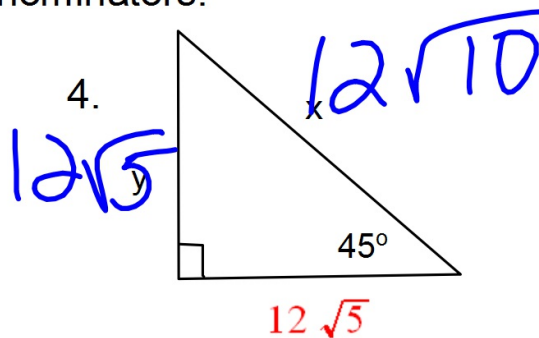
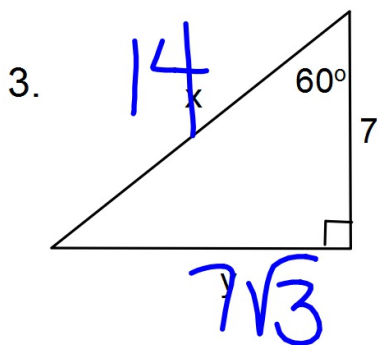
2. The sides of a right triangle are whole numbers.

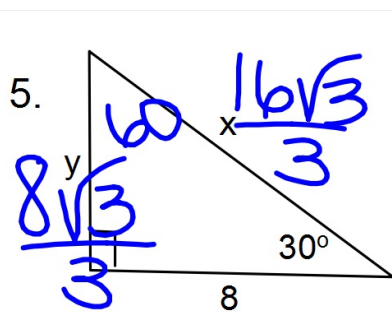
Find the third side of the right triangle if two sides are:

88, 137, 105

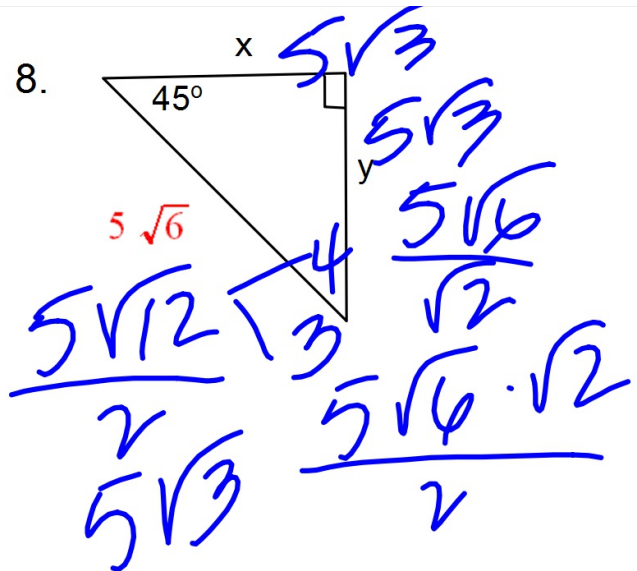
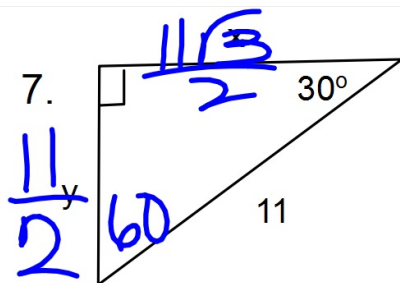
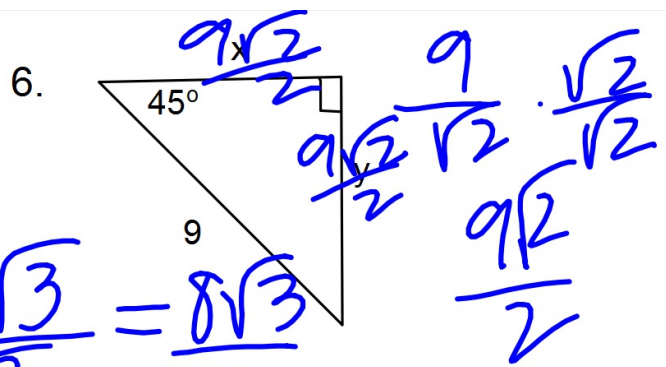
$$88^2 + 137^2 = c^2$$
$$88^2 + b^2 = 137^2$$

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

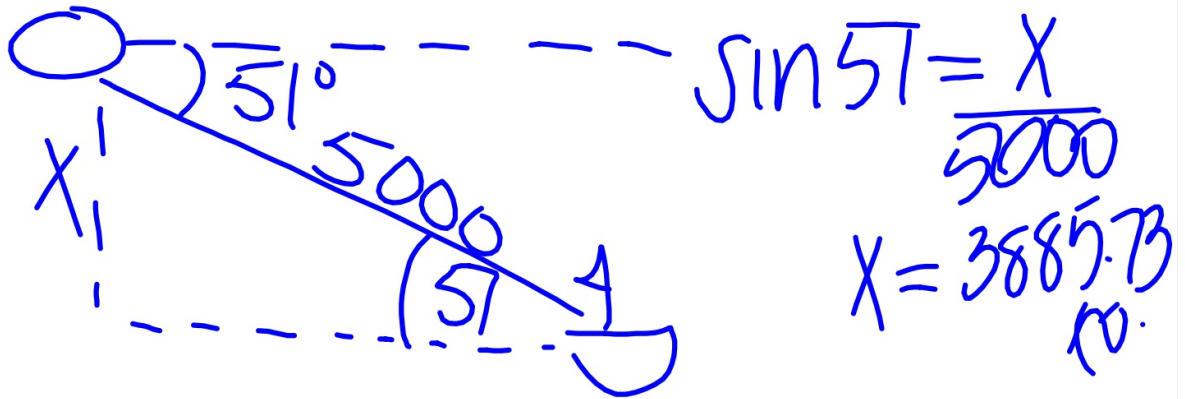




$$\frac{8}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{8\sqrt{3}}{3}$$



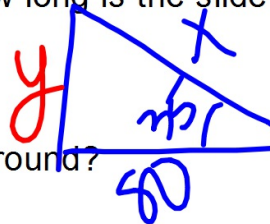
9. The engine on a boat has died and the captain has radioed for help. The Coast Guard helicopter sees the boat with an angle of depression of 51° . The line-of-sight distance from the helicopter to the boat is 5000 ft. How high above the boat is the helicopter?



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?

$$\tan 35 = \frac{y}{80}$$

$$y = 56.02 \text{ ft}$$