

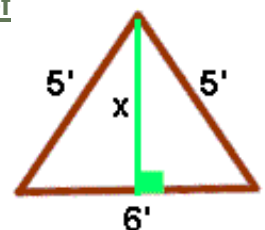


**Draw a diagram** when one isn't given and **SET UP the trig equation!**  
**DO NOT SOLVE!!!**

- 1) A building 14.5 m tall casts a shadow of 11.4 m along the level ground. At what angle do the rays of the sun hit the ground (to the nearest degree)?  
**Draw the diagram and set up trig equation.**
  
- 2) A 5.2 m ladder leans against a wall. The bottom of the ladder is 1.9 m from the wall. What angle does the ladder make with the ground?  
**Draw the diagram and set up trig equation.**
  
- 3) A ship is on the surface of the water, and its radar detects a submarine at a distance of 238 feet, at an angle of depression of 23 degrees. How deep underwater is the submarine?  
**Draw the diagram and set up trig equation.**

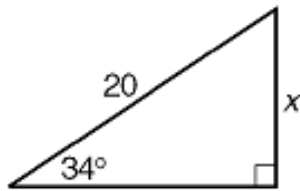


- 4) Bailey's dog house is shaped like a tent. The slanted sides are both 5 feet long and the bottom of the house is 6 feet across. What is the height of her dog house, in feet, at its tallest point?

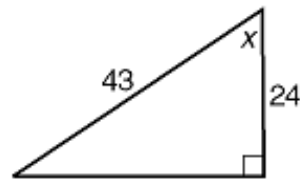


**Setup** the trigonometric ratio for each triangle. **DO NOT SOLVE!**

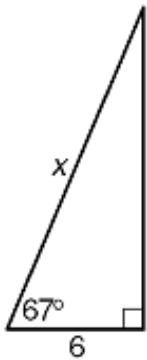
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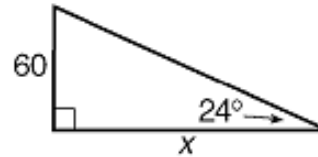
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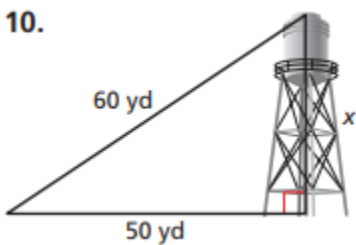
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**Review: Pythagorean theorem**

- 9) The post office is 3 miles west of your home. Your school is 2 miles north of the post office. How far is your home from your school? Round your answer to the nearest tenth.

10.



**Find the height  $x$ . Round your answer to the nearest tenth.**

