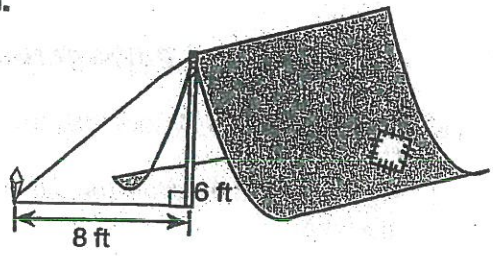
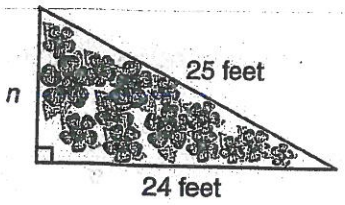
Use the Pythagorean theorem to solve each problem.

A tent is supported by a guy rope tied to a stake, as shown in the diagram. What is the the length of the rope? _____



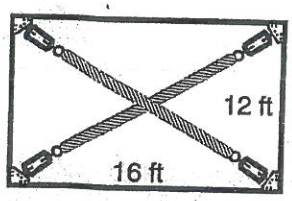
If the supporting stake in Problem 1 were 15 feet from the tent, and an 8-foot tent pole were used, what would be the length of the guy rope? _____

Stephanie is planning a right triangular garden. She marked two sides that measure 24 feet and 25 feet. What is the length of side *n*? _____

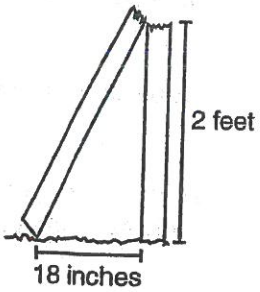


A builder needs to add diagonal braces to a wall. The wall is 16 feet wide by 12 feet high. What is the length of each brace?

_____



The diagram at the right shows how a post was broken. What was the original height of the post? _____



The sets of numbers 3, 4, 5 and 5, 12, 13 are examples of Pythagorean triples. Use what you know about the Pythagorean theorem to explain why these numbers are called Pythagorean triples. _____

_____

_____

ermine whether the following sets of three numbers are hagorean triples. Write *yes* or *no* for each set of numbers.

8, 15, 17 _____

15, 20, 25 _____

_0, 48, 52 _____

2, 9, 11 _____

39, 80, 89 _____