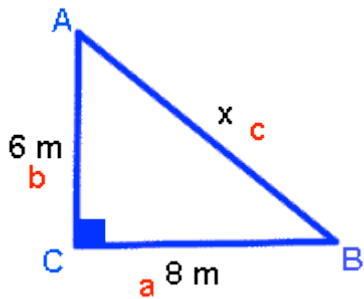


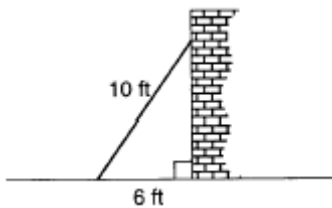
# Pythagorean Theorem Handout

## Example 1



## Example 2

A wall is supported by a brace 10 feet long, as shown in the diagram below. If one end of the brace is placed 6 feet from the base of the wall, how many feet up the wall does the brace reach?

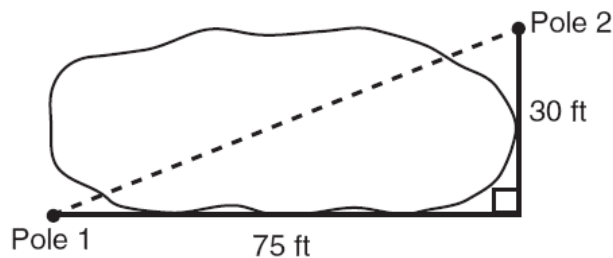


## Example 3

A triangle has sides 6, 7, and 10. Is it a right triangle?

## Example 4

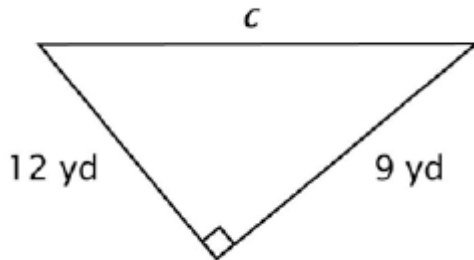
The NuFone Communications Company must run a telephone line between two poles at opposite ends of a lake, as shown in the accompanying diagram. The length and width of the lake are 75 feet and 30 feet, respectively.



What is the distance between the two poles, to the *nearest foot*?

## Student Practice

1. Find the missing side of the triangle.

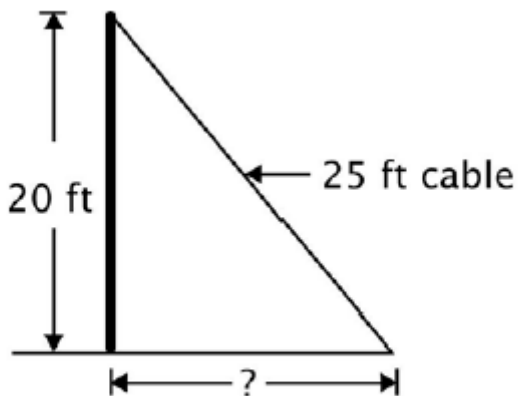


2. Given the following information, find the unknown length for each triangle.

(i)  $b = 8, c = 17$

(ii)  $a = 12, c = 13$

3. A telephone pole support cable attaches to the pole 20 feet high. If the cable is 25 feet long, how far from the bottom of the pole does the cable attach to the ground?



4. The measures of three sides of a triangle are 9, 16, and 20. Determine whether the triangle is a right triangle. Explain your answer.