

Algebra: Pythagorean Theorem Story Problems

For each of the following story problems:

1. Draw and label a diagram
 2. Write and solve an equation (using the Pythagorean Theorem)
 3. Show all work and steps
 4. Give exact and approximate solutions to the solutions from the Theorem
 5. Answer the problem's question in a sentence
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1. Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the front door?

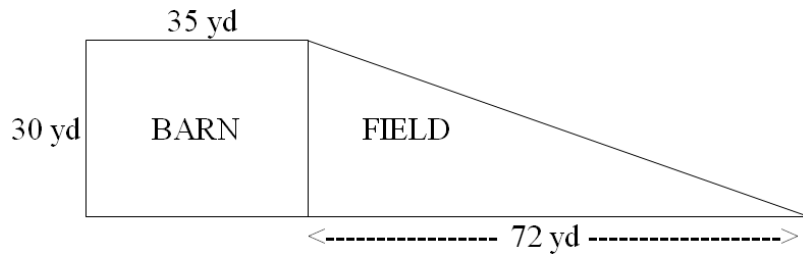
 2. To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 34 meters south and 41 meters east. To the *nearest meter*, how many meters would be saved if it were possible to walk through the pond?

 3. Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the *nearest tenth* of a mile, they must travel to return to their starting point?

 4. Oscar'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 his dog house, in feet, at its tallest point?

Name _____ Date _____ Per _____

5. Farmer Brown wants to put a fence around a triangular shaped field. A rectangular barn is directly next to the field. A diagram is below:



Farmer brown is not going to put fencing along the side of the field that is right next to the barn, but will along the other two sides. The fencing will cost him \$3.79 per foot. What will be the cost of the fencing?
Show all work.

6. In the diagram, AEB is straight and angles A and B are right.

Calculate the total distance $DE + EC$.

