

NAME \_\_\_\_\_ DATE \_\_\_\_\_ PER. \_\_\_\_\_

## PYTHAGOREAN THEOREM

Use the Pythagorean Theorem to find the missing length. Give answers in simplest radical form. Draw a picture first if needed.

1. \_\_\_\_\_

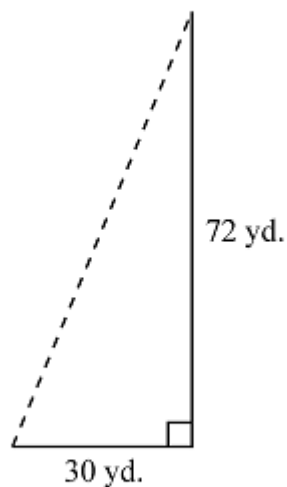
Find your own Real World Right Triangle Problem dealing with a subject that interests you. Yes, you may use the computer to research quickly. **Write the question to the right, solve and place answer above.** Be sure to include your picture. Be prepared to present to the class. Three lucky students will win this honor Monday.

2. \_\_\_\_\_

How many feet from the base of a house must a 39-foot ladder be placed so that the top of the ladder will reach a point on the house 36 feet from the ground?

3. \_\_\_\_\_

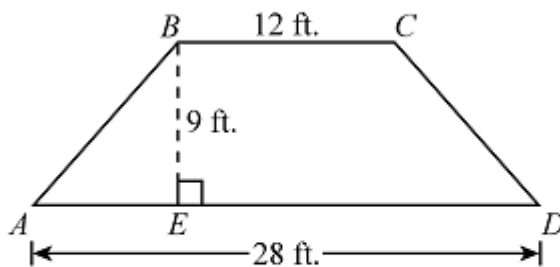
Alicia walked east for 30 yards, then walked north for 72 yards, as shown below.



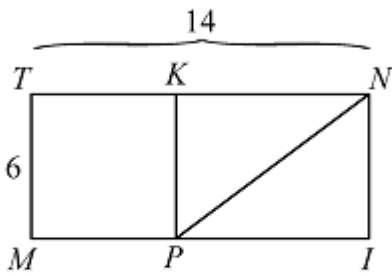
If Alicia walked directly back to her starting point, how far would she have to walk to get there?

4. \_\_\_\_\_

The cross section of an attic is in the shape of an isosceles trapezoid, as shown in the figure below.



If the height of the attic is 9 feet,  $BC = 12$  feet, and  $AD = 28$  feet, how many feet long is  $\overline{AB}$ , to the nearest foot?

5. _____	A rectangle has a diagonal of 2 and a length of $\sqrt{3}$ . Find its width.
6. _____	The length of the hypotenuse of a right triangle is 20 centimeters, and the length of one leg is 12 centimeters. The length of the other leg is —
7. _____	<p>In the accompanying diagram, <math>MINT</math> is a rectangle and <math>MPKT</math> is a square.</p>  <p>If <math>MT = 6</math> meters, and <math>TN = 14</math> meters, how many meters long is <math>\overline{PN}</math>?</p>