Word Problems solved using the Pythagorean Theorem

For each of the following:
- Draw a diagram and label all parts as described in the problem
- State the Pythagorean formula
- Substitute values in for the variables
- Solve and restate the final answer as a sentence with units

Round to the nearest tenth when appropriate

1) Find the length of a diagonal of a rectangular picture whose sides are 12 in and 17 in.

2) Tina measures the distances between three cities on a map. The distances between the three cities are 45 miles, 56 miles and 72 miles. Do the positions of the three cities form a right triangle?

3) A wire 30 feet long is stretched from the top of a flagpole to the ground at a point 15 feet from the base of the pole. How high is the flagpole?

4) Isaac's tv is 25 inches wide and 18 inches high. What is the diagonal size of his tv?

5) Tara drives due north for 22 miles and then east for 11 miles. How far a Tara from her starting point?

6) What is the perimeter of a right triangle if the hypotenuse is 15 cm and one of the legs is 9 cm?

7) Use what you know about finding the distance between two points.
Draw a separate simple diagram of the triangle formed.
Find the distance across the lake:

50 ft

100ft

200 ft