

Solve the following word problems, using the Pythagorean Theorem. Draw a picture to help with the solution.

1. A 17 foot ladder is placed against a wall. The foot of the ladder is 8 feet from the bottom of the wall. How high up the wall is the top of the ladder?
2. A ship left port and sailed 24 miles east and then it sailed due North. It was then 26 miles from port. How many miles North did the ship travel?
3. In a TV advertisement, the announcer said the size of the screen is a diagonal measurement. A new TV set is 16 inches by 12 inches. What is the diagonal measurement of the screen?
4. Can a circular tabletop 9 feet in diameter be moved through a doorway that is 8 feet high by 6 feet wide? Explain why or why not.
5. A rectangular swimming pool is 30 feet long and 16 feet wide. How far is it to swim diagonally across the pool?
6. A telephone pole is braced by a 15 foot support wire attached from the pole to the ground 12 feet from the base of the pole. How high up the pole is the wire attached to the pole?