

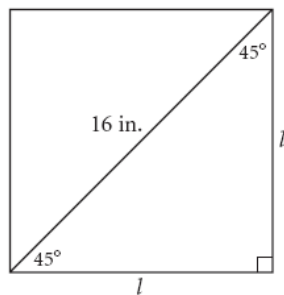
Lesson 9.4: Story Problems

In this lesson you will:

- use the Pythagorean Theorem to solve problems

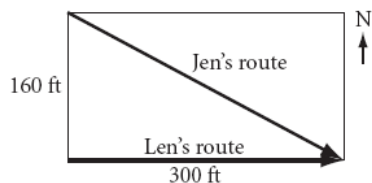
You have learned that drawing a diagram will help you to solve difficult problems. By now you know to look for many special relationships in your diagrams, such as congruent polygons and parallel lines. Now you can also use the Pythagorean Theorem to solve problems that involve right triangles.

- Example 1: A square has a diagonal of length 16 inches. What is the area of the square?

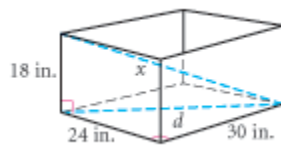


- Example 2: The Clementina High School Marching Band is practicing on the school football field. The field is 300 feet long from west to east and 160 feet wide from north to south. Len starts at the southwest corner and marches at a rate of 5 ft/sec toward the southeast corner. At the same time, Jen begins marching diagonally from the northwest corner toward the southeast corner. If they want to meet at the corner at the same instant, how fast does Jen need to march?

To start, make a sketch to illustrate the problem.



- Example 3: What is the longest stick that will fit inside a 24-by-30-by-18-inch box?



⇒ASSIGNMENT: _____