

## Practice Worksheet for Lesson 8-2

Name:

Mailbox #:

Draw a diagram and solve each of the following problems. Round your answer to the nearest tenth.

### Baseball Diamond

A baseball diamond is a square with 90 ft between each base. If a player needed to throw the ball from first base to third in order to get a runner out, how far would he have to throw it?

### Height of a Building

Firemen, construction workers, and other workers often rely on the use of ladders in their line of work. For example, the height to a second story window may be 25 feet, and a window cleaner may need to put the ladder ten feet away from the house in order to avoid the bushes or flowers. How long of a ladder does the window cleaner need in order to achieve this task?

### Two friends meeting at a specific destination

Let's say Bob and Larry are meeting at Blockbuster on the corner of Park and Pleasant Street. Presently, Bob is on Park Street to and is 8 miles away. Meanwhile, Larry is on Pleasant Street 7 miles away. How far away are they from each other?

### **Ramp of a moving truck**

The height of a moving truck is 4 feet. The distance from the bottom edge of a ramp on the ground to the truck is 6 feet. How long is the ramp?

### **Measurement of TV**

Television sets are generally measured diagonally, thus classifying them as 13 inches, 27 inches, 36 inches, and so forth. Suppose we want to purchase an entertainment center, but the space for the TV is only 20 inches wide and 18 inches tall. Our TV set is 27 inches on its diagonal. Will our TV be able to fit into the cubicle?

### **Pyramid Problem:**

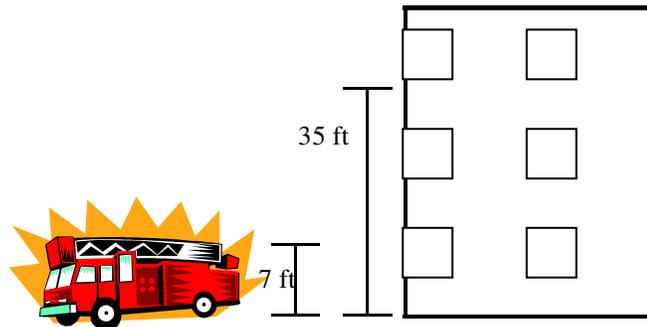
The *Great Pyramid of Giza* is approximately 481 feet high (vertical height from the ground to the top) and 756 wide. The base is a square.

Approximately how far did the ancient Egyptians have to push the final stone up the side of the pyramid to reach the top?

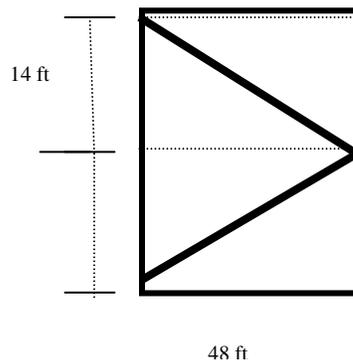
**Fire problems:**

A fire breaks out at the Pythagorville Math Museum. The fire department is called to the scene. Over the scanner, WABC hears of the fire and dispatches their helicopter to the scene for a live report. How much further must the Pythagorville Fire Department travel by road than the WABC helicopter travels by air? See graph grid for measurements.

Once the PFD arrives at the scene, they discover the fire on the third floor of the museum. They calculate that the third floor window is thirty-five feet from the base of the building. Using the hook and ladder fire engine they must extend the ladder to fight the fire. The ladder is anchored to the top of the truck at a height of seven feet and the truck is parked twenty-one feet from the base of the building. How long will their ladder be once fully extended to the window?



A firefighter discovers a victim on the third floor of the Math Museum. The museum is forty-eight feet across and each floor is fourteen feet in height. They exit the inferno through a window that leads to the fire escape. How far has the fire fighter carried the victim when they safely reach the ground?



If a firefighter can carry a victim at a rate of six feet per second, how long will it take them to reach the ground?

The victim is airlifted to Pythagorville Hospital. From the museum, the hospital is five blocks east then north traveling by roads. The airlift helicopter travels thirteen blocks northeast. What are the coordinates of the hospital?

