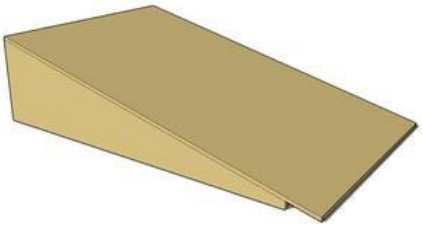
Pre-Algebra

Aim: How can we solve problems using the Pythagorean Theorem?

Do Now:
A carpenter wants to build a handicap ramp over a set of steps that is 12 feet long and 5 feet high. How long will the ramp be?

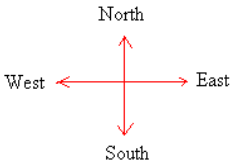


Pythagorean Theorem Word Problems & Applications

-Draw a picture for each situation described below.
-Label your diagram and solve.

1. A 6 ft. ladder is leaning against a building. The base of the ladder is 4 ft. away from the building. How high up the building does the ladder reach?

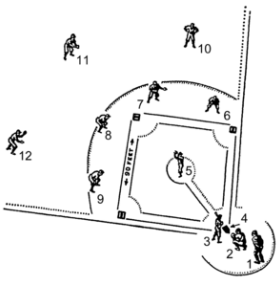
2. John leaves school to go home. He walks 6 blocks North and then 8 blocks west. If each block is 500 feet long, how far is John from the school?



3. A 130 foot rope is attached to the top of a 50 ft. flagpole and reaches a point on the ground. What is the distance between the point on the ground where the rope is tied and the bottom of the flagpole?

4. A soccer field is a rectangle 90 meters wide and 120 meters long. The coach asks the players to run from one corner to the other corner diagonally across the field. What is the distance run by the players?

5. A baseball diamond is a square that is 90 feet on each side. What is the distance from home plate to second base?



6. Find the area of the square

7. On a map, the Bermuda triangle has sides 7mm, 8mm, and 9mm. Is this a right triangle?

8. TV's are advertised by the length of their diagonal in inches. The length of the TV below is 4.5 feet and the width is 3.2 feet. The nearest whole number, what would the advertised size of the TV be?