



Date:

SCHEDULE

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Download Math Task Template From Website
7.1LastNamePythagoreanTheorem.pdf

Learning Goals:

Today we will revisit the Pythagorean Theorem in order to find the lengths of the sides of right-angle triangles and apply our knowledge to real-world scenarios.



Mind Buster:
Pepper Problem



Demo:
Find The Side Lengths of Right-Angle Triangles



Unit 7 - Measurement Relationships:
7.1: Pythagorean Theorem

Pepper Problem!

Mr. Pearce's hot chili recipe calls for a ratio of 3 cups of tomato juice to 4 cups of kidney beans to 2 cups of peppers.

If Mr. Pearce needs 45 cups of chili total, how much of each ingredient does he need to use? Show more than one solution.



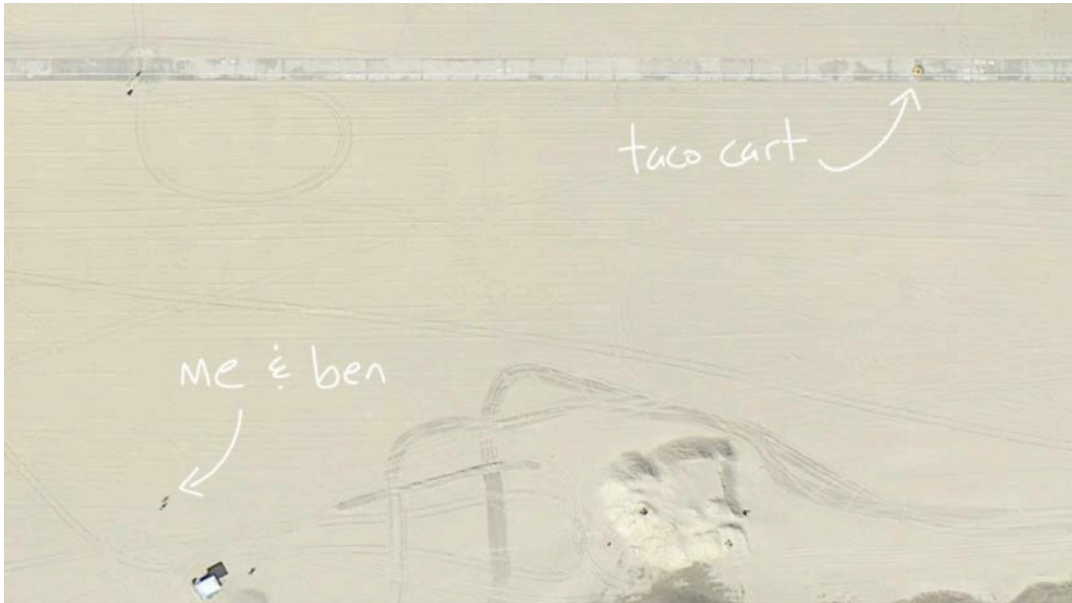


Taco Cart

Shared By: Dan Meyer

REAL WORLD MATH

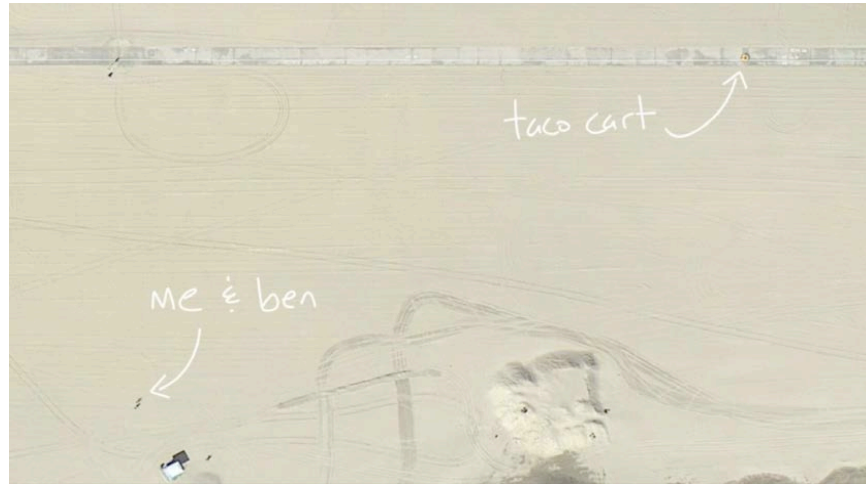
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Write the Question:

What information do we need?

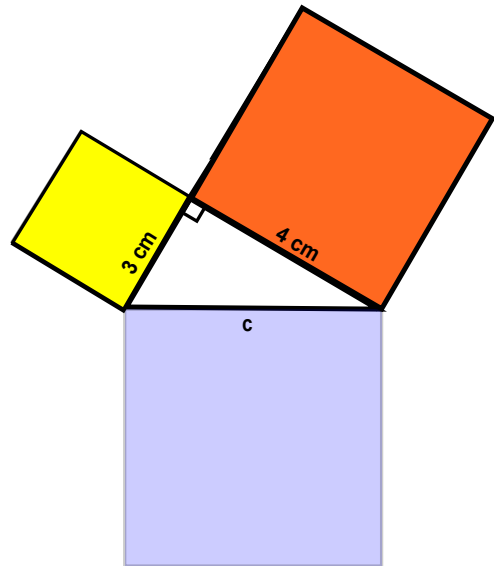
List your guesses here:





Pythagorean Puzzle

How can we calculate the length of a side in the following *right-angle* triangle?

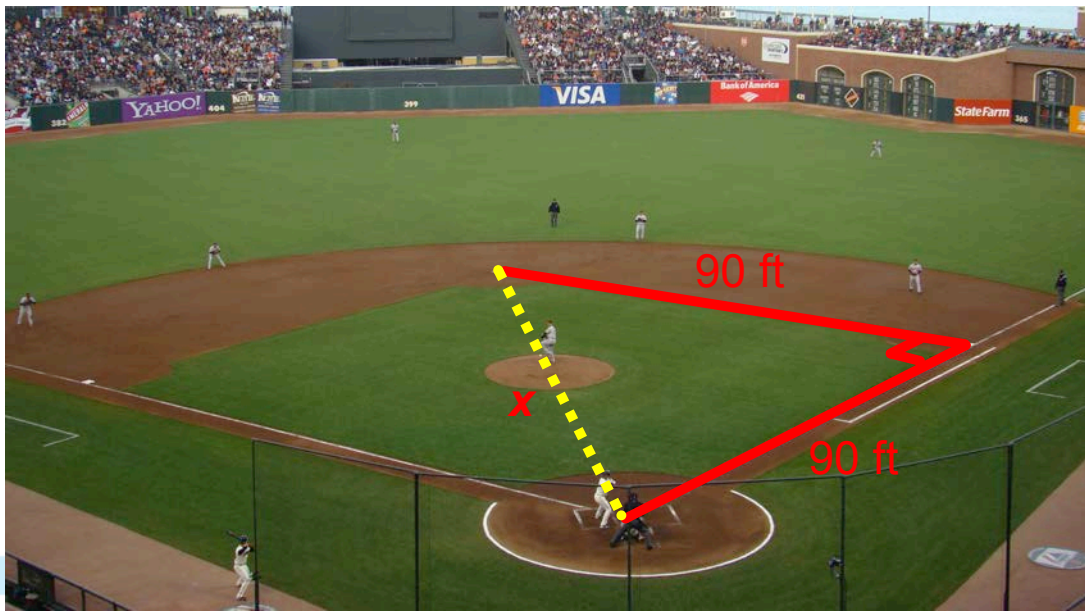


PYTHAGOREAN'S THEOREM

- Given two side lengths of a right-angle triangle, the missing side can be found using:

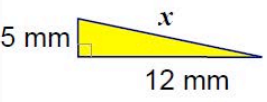
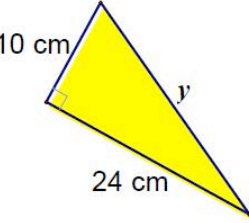
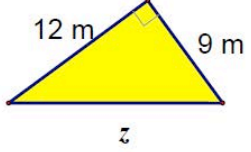
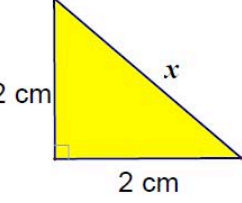
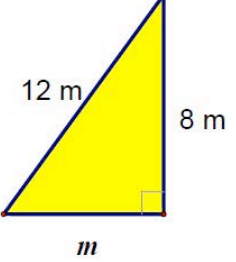
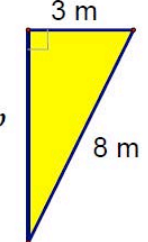


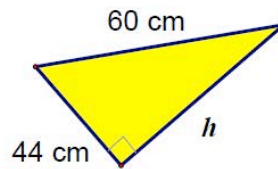
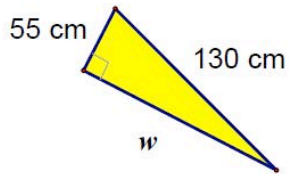
You Try! How far does a catcher have to throw to try and catch a runner stealing 2nd base?



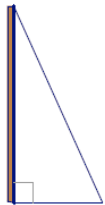
1.20: Coach and Be Coached



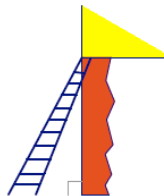
A coaches B	B coaches A
	
	
	



A hydro pole casts a shadow that is 10 m long. A technician measures the wire that runs from the top of the pole to the end of the shadow and finds it to be 26 m. How tall is the pole?



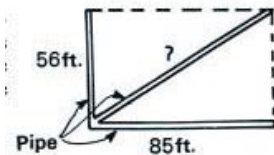
Don is building a loft in his garage. The ladder he is using extends to 10 metres. The loft is 8 m from the floor. How far away from the wall should he anchor the ladder?



1.21: Pythagorean Worksheet

1. If the legs of an isosceles right triangle are 6 units long, find the length of the hypotenuse.

2. Eva wants to put an underground sprinkler system in her back yard. A drawing of the system is shown below. About how many feet of water pipe will Eva need?



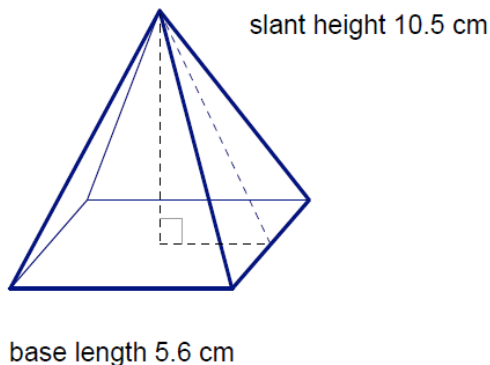
3. Jackson is 54 miles east of Lazy River Resort. Ontario is 31 miles south of Jackson. A land developer proposes building a shortcut road to directly connect Ontario and Lazy River. Draw a picture and find the length of this new road.
4. A television screen measures approximately 15.5 inches high and 19.5 inches wide. A television is advertised by giving the approximate length of the diagonal of its screen. How should this television be advertised?
5. A 6-ft ladder is placed against a wall with its base 2 ft from the wall. How high above the ground is the top of the ladder?



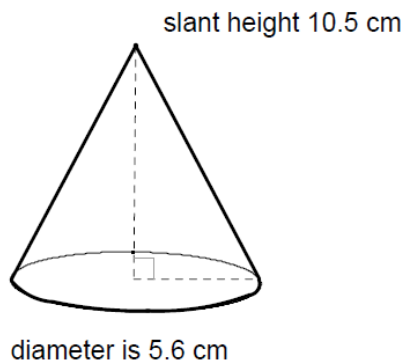
1.22: The Pythagorean Theorem – Hidden Application

The Geobellies Company wishes to make a new type of container for their product. The designer has created two containers: one the shape of a square-based pyramid, and the other a cone. Your job is to determine which container holds more.

Pyramid



Cone



- 1) Use the Pythagorean Theorem to find the height of each shape

Pyramid	Cone

- 2) How much can each container hold? Show your work.

Pyramid	Cone

- 3) Identify the shape with the greater volume.

- 4) If the geobellies cost $\$0.005/\text{cm}^3$, how much will it cost to fill each container?

