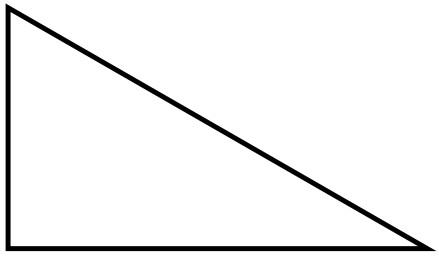
14.2 Pythagorean Theorem

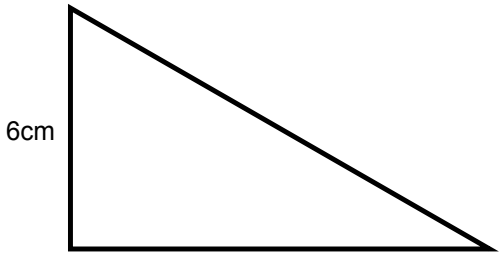
The Pythagorean Theorem

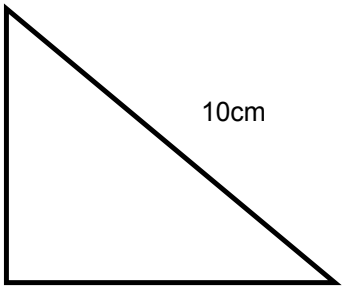


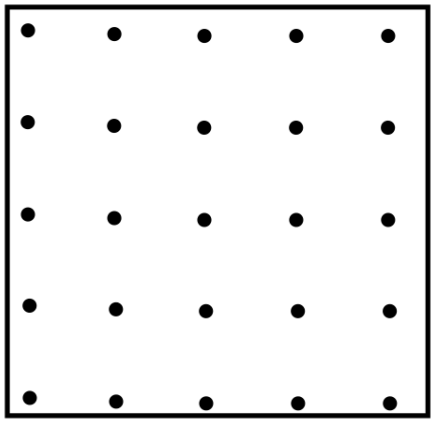
What does it say? What does it really mean?

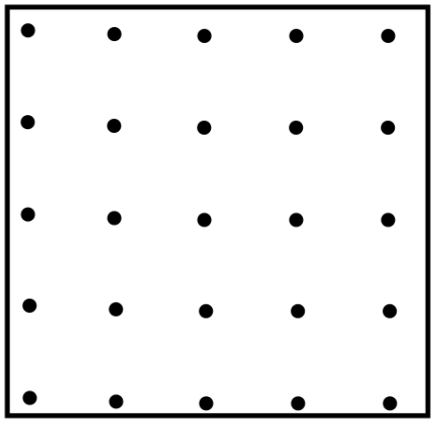
How do we use it?

Find the missing side:



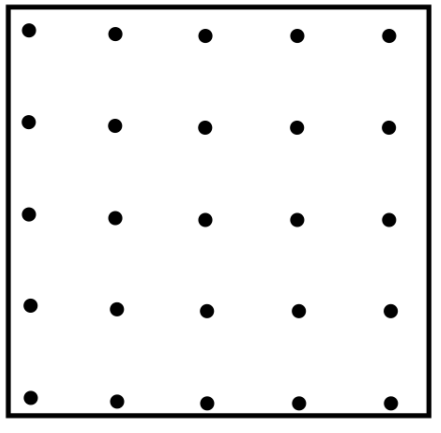






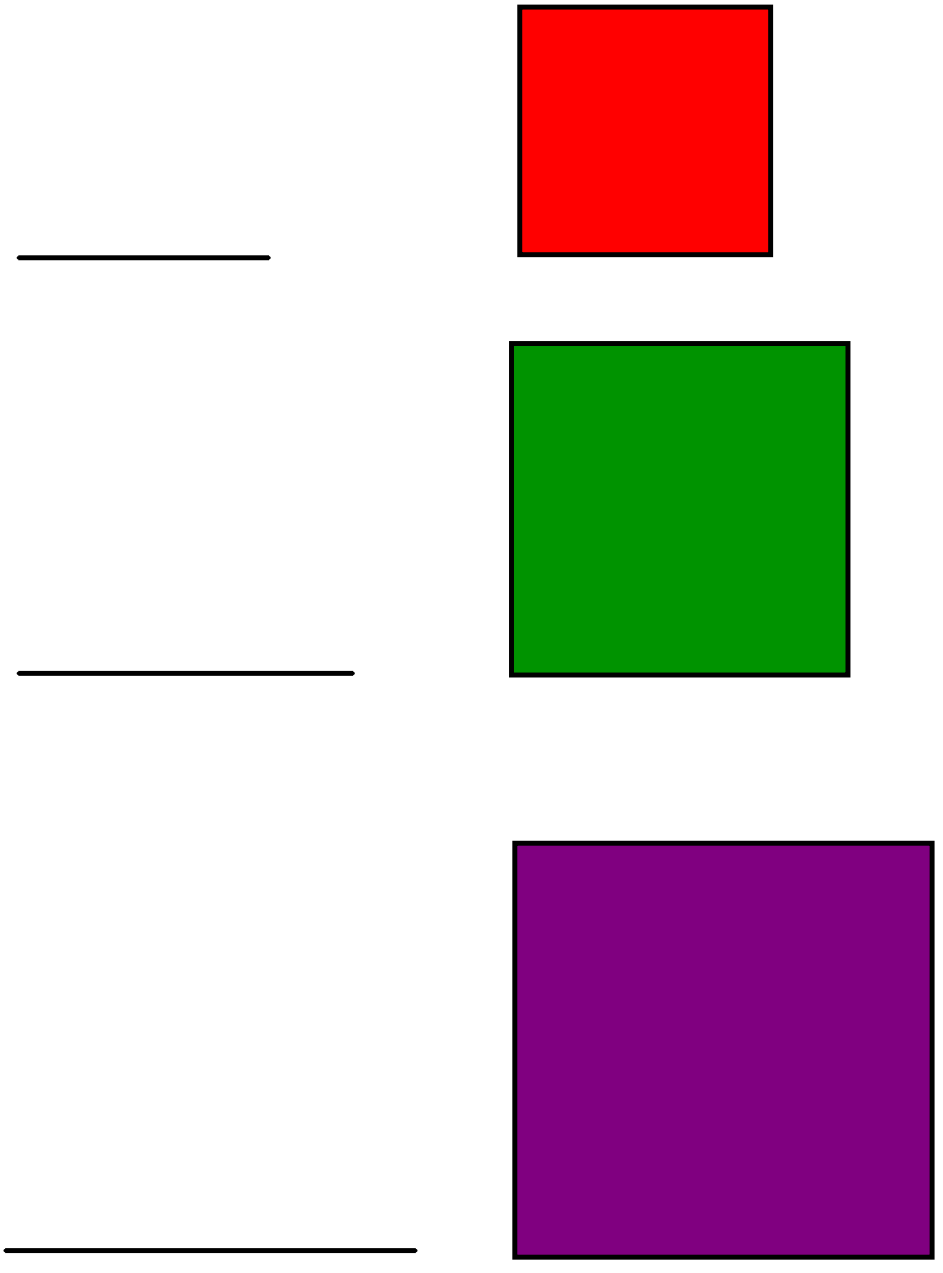
What is the longest segment you can get on a geoboard?

What is the second longest?



Third?

A Geometric Representation:



Pythagorean Triples

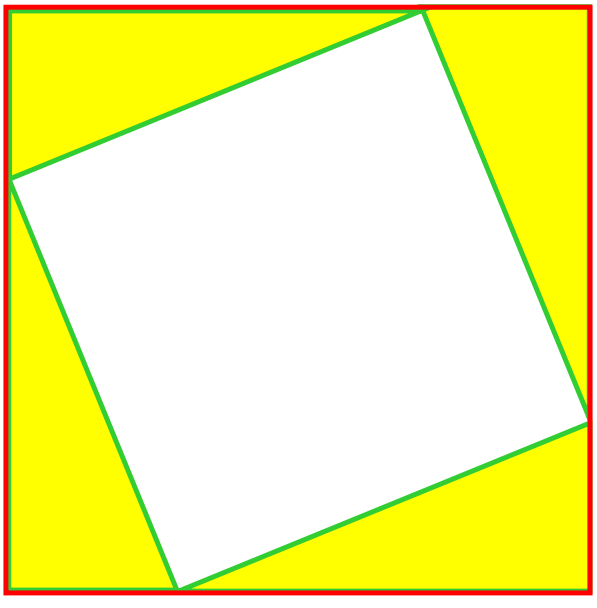
You will need a sheet of graph paper.

On your graph paper, draw a vertical segment the number of units in length that is designated in the table.

Draw a horizontal segment using the table below and then measure or compute the hypotenuse.

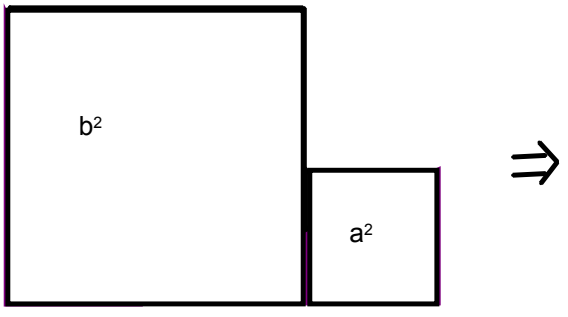
Vertical	Horizontal	Hypotenuse
5	12	
6	8	
8	15	
12	16	
15	20	

Carpet proof

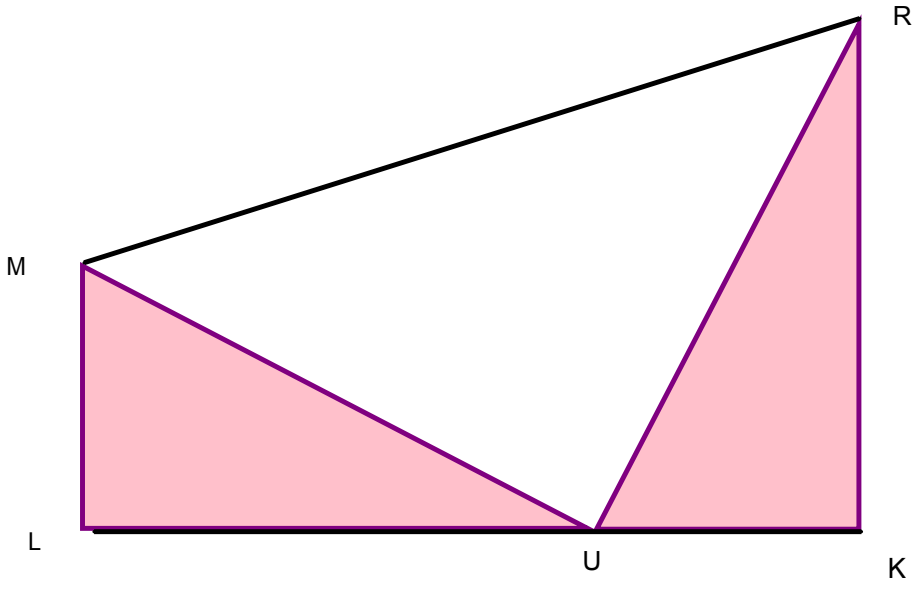


http://www.youtube.com/watch?v=pVo6szYE13Y&feature=related

An Indian Proof



Garfield's Proof



a = short leg b = long leg c = hypotenuse

MLKR is a _____

∆ MUR is _____ _____ triangle; why?

area of MLKR =

Area of the three triangles = _____+_____+_____

Can we use Pythagorean Theorem to find the diagonal length of a unit cube?