

Activity: "26 Squares"

Getting Started

With the squares from your envelope...

i)

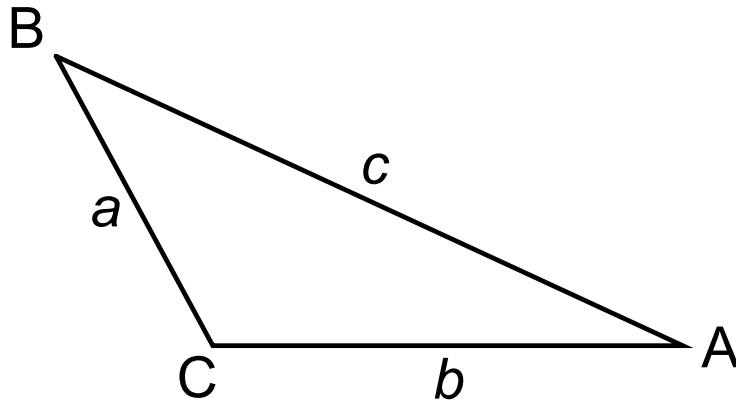
ii)

iii)

Triangle Side Inequality

Key Idea:

To construct any triangle, ABC, using the squares you've been given ...



What's Your Angle?

-Go back to your **Triangle** list.

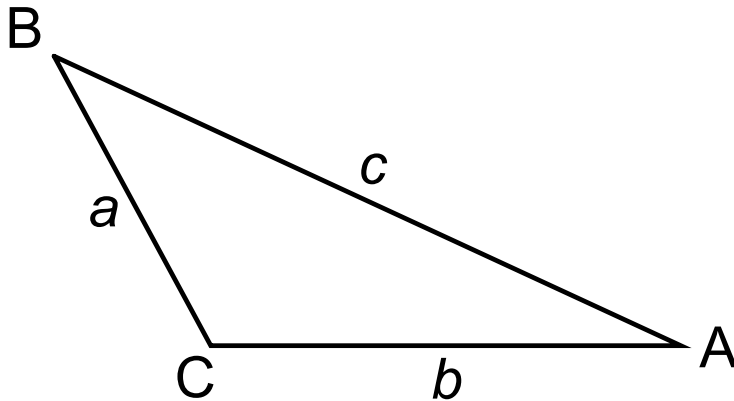
-Measure the angles for, at least, three of your triangles and record them in the table.

Triangle	Side lengths			Angle Measures		
	<i>a</i>	<i>b</i>	<i>c</i>	A	B	C

Triangle Side & Angle Inequality

Key Idea:

If $c > b > a$, then ...



Right Triangles

- Find 3 squares that make a right triangle.
- Find as many possible combinations as you can with the squares you've been given.
- Add your data to the class table and to your own (next slide).

Right Triangles

side 1	side 2	side 3	$(\text{side 1})^2$	$(\text{side 2})^2$	$(\text{side 3})^2$

Sum of the Squares

What do you notice about the squares of the sides?

$(\text{side 1})^2$	$(\text{side 2})^2$	$(\text{side 3})^2$
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Pull

Sum of the Squares

The *Sum of the Squares* (also known as the *Pythagorean Theorem*) tells us that ...

-the sum of the areas of the two, smaller squares (a^2 and b^2) equals the area of the larger square (c^2)

OR

$$c^2 = a^2 + b^2$$

Pull

Problem

The length of one side of a right triangle is 10 cm. What might the lengths of the other two sides be?

Show your work.

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Learning Goals



Practice

p371 *Sum of Squares* (Pythagorean Theorem)

#3, 4

p370 *Ratio & Proportion*

#2 acd

p370 *Key Terms* (Review of)

#1

Date: _____

