Proving Triangles are Right Triangles

Let's just say I have three popsicle sticks of three different lengths 4cm, 5cm, and 7cm. Then let's say I bet you $100 that I can make a right triangle out of them connecting them end to end. Is that a bet you should take? Well, you can find out. Just plug the numbers into the Pythagorean theorem. If you get a number = the same number at the end then the three sides will make a right triangle. Let's try a couple of these together.

Do the side lengths 8in, 11in, and14in make a right triangle?

Step 1. Write the Pythagorean theorem.

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

Step 2. Plug in the lengths and simplify (make sure the longest length is the "c" to avoid hungry mummies).

$8^2+11^2=14^2$
$64+121=196$
$185=196$

Step 3. Look at the final answer. If it is true (ex 2=2) then it is a right triangle. If it is false (ex 2=3) then it's not.

False $185\neq196$

Couldn't be easier, huh? Do another one!

Do the side lengths 8cm, 15cm, and 17cm make a right triangle?

Step 1.

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

Step 2.

$8^2+15^2=17^2$
$64+225=289$
$289=289$

Step 3.

True $289=289$

Let's practice lots more to make you an expert!