Professor R. Smullyan in his book *5000 B.C. and Other Philosophical Fantasies* tells of an experiment he ran in one of his geometry classes. He drew a right triangle on the board with squares on the hypotenuse and legs and observed the fact the the square on the hypotenuse had a larger area than either of the other two squares. Then he asked, "Suppose these three squares were made of beaten gold, and you were offered either the one large square or the two small squares. Which would you choose?" Interestingly enough, about half the class opted for the one large square and half for the two small squares. Both groups were equally amazed when told that it would make no difference.
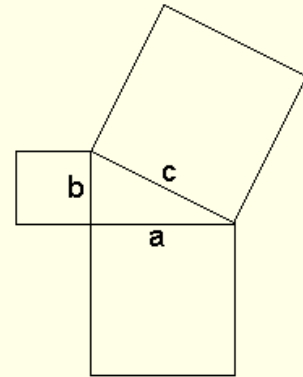
The *Pythagorean* (or *Pythagoras'*) *Theorem* is the statement that the sum of (the areas of) the two small squares equals (the area of) the big one.

In algebraic terms, $a^2 + b^2 = c^2$ where **c** is the hypotenuse while **a** and **b** are the legs of the triangle.