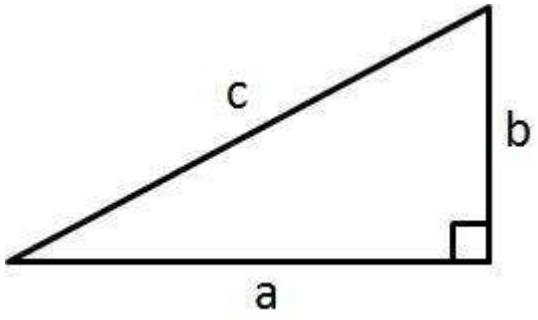
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PYTHAGORAS' THEOREM

Pythagoras' theorem states that in a right triangle (or right-angled triangle) the sum of the squares of the two smaller sides of the triangle is equal to the square of the hypotenuse.

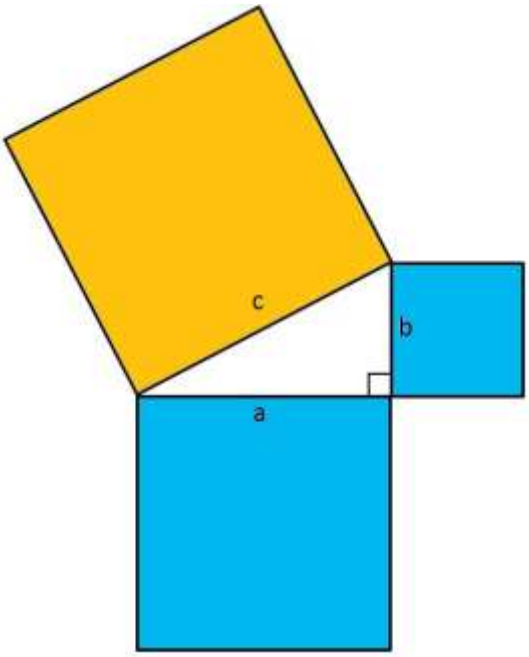


In other words, $a^2 + b^2 = c^2$.

where c is the hypotenuse (the longest side) and a and b are the other sides of the right triangle.

What does this mean?

This means that for any right triangle, the orange square (which is the square made using the longest side) has the same area as the other two blue squares added together.



Other formulae

As a result of the formula **$a^2 + b^2 = c^2$,** we can also deduce that:

- **$b^2 = c^2 - a^2$ and $a^2 = c^2 - b^2$**
- **$c = \sqrt{(a^2 + b^2)}$**
- **$b = \sqrt{(c^2 - a^2)}$ and $a = \sqrt{(c^2 - b^2)}$**