



## RIGHT TRIANGLE SIDES RELATION

### Why

How does constraining a triangle to be a right angle constrain the lengths of its sides?

### Result

**Proposition 1.** *Let  $a$  and  $b$  be the lengths of the sides of a right triangle and  $c$  be the length of the hypotenuse. Then*

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

The result is called *Pythagorean theorem* and the equation is called the *Pythagorean equation*.



