Proof Without Words: A Reciprocal Pythagorean Theorem

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If $a$ and $b$ are the legs and $h$ the altitude to the hypotenuse $c$ of a right triangle, then

$$
\left(\frac{1}{a}\right)^2 + \left(\frac{1}{b}\right)^2 = \left(\frac{1}{h}\right)^2.
$$

Proof.

![Diagram of a right triangle with altitude h, legs a and b, and hypotenuse c, with the reciprocal expressions showed.]


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Geometry in Government

In a family of accomplished scholars, “my performance was decidedly mediocre. I approached the bulk of my schoolwork as a chore rather than an intellectual adventure.”

Geometry came to the rescue. “Instead of memorizing facts, we were asked to think in clear, logical steps. Beginning from a few intuitive postulates, far-reaching consequences could be derived, and I took immediately to the sport of proving theorems.”

—Steven Chu
United States Secretary of Energy
as quoted by Lisa M. Krieger
Bay Area News Group