

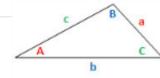
## The Problem With Roots

The Pythagorean Theorem:  $a^2 + b^2 = c^2$ 

And now...here is the problem:

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On the planet Straitege there live creatures called Straits. Straits are capable of doing only two things: drawing lines of length 1 unit and making right angles. Now suppose n is a positive integer. Is it possible for a Strait to make a line of length  $\sqrt{n}$ ? As



$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$c^2 = a^2 + b^2 - 2ab\cos C$$