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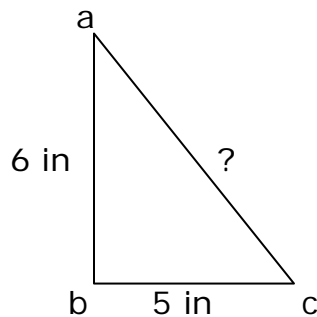
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Proof of the Pythagorean Theorem and its Converse - Step-by-Step Lesson

A triangle shaped piece of cotton fabric is 5 inches long and 6 inches wide. How long is the diagonal of triangle?

Explanation:

In a right triangle, $a^2 + b^2 = c^2$, where a and b are the lengths of the legs and c is the length of the hypotenuse. This is called the Pythagorean theorem.



Use the Pythagorean Theorem, with $a = 6$ and $b = 5$.

plug in a 6 and 5:

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

$$6^2 + 5^2 = c^2$$

$$36 + 25 = c^2$$

$$61 = c^2$$

$$c = 7.81 \text{ inches}$$

