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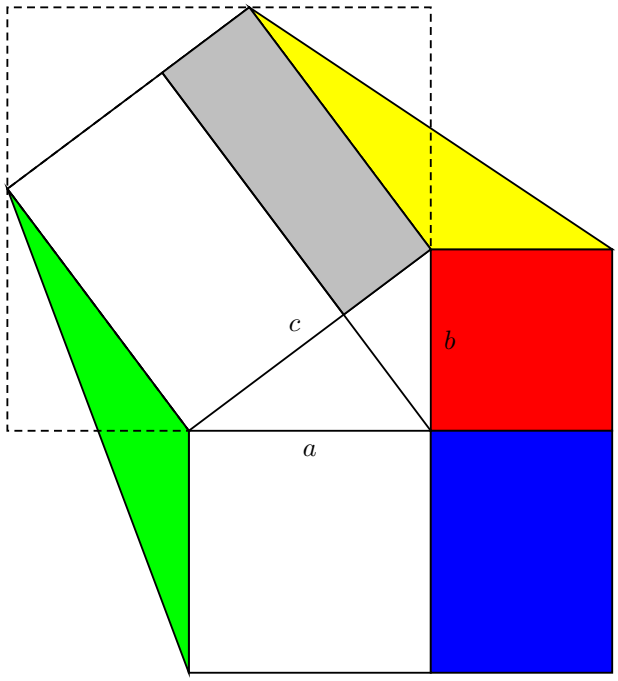
Solution to *CMJ* Problem 748.



The figure itself is a proof without words. Let the right triangle have sides a, b and c. Then the yellow triangle has a base b and height a. The green triangle has base a and height b. Their area is the same as the blue rectangle.

Since the height to the hypotenuse divides the hypotenuse into a ratio of $b^2 : a^2$. The area of the gray rectangle is therefore $c^2 \cdot \frac{b^2}{a^2+b^2} = b^2$, the same as the red square.

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