A visual proof of the Pythagorean theorem

Wolfgang Slany
http://slany.org/wolfgang/
http://www.dbai.tuwien.ac.at/proj/pf2html/

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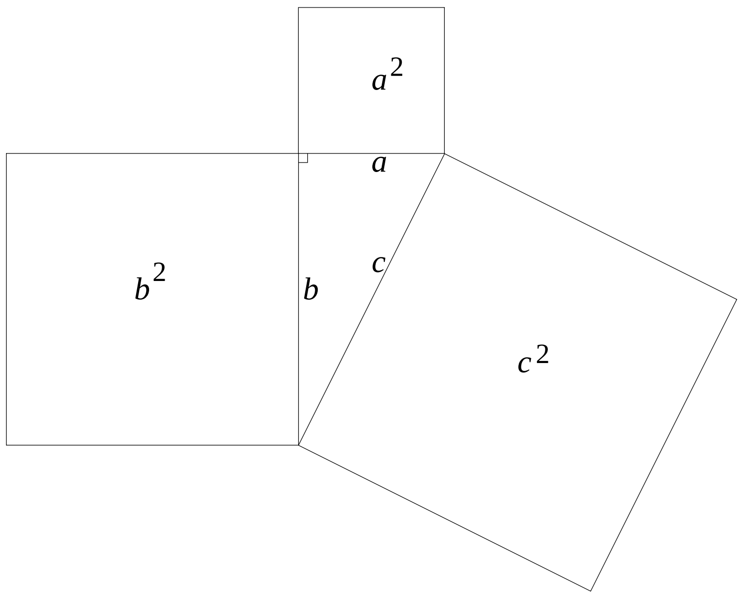
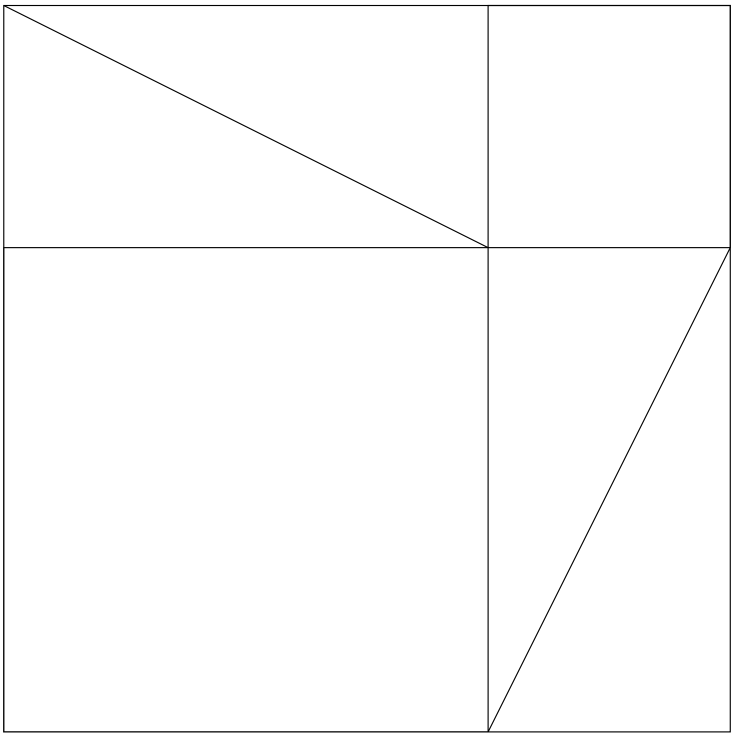
Theorem ([1]): The area of the square built upon the hypotenuse of a right triangle is equal to the sum of the areas of the squares upon the remaining sides. Stated algebraically, for a right triangle with sides of lengths a, b, and c, where c is the length of the hypotenuse,

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

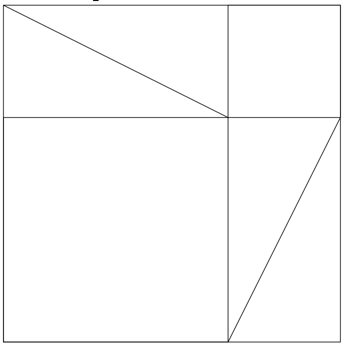
For example, the area of the square labeled c^2 in the following figure is equal to the sum of the areas of the squares labeled a^2 and b^2.

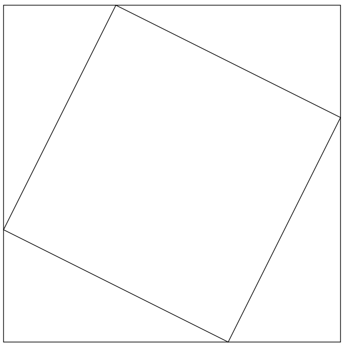


Proof:

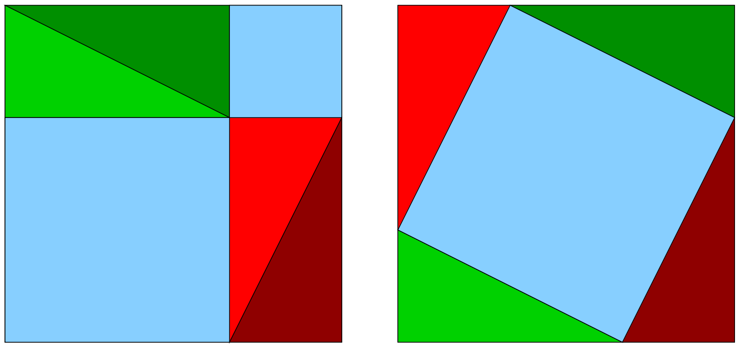


A more detailed proof:

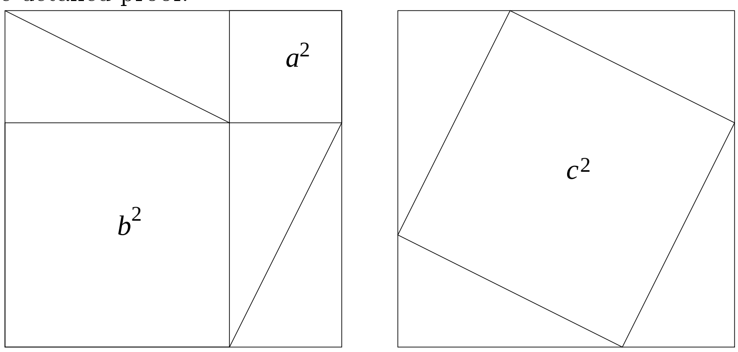




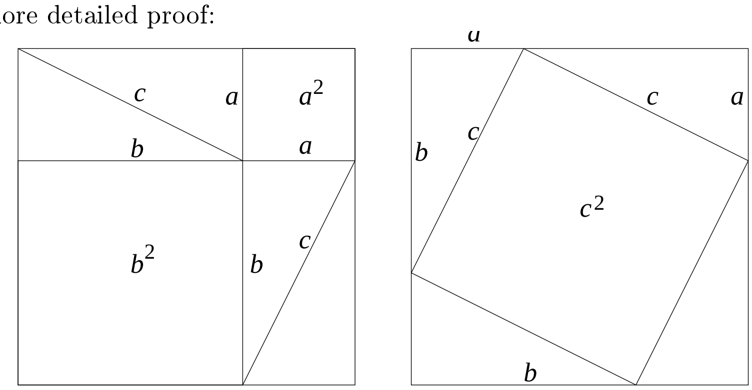
A more detailed proof:



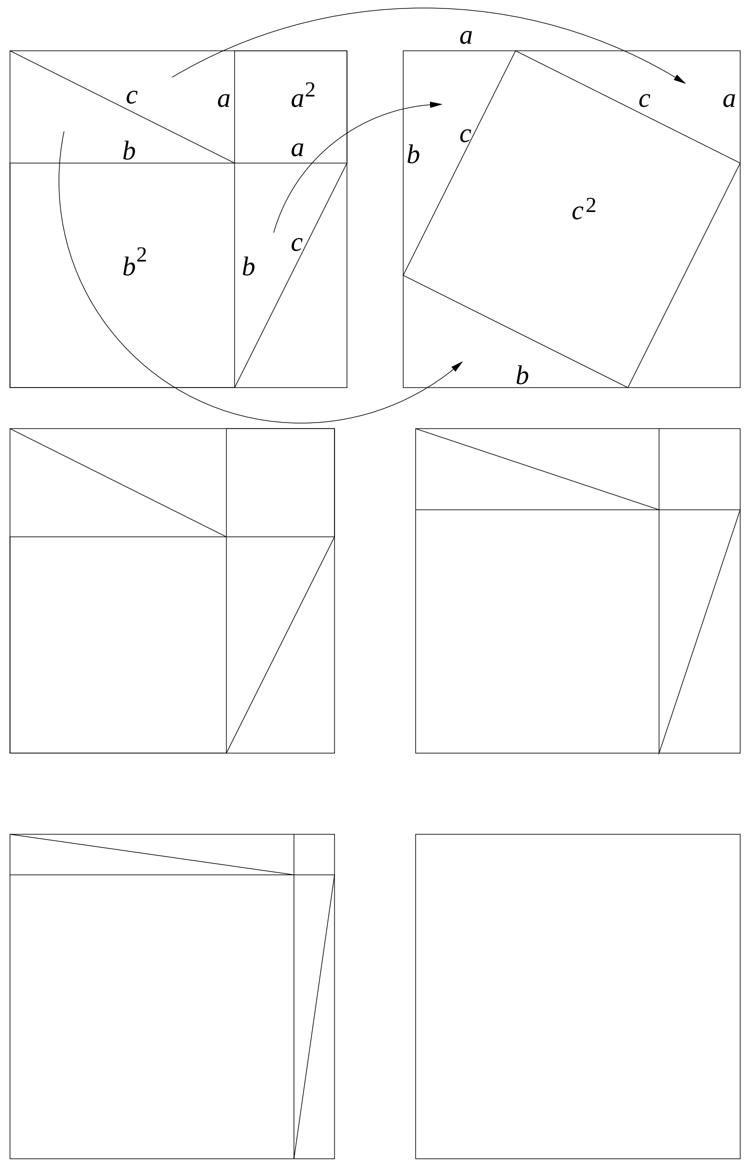
A more detailed proof:



A more detailed proof:



A more detailed proof:



A more detailed proof:
See http://whyslopes.com/etc/ThreeSkillsForAlgebra/ch17.html.

References

[1] Chou pei suan ching: The Arithmetical Classic of the Gnomon and the Circular Paths of Heaven, a Chinese astronomical and mathematical treatise. Exact date of origin unknown http://www.google.com/search?q=chou+pei+suan+ching.