

The Pythagorean Theorem

CTTI

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Consider various proofs:

1. Look at the Garfield paper. (Draw the diagram that got blacked out by 137 years.)
2. Prove using similar triangles. (Hint: draw a perpendicular from the hypotenuse to the opposite vertex; follow your nose. <http://aleph0.clarku.edu/~djoyce/java/elements/bookVI/propVI31.html>)
3. The standard Euclid proof <http://aleph0.clarku.edu/~djoyce/java/elements/bookI/propI47.html>
4. your favorite
5. 98 proofs <http://cut-the-knot.org/pythagoras/#pappa>

Which (proofs) are in your textbook?

Note that each proof uses either *area* or *similarity*.

Hint: Garfield's phrase, 'On the hypotenuse cb of the right angled triangle abc draw the half square cbe ', means 'choose e so that ec and cb are two sides of a square (above the original triangle) with diagonal eb .