A proof of the Pythagorean theorem

c

c

c^2

a

c

a a^2 a

c

a

b

b b^2 b
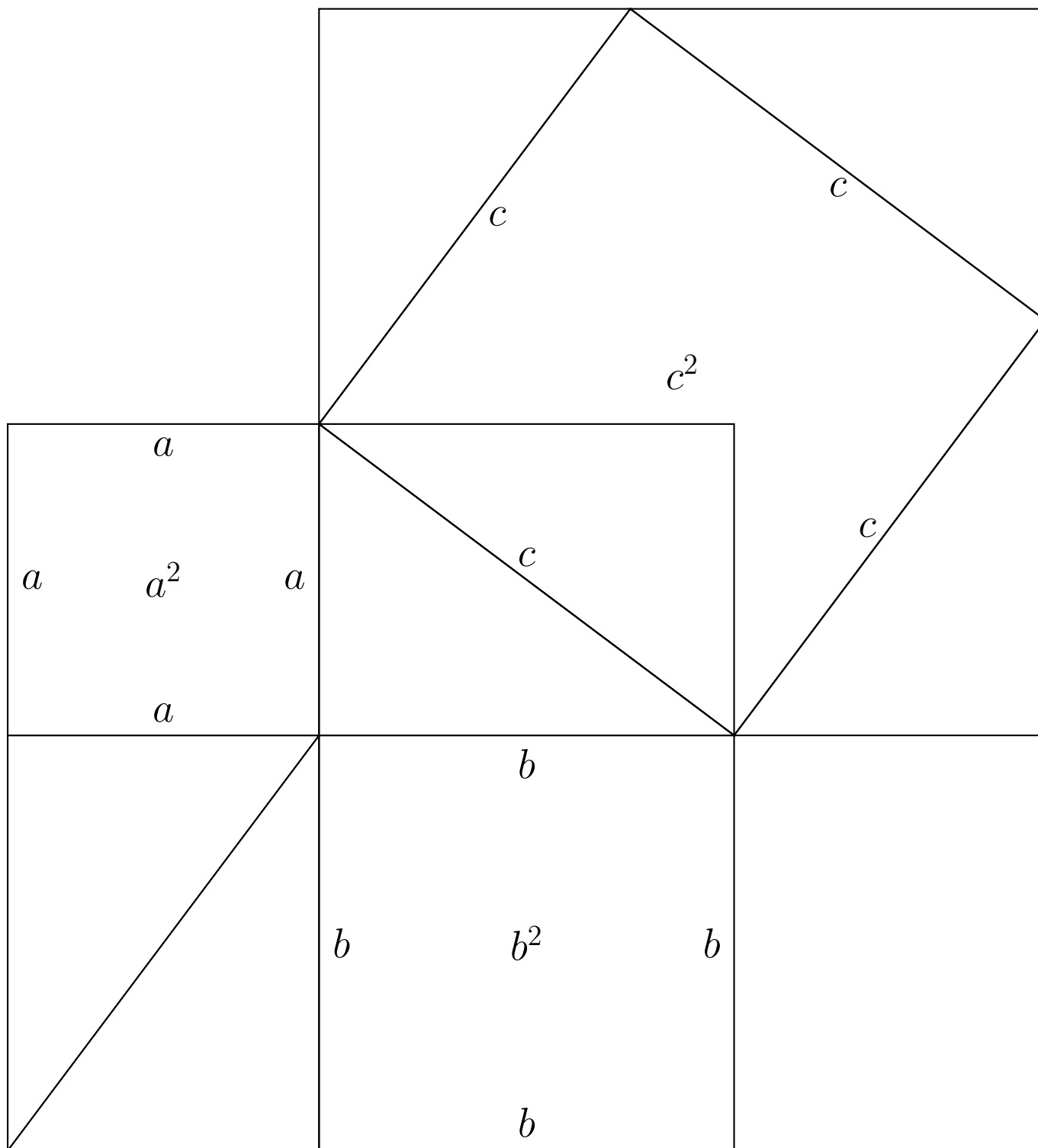
b

Therefore $a^2 + b^2 = c^2$ in any right-angled triangle