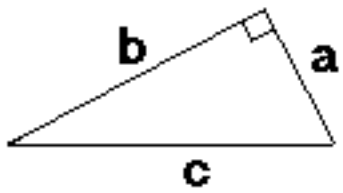
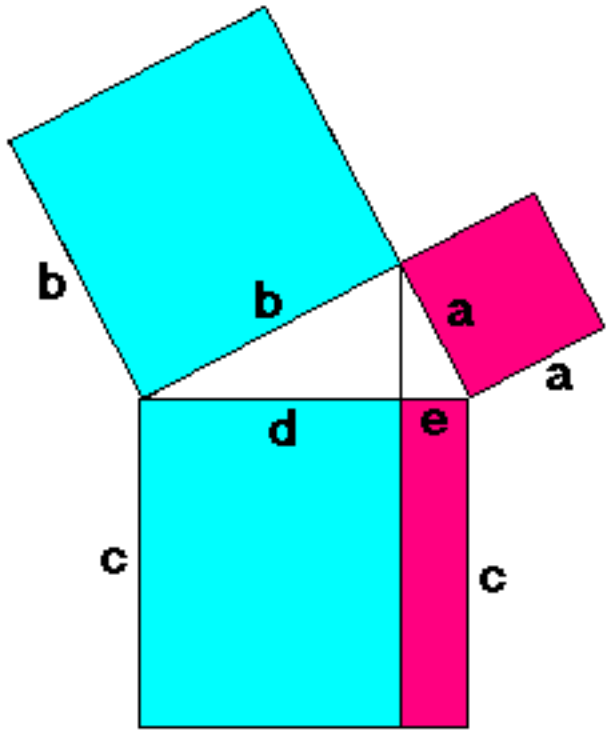
To prove: $a^2 + b^2 = c^2$

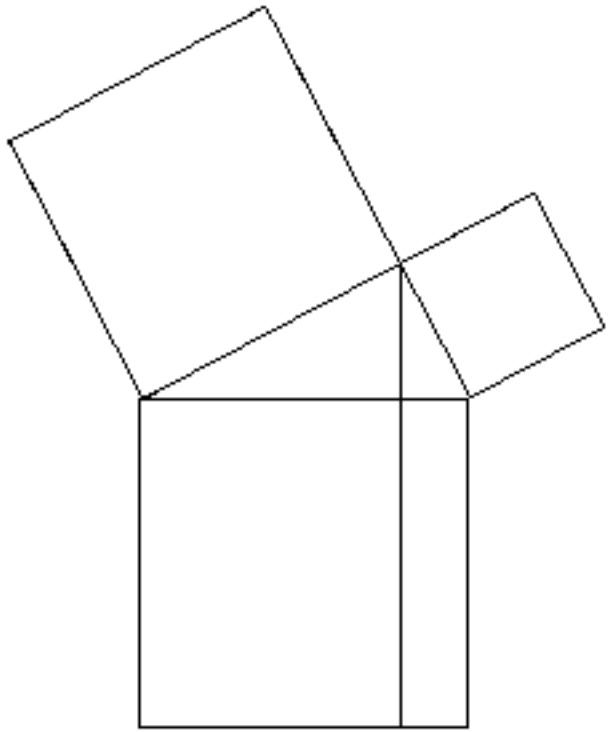


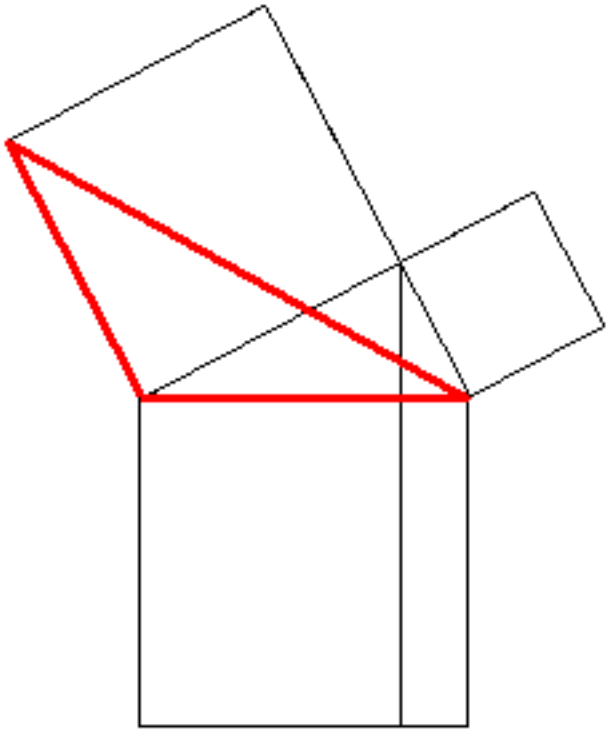


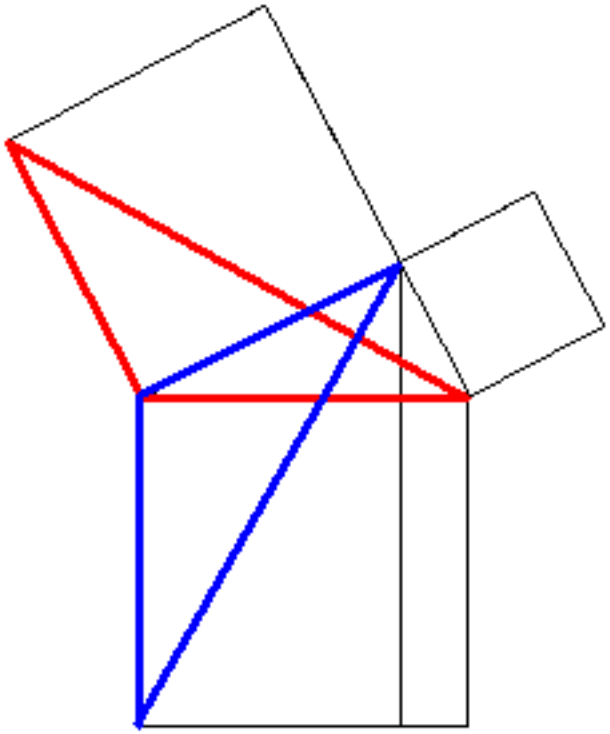
To prove: $a^2 + b^2 = c^2$

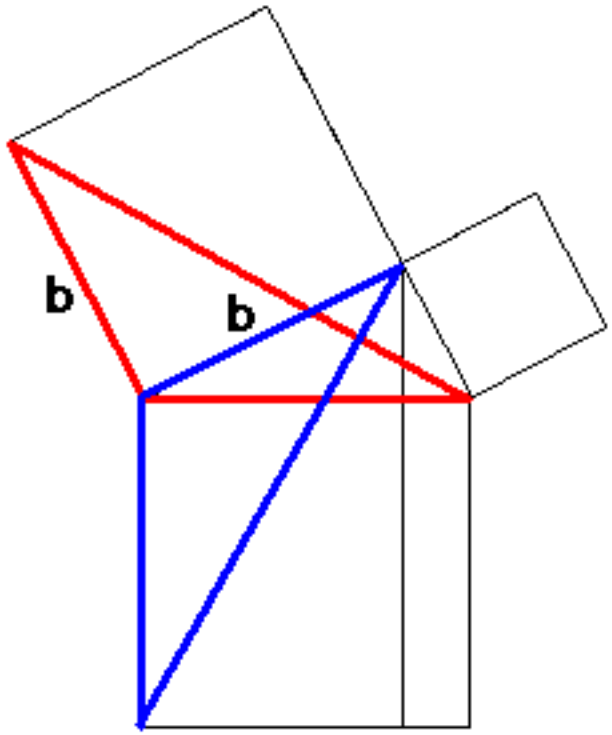
In fact, $a^2 = ce$

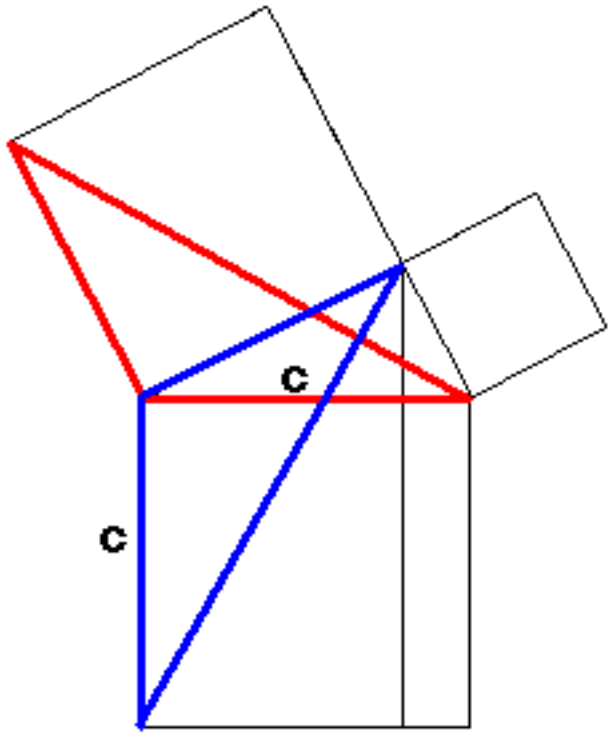
and $b^2 = cd$

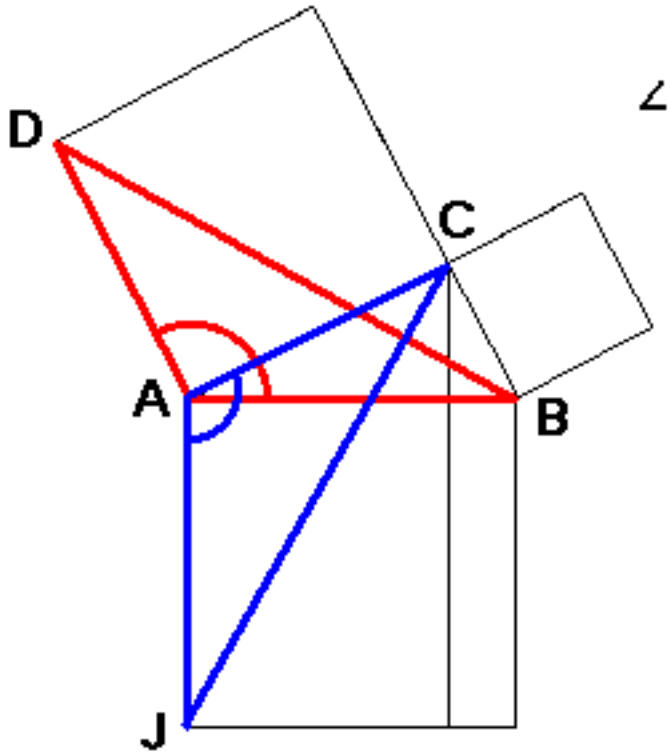







b
b

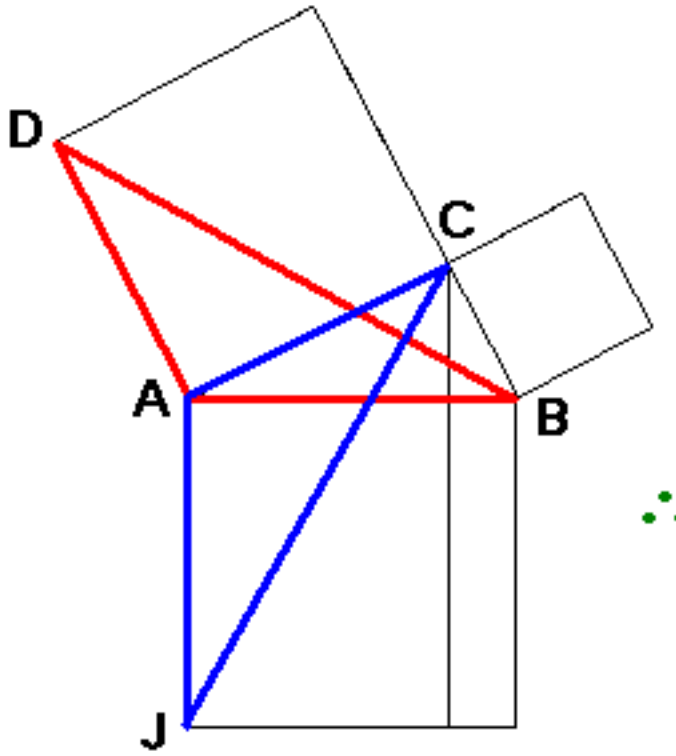

c
c



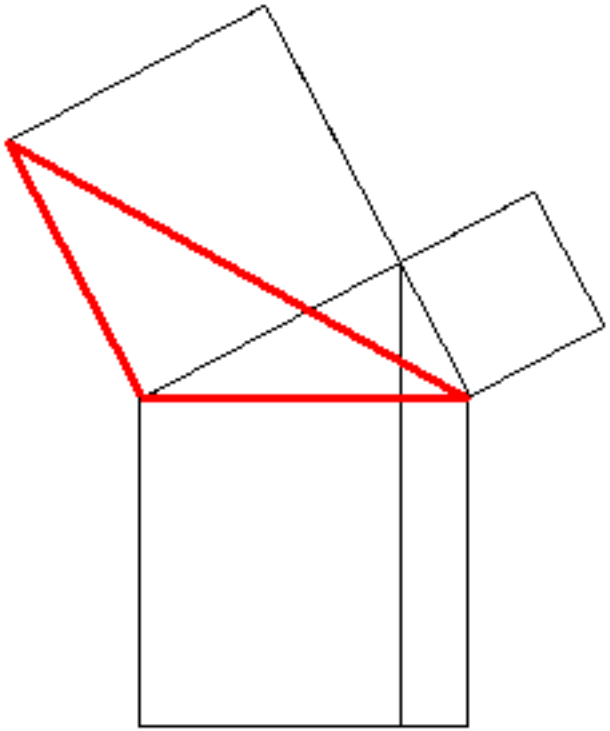
$\angle DAB$

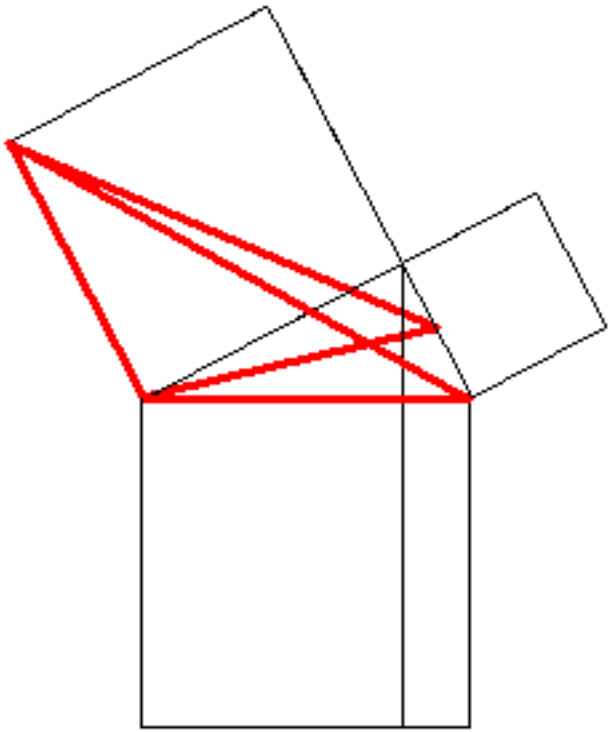
$= \angle CAB$ + a right angle

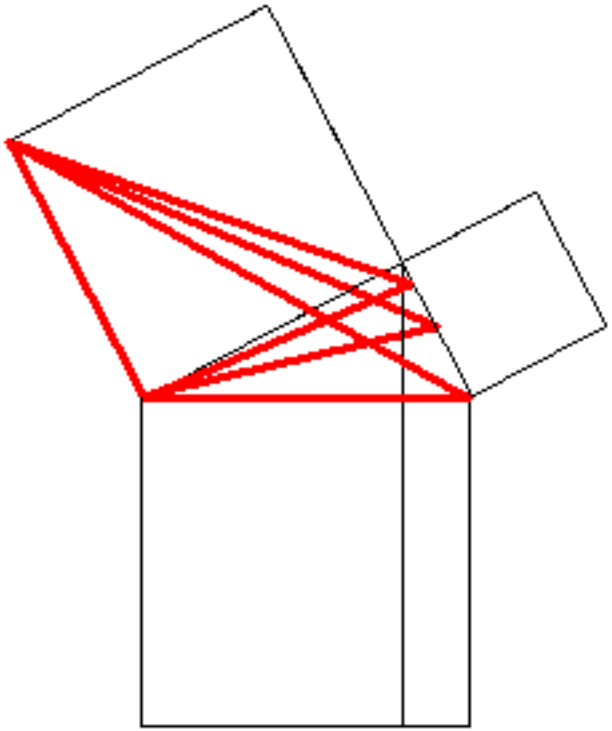
$= \angle CAJ$

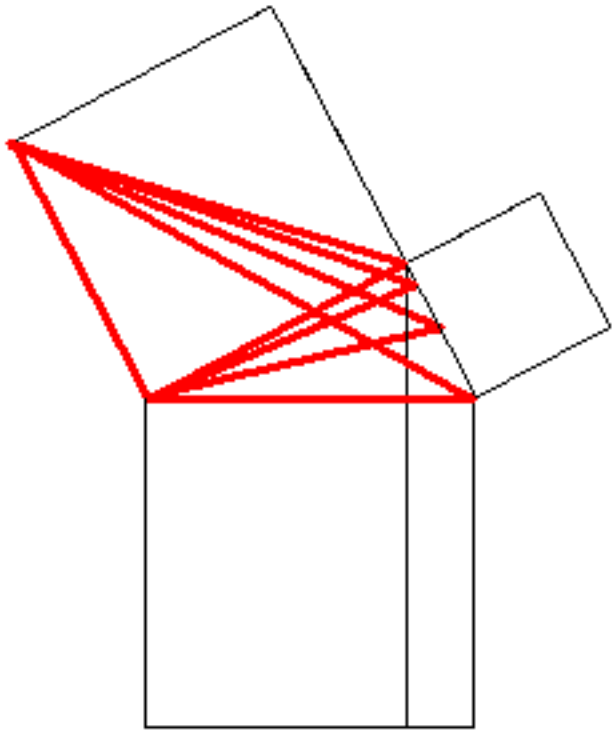


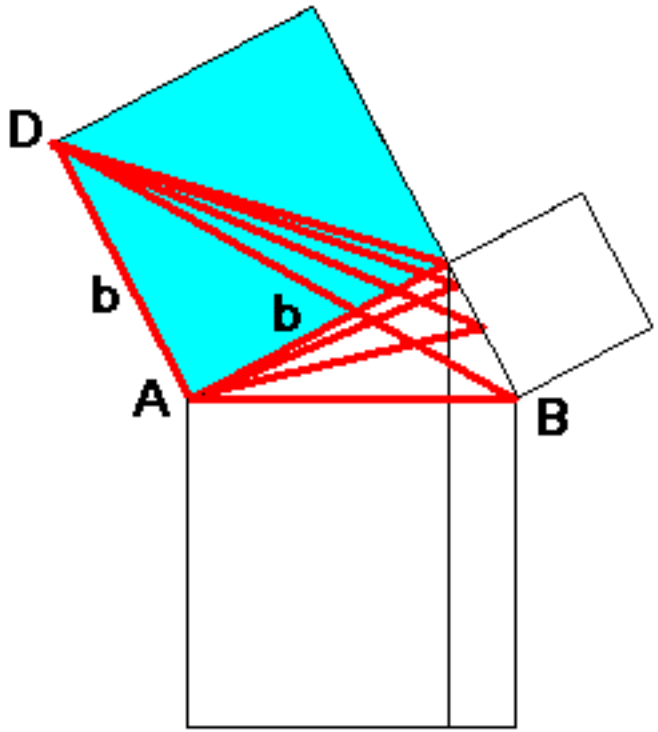
$\therefore$ $\triangle DAB \cong \triangle CAJ$



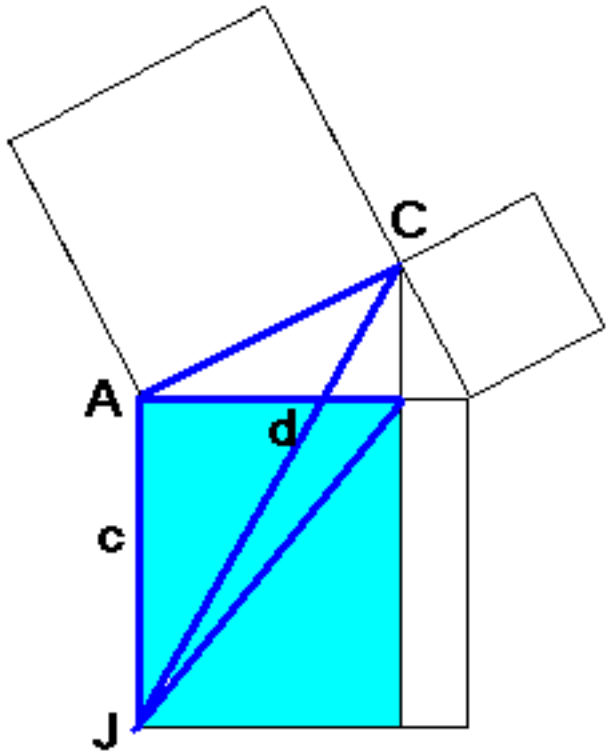






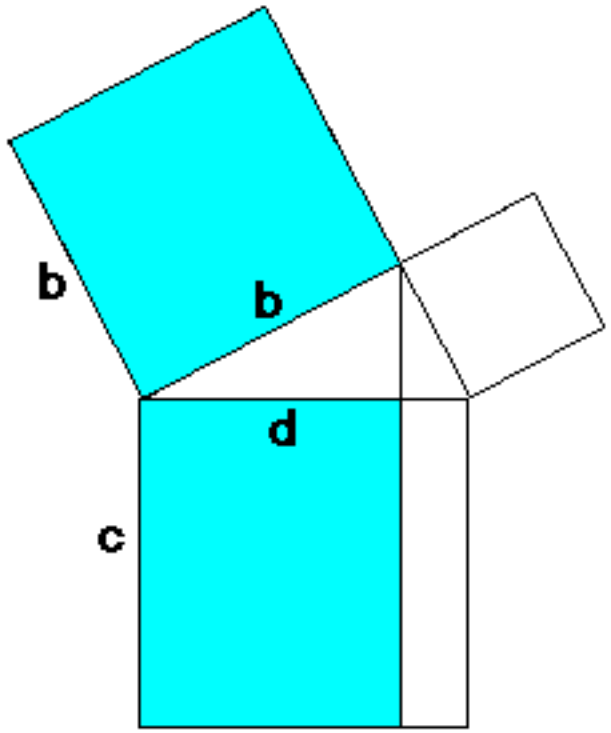


$$\text{area}(\triangle DAB) = \frac{1}{2} b^2$$



Similarly,

$\text{area}(\triangle CAJ) = \frac{1}{2}cd$

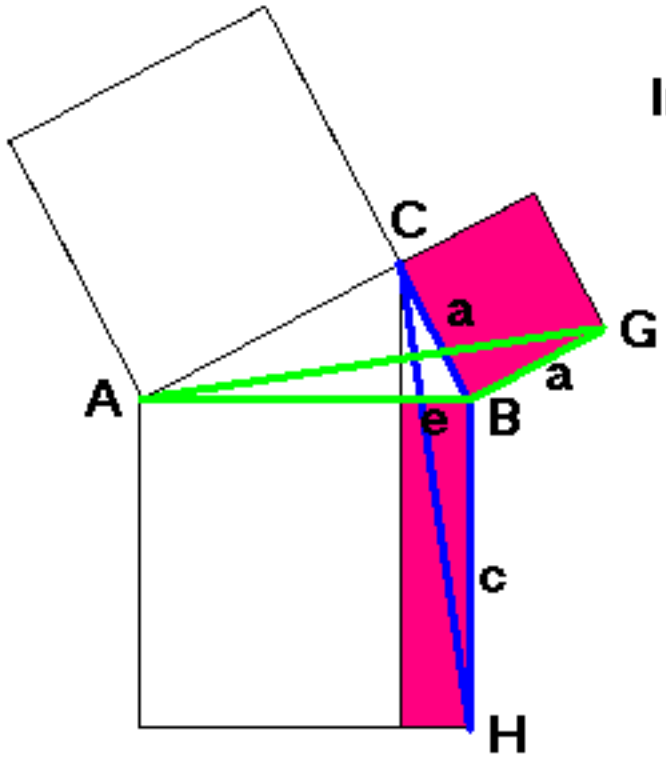


$\text{area}(\triangle DAB) = \frac{1}{2} b^2$

Similarly,

$\text{area}(\triangle CAJ) = \frac{1}{2} cd$

$\therefore\ b^2 = cd$

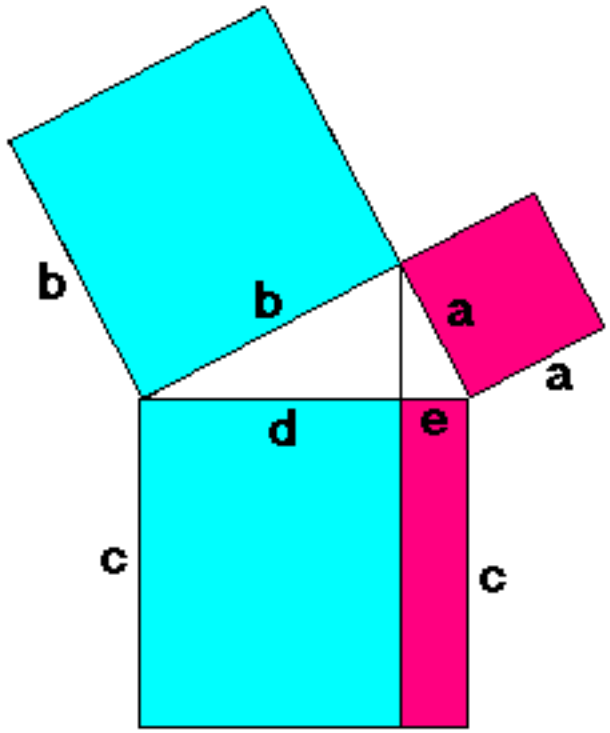


In the same way,

a^2 = 2 area($\triangle$GAB)

= 2 area($\triangle$CHB)

= ce



Therefore:

$$b^2 + a^2 = cd + ce$$
$$= c(d+e)$$
$$= c^2$$

QED!