



$$ABH \sim ABC$$

$$AB/AC = AH/BA = HB/BC$$

$$a/c = a_c/a = h/b$$

$$BHC \sim ABC$$

$$BC/AC = BH/BA = HC/BC$$

$$b/c = h/a = b_c/b$$

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

$$a/c = a_c/a$$

$$a^2 = a_c \cdot c$$

$$b/c = b_c/b$$

$$b^2 = b_c \cdot c$$

$$a^2 + b^2 = c(a_c + b_c) = c^2$$

