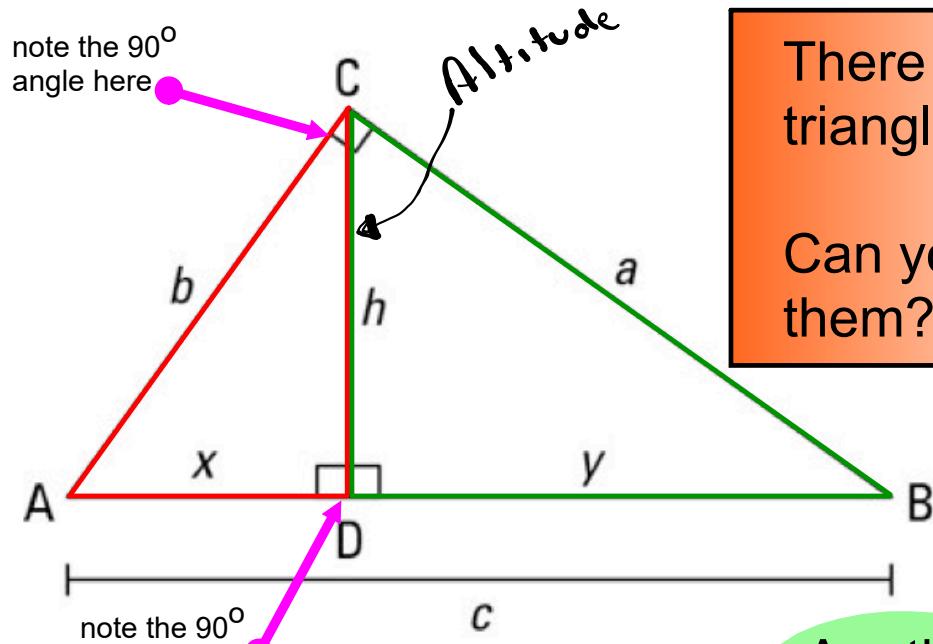
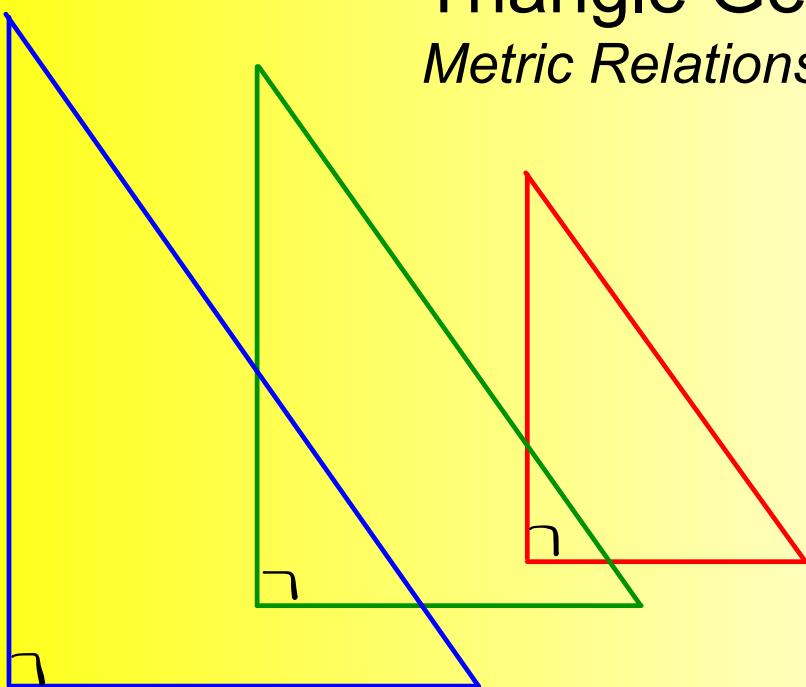


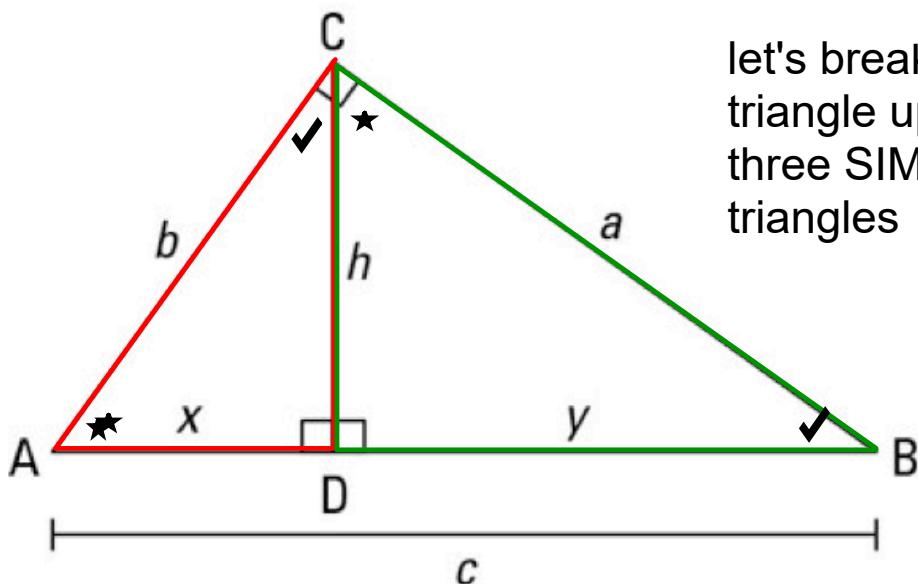
Triangle Geometry

Metric Relations

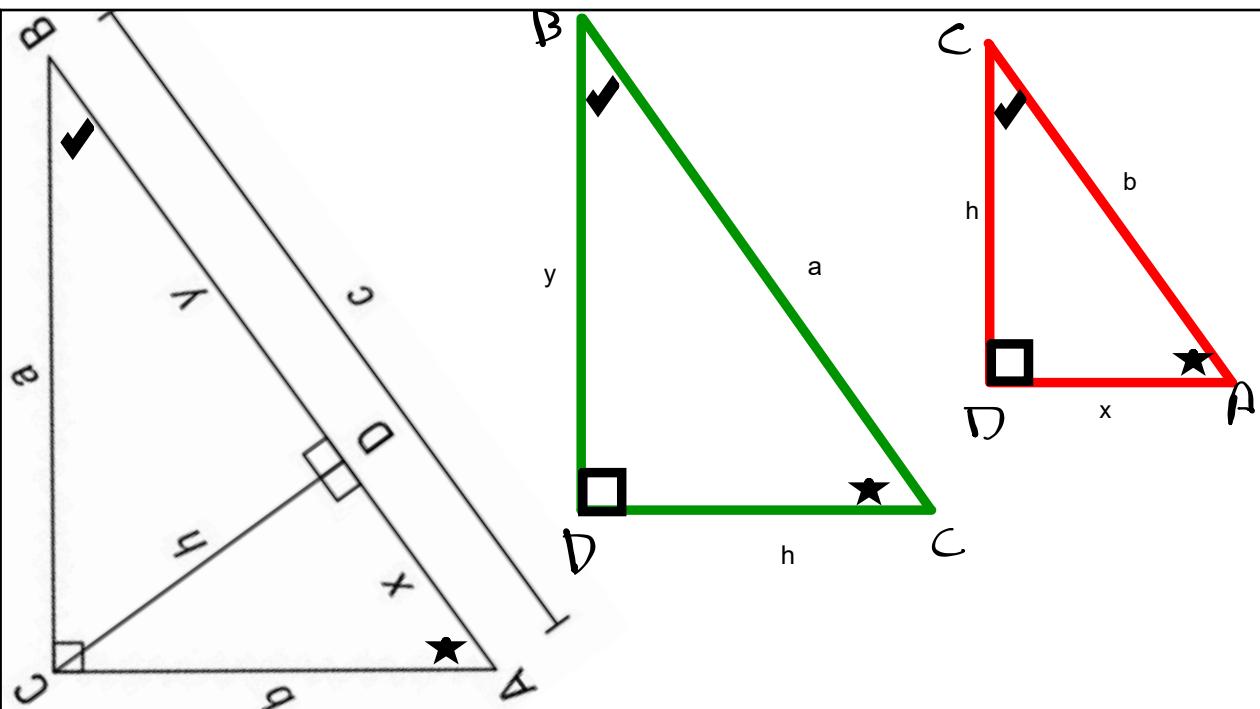
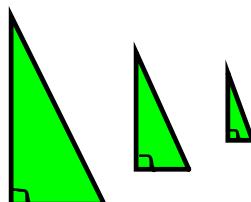


There are 3 triangles here.
Can you name them?

Are they similar?



Be sure to ORIENT them in the same way...like this



$$\Delta ABC \sim \Delta BCD$$

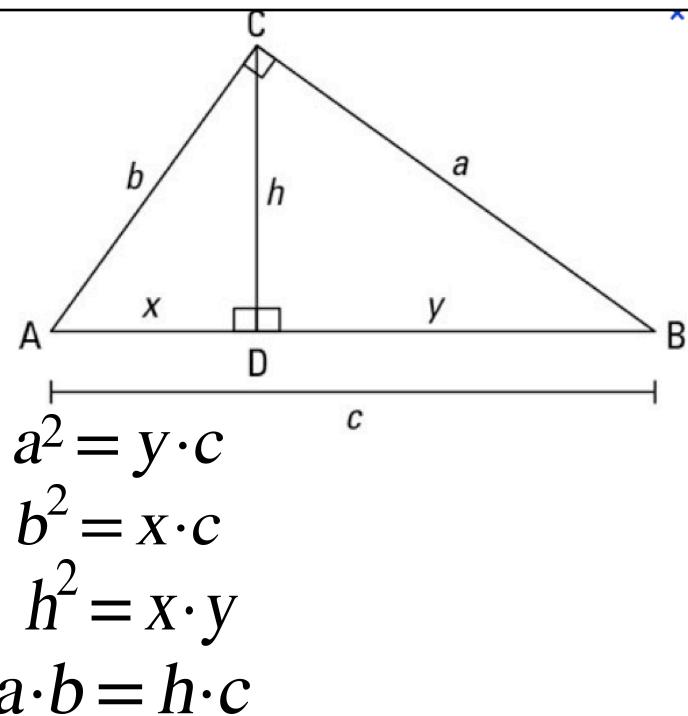
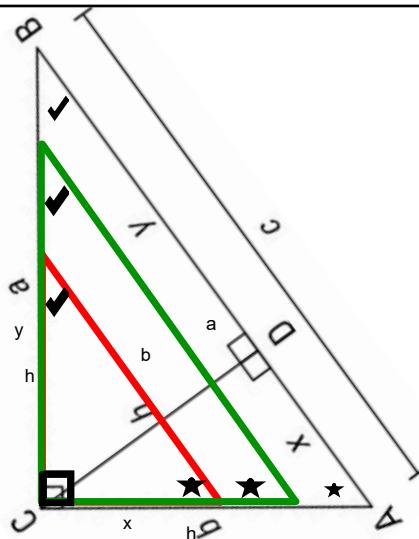
AA

$$\Delta BCD \sim \Delta CAD$$

$$\Delta ABC \sim \Delta CAD$$

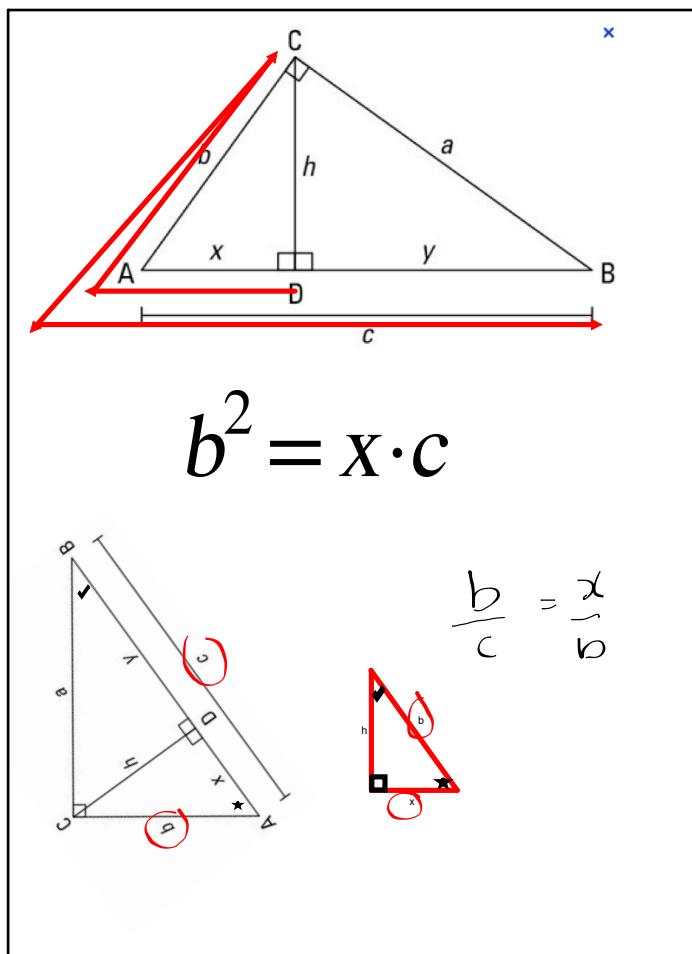
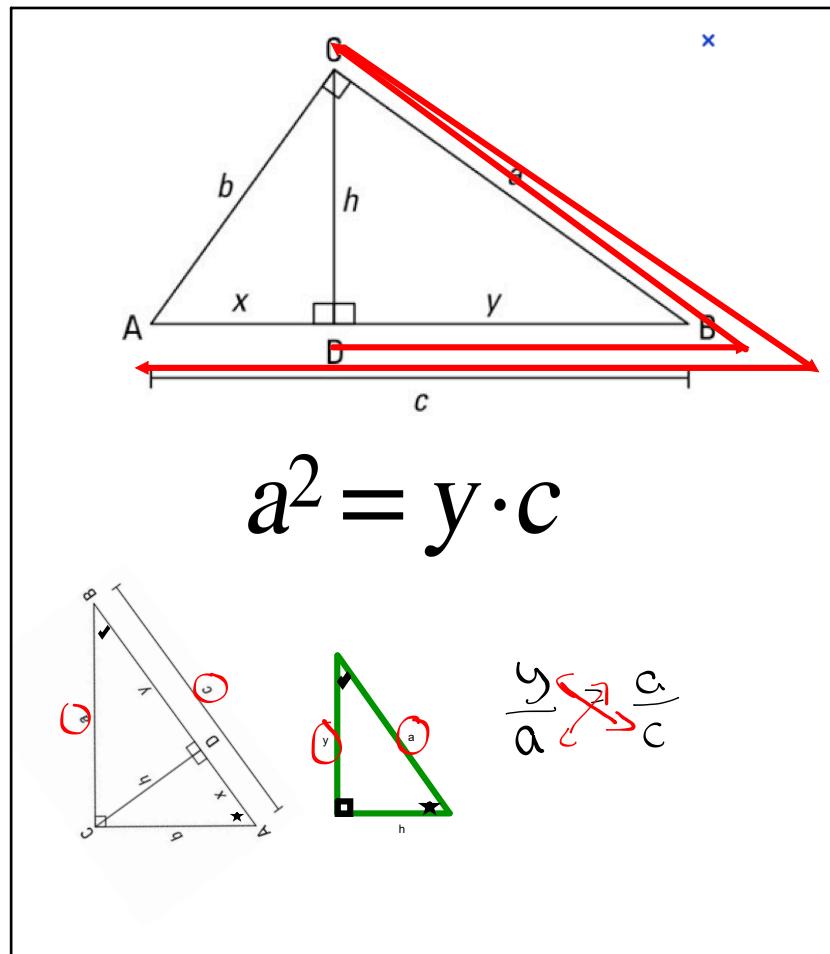
AA

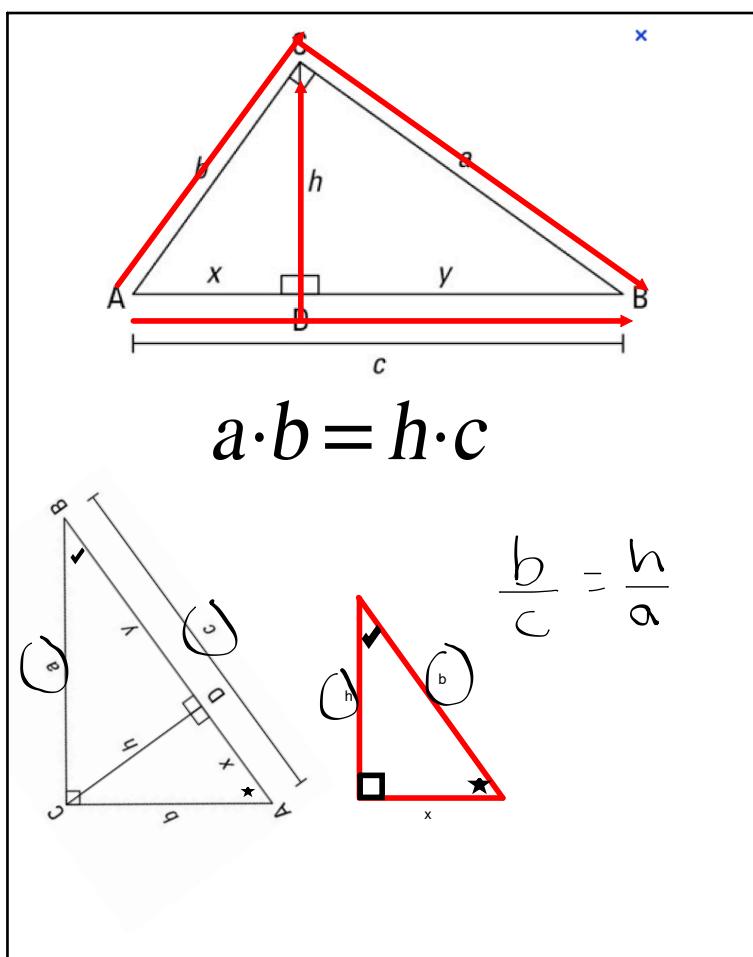
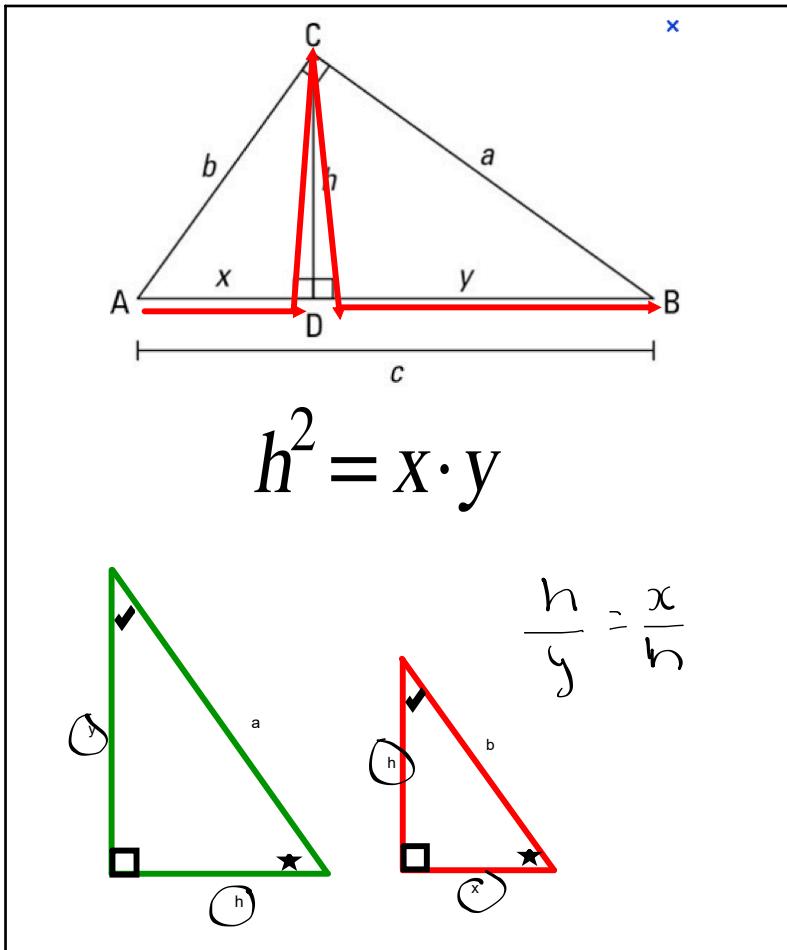
All 3 laying
on top
of each other

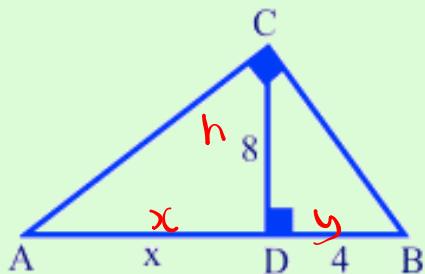


Don't forget Pythagoras!

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





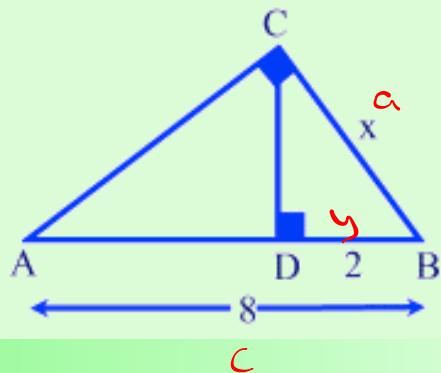
1. Find x :

$$h^2 = xy$$

$$8^2 = 4x$$

$$\frac{64}{4} = \frac{4x}{4}$$

$$16 = x$$

2. Find x :

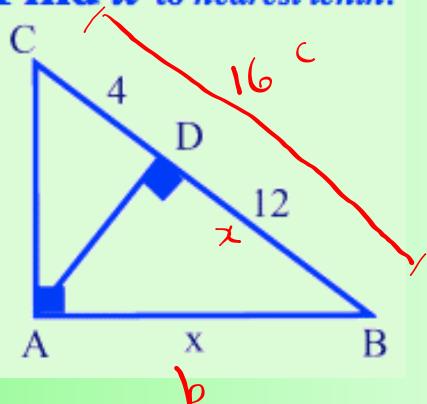
$$a^2 = yc$$

$$x^2 = 2(8)$$

$$\sqrt{x^2} = \sqrt{16}$$

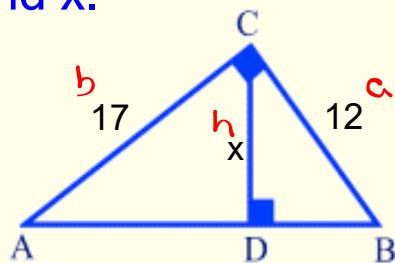
$$x = 4$$

3. Find x to nearest tenth:



$$\begin{aligned}b^2 &= xc \\x^2 &= 12(16) \\ \sqrt{x^2} &= \sqrt{192} \\ x &= 13.09\end{aligned}$$

4. Find x .



$$ab = hc$$

① \overline{AB} :

Textbook Homework:
~~#1~~ Page 182-183 #1-6