Def. Geometric Mean

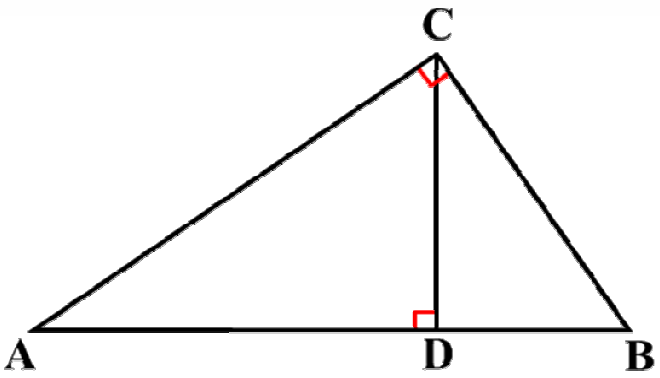
A proportion where the 2 mean #s are equal to each other.

$$\frac{a}{x} = \frac{x}{c}$$

Find the geometric mean between each pair of numbers.

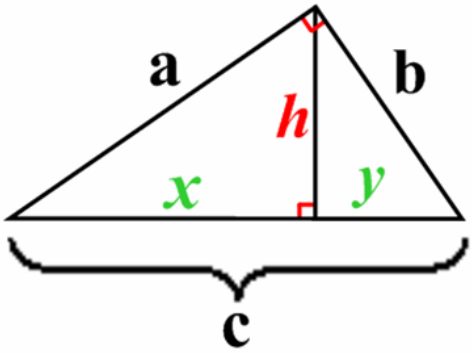
1. 9 and 4 **2.** 36 and 49 **3.** 6 and 8 **4.** $2\sqrt{2}$ and $3\sqrt{2}$

If the altitude is drawn from the vertex of the rt. ∠ of a rt. Δ to its hypotenuse, then the 2 Δ's are ~ to the original Δ and to each other.



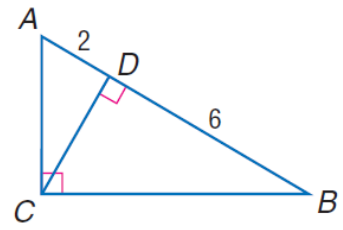
If a rt. Δ has an altitude drawn to the hypotenuse, the following proportion is always true.

$$\frac{x}{h} = \frac{h}{y}$$

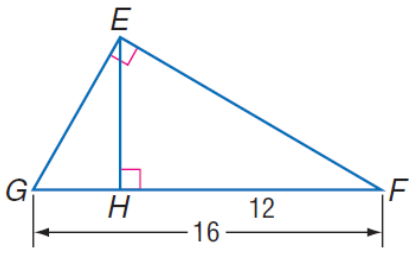


Find the measure of the altitude drawn to the hypotenuse.

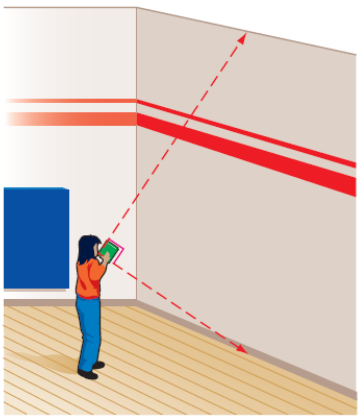
5.



6.



7. DANCES Danielle is making a banner for the dance committee. The banner is to be as high as the wall of the gymnasium. To find the height of the wall, Danielle held a book up to her eyes so that the top and bottom of the wall were in line with the bottom edge and binding of the cover. If Danielle's eye level is 5 feet off the ground and she is standing 12 feet from the wall, how high is the wall?

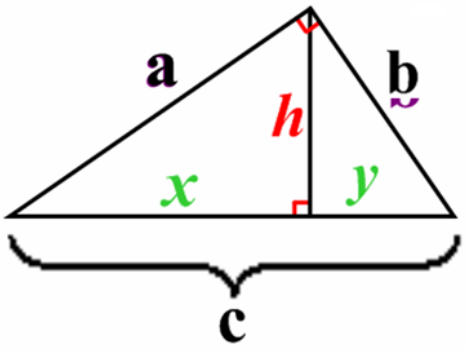


If a rt. Δ has an altitude drawn to the hypotenuse, the following proportions are always true.

$$\frac{c}{a} = \frac{a}{x}$$

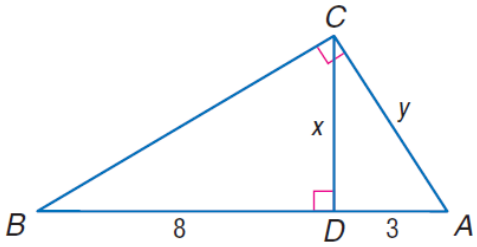
or

$$\frac{c}{b} = \frac{b}{y}$$



Find x and y.

8.



9.