

Geometric Mean: If

$\frac{a}{x} = \frac{x}{b}$, then x is the

geometric mean between

a and b .

In a right triangle, an altitude drawn to the hypotenuse forms three similar triangles.

$$\frac{x}{h} = \frac{h}{y} \quad \frac{\text{short leg}}{\text{long leg}} = \frac{\text{short leg}}{\text{long leg}}$$

$$\frac{c}{b} = \frac{b}{x} \quad \frac{\text{hypotenuse}}{\text{short leg}} = \frac{\text{hypotenuse}}{\text{short leg}}$$

$$\frac{c}{a} = \frac{a}{y} \quad \frac{\text{hypotenuse}}{\text{long leg}} = \frac{\text{hypotenuse}}{\text{long leg}}$$