

Vocabulary: Similarity in Right Triangles



Vocabulary

- **Geometric mean** – the positive number x such that $\frac{a}{x} = \frac{x}{b}$, where a and b are positive numbers.
 - For example, the geometric mean of 2 and 18 is 6, because $\frac{2}{6} = \frac{6}{18}$.
 - Note that $2 \cdot 3 = 6$, and $6 \cdot 3 = 18$.
 - Also note that the *arithmetic mean* of 2 and 18 is 10, since $\frac{2+18}{2} = 10$.
 - The two x 's are called the *means* of the proportion $\frac{a}{x} = \frac{x}{b}$, and a and b are called the *extremes*.
- **Similar** – having the same shape, but not necessarily the same size.
 - The symbol \sim means “is similar to.”
 - Two polygons are similar when all corresponding angles are congruent.
 - For example, in the figure to the right, $\triangle ABC \sim \triangle EFG$.

