

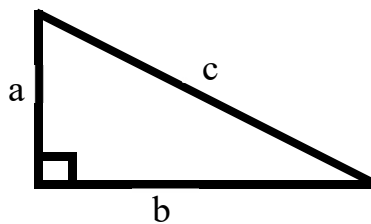
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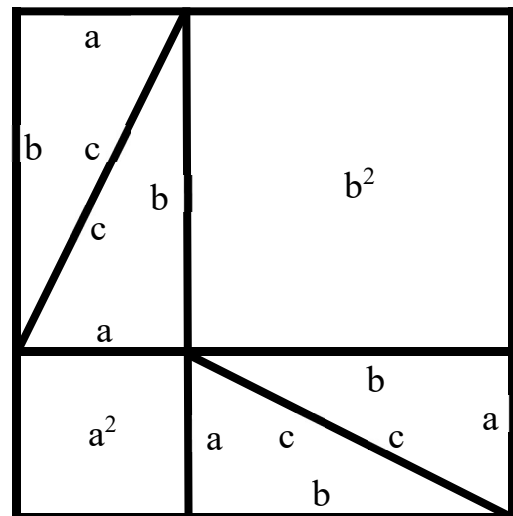
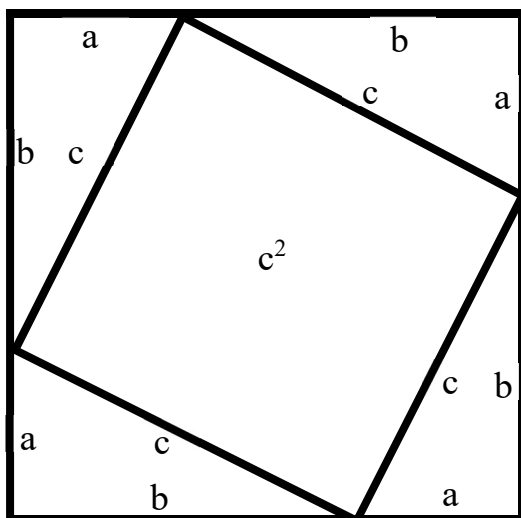
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Pythagoras's Theorem

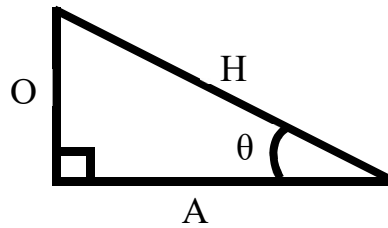


$$a^2 + b^2 = c^2$$

Proof



Basics of Trigonometry



$$\cos \theta = \frac{\textit{Adjacent}}{\textit{Hypotenuse}} = \frac{A}{H} \quad \longrightarrow \quad A = H \times \cos \theta$$

$$\sin \theta = \frac{\textit{Opposite}}{\textit{Hypotenuse}} = \frac{O}{H} \quad \longrightarrow \quad O = H \times \sin \theta$$

$$\tan \theta = \frac{\textit{Opposite}}{\textit{Adjacent}} = \frac{O}{A} = \frac{\sin \theta}{\cos \theta} \quad \longrightarrow \quad O = A \times \tan \theta$$