



Math for the people, by the people.

sohcahtoa

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| Canonical name | Sohcahtoa |
| Date of creation | 2013-03-22 15:59:23 |
| Last modified on | 2013-03-22 15:59:23 |
| Owner | Wkbj79 (1863) |
| Last modified by | Wkbj79 (1863) |
| Numerical id | 13 |
| Author | Wkbj79 (1863) |
| Entry type | Definition |
| Classification | msc 97D40 |
| Classification | msc 51-01 |
| Related topic | Adjacent2 |
| Related topic | Opposite2 |
| Related topic | Hypotenuse |
| Related topic | Trigonometry |

Let θ be an acute angle and fix a right triangle having θ as one of its angles. The trigonometric functions $\sin \theta$, $\cos \theta$, and $\tan \theta$ can be defined as:

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

A mnemonic device for remembering the three given above is *sohcahtoa*.

The *sohcahtoa* can be divided up into three portions of three letters each. The first portion, *soh*, should recall to memory that $\sin \theta$ is opposite over hypotenuse; the second portion, *cah*, should recall to memory that $\cos \theta$ is adjacent over hypotenuse; and the third portion, *toa*, should recall to memory that $\tan \theta$ is opposite over adjacent.

I would like to thank Mrs. Sue Millikin for teaching me trigonometric functions using this mnemonic device.