

# YOUR TRIGONOMETRY QUESTIONS...

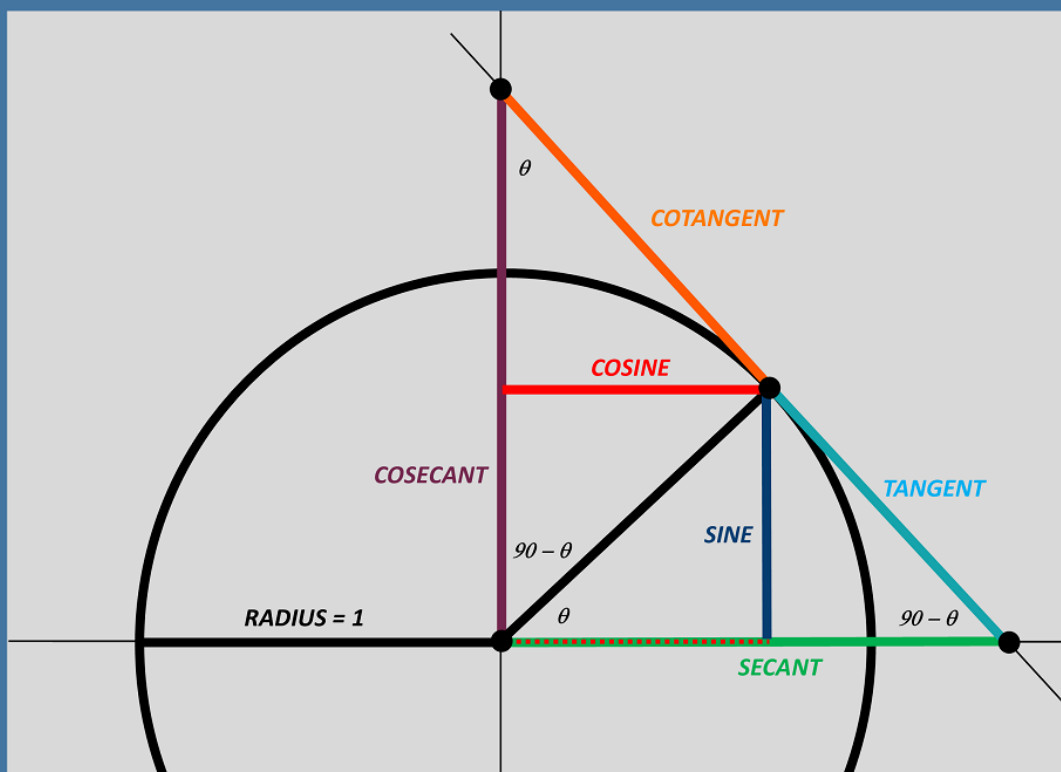
*What is the "sine" of an angle? Why is it "opposite over hypotenuse"? And why is cosine "adjacent over hypotenuse"? And why is the "cosine" named that way? What does the "co" stand for?*

*Why is "sine over cosine" called the "tangent" of the angle? Is this tangent related to tangent lines from geometry? And does the "secant" have anything to do with secant lines? And why are "cotangent" and "cosecant" named that way?*

*When they were first naming these things, why did they define secant as  $1/\cosine$  and cosecant as  $1/sine$  and not the other way around? The way they did it seems harder to memorize. So what were they thinking?*

*And what about the Pythagorean identity? Is there a reason why  $(\sin \theta)^2 + (\cos \theta)^2 = 1$ ? What is "Pythagorean" about this?*

## ANSWERED HERE:



[www.advancedmathyoungstudents.com](http://www.advancedmathyoungstudents.com)