

Re: Sin Cos Tan, why not Sin Sec Tan?

Source: <http://sci.tech-archive.net/Archive/sci.math/2004-07/3881.html>

From: Steffen Buehler (*steffen.buehler_at_mailinator.com*)

Date: 07/15/04

Date: Thu, 15 Jul 2004 08:15:25 +0200

Cassandra Thompson wrote:

- > *I am still trying to understand why we have a tendency (as teachers)*
- > *to present the three as if there were an impenetrable group.*
- > *ie (sin, cos, tan)*
- >
- > *When it appears, at least to me, that we are really trying to teach*
- > *them: (sin and its cofunction, cos) and (tan).*
- >
- > *(Sec, and its cofunction csc) and (cot) get a mention one the student*
- > *fully understands the first three.*

If they are mentioned at all. :-) Who needs them?

- > *[I hope the brackets indicate how my mind groups these functions).*
- >
- > *Would it be just as worthwhile to the student to teach instead.*
- > *(sec and its cofunction csc), and tan???*

I think the reason for (sin/cos) and (tan) is that these are the most often used of the six in applied mathematics. Sin and cos are the daily bread for every graphics programmer, who has to calculate pixel coordinates on a screen. Or when it comes to Fourier analysis or anything else having to do with complex

Tan, on the other hand, is essential for calculating the gradient of a curve (the slope of a hill on the road signs is given in tan as well).

I can't remember anything in applied math requiring sec, csc or cot. Anyone?

Best regards
Steffen