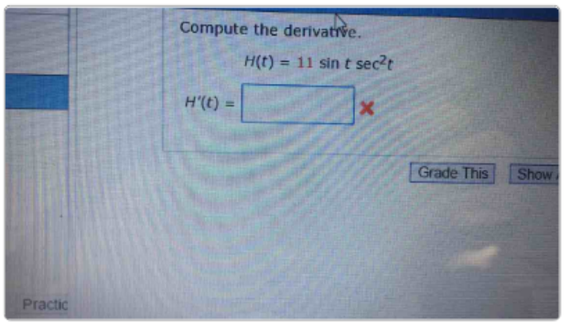


Feb 17th 6:59:24 pm

Hey Chris - welcome back 😀

Feb 17th 6:59:26 pm

TUTOR FOUND, NOW REVIEWING PROBLEM AT NO CHARGE

Feb 17th 6:59:26 pm

You are being connected to a tutor right now!

Feb 17th 6:59:28 pm

Nice

Feb 17th 6:59:34 pm

Did you start on the problem, even just a little?

Feb 17th 6:59:36 pm

SESSION STARTED AT 1:59 PM

Feb 17th 6:59:37 pm

Hello Chris, and welcome to Yup!

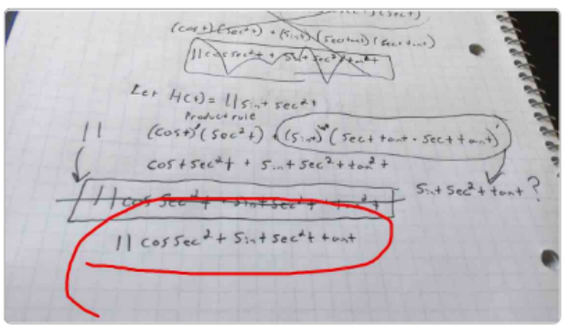
Feb 17th 6:59:42 pm ✓ ***Introduction: Greets student by name and welcomes them to Yup***

Hi! And thank you

Feb 17th 6:59:51 pm

You are welcome! What progress have you made so far on this problem?

Feb 17th 7:00:15 pm ✓ ***A1: Determine progress***



Feb 17th 7:00:41 pm

Thanks for sharing! Give me a minute to check your work. :)

Feb 17th 7:01:06 pm ✓ ***A1: Check student's uploaded work***

Sure no problem

Feb 17th 7:01:18 pm

First off, let's correct some small things.

Feb 17th 7:01:47 pm

✓ ***B1: Redirect student errors***

Okay

Feb 17th 7:01:56 pm

Do you have angles missing here? Notice that cos by itself does not have much mathematical meaning.

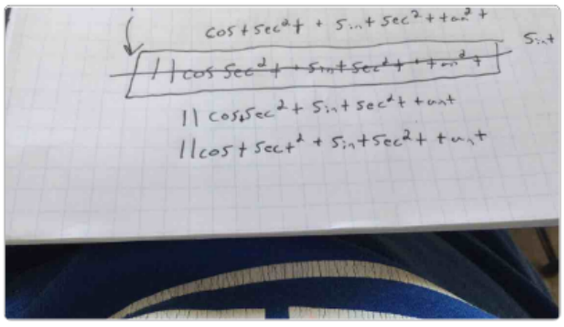
Feb 17th 7:02:01 pm

Yes there should have been a t

Feb 17th 7:02:21 pm

Let's check for those, and send the correction. :)

Feb 17th 7:02:31 pm



Feb 17th 7:03:15 pm

okay :)

Feb 17th 7:03:20 pm

Now let me take another careful look!

Feb 17th 7:03:34 pm ✓ ***A1: Check student's uploaded work***

Ok. It seems you have attempted the product rule. Is that correct?

Feb 17th 7:03:59 pm

yes that is correct

Feb 17th 7:04:09 pm

The first little error has to do with the 11. Notice 11 is only part of one of your 2 terms in the derivative. Should this be the case?

Feb 17th 7:04:23 pm ✓ ***B1/C2: Acknowledge student's mistake without causing stress***

Well I thought I could pull the 11 out since it was a constant

Feb 17th 7:04:46 pm

And plug it back in front later

Feb 17th 7:04:53 pm

Remember, that 11 can be pulled out of the entire derivative calculation because of our constant multiple rule.

Feb 17th 7:04:58 pm

Exactly! But it is pulled out of the entire calculation. You have involved it in only half of the calculation (1 of the two terms).

Feb 17th 7:05:21 pm ✓ ***B2: Guides student towards understanding their mistake***

Oh okay I see what you're saying

Feb 17th 7:05:46 pm

Can you see this error?

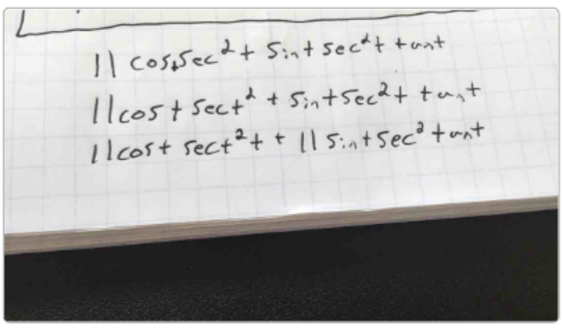
Feb 17th 7:05:49 pm

Great!

Feb 17th 7:05:50 pm

Let's make that small correction. :)

Feb 17th 7:05:55 pm ✓ ***C2: Reassuring language***



Feb 17th 7:06:21 pm

Much better! You could have just used brackets instead, but either way, nice job! There is one more mistake though. Give me one moment to explain.

Feb 17th 7:06:54 pm ✓ ***C2: Positive language*** / ✓ ***B2: Tutor builds on student's input***

The first step is now perfect!

Feb 17th 7:06:58 pm ✓ ***C2: Encouraging language***

When working on the second term of the product rule, you went into the chain rule. Is that correct?

Feb 17th 7:07:11 pm ✓ ***C1: Asks student to clarify their thought process***

No I didn't use chain rule. I know the derivative of secx is secxtanx so

Feb 17th 7:07:50 pm

To calculate the derivative of g(x) in the formula I simply multiplied those terms

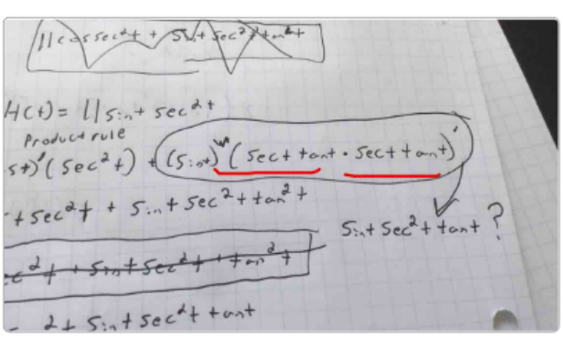
Feb 17th 7:08:11 pm

Hopefully that makes sense

Feb 17th 7:08:23 pm

This is absolutely true! And we will use this! But did you account for the fact that we have sec^2 t instead of just sec t?

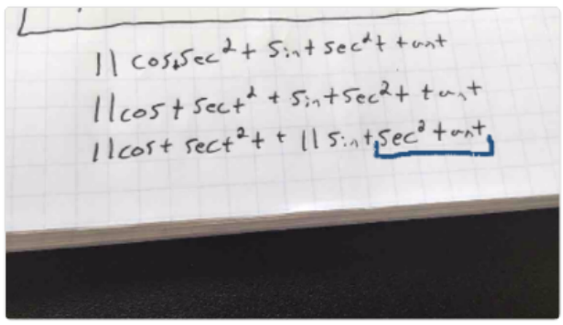
Feb 17th 7:08:28 pm ✓ ***C2: Encouraging language / C1: Scaffolded question***



Feb 17th 7:08:59 pm

Yes?

Feb 17th 7:09:03 pm



Feb 17th 7:09:59 pm

Not quite. Let's go through and fix this together. The term I underlined is what you calculated for the derivative of sec^2 t. Is that correct?

Feb 17th 7:10:14 pm ✓ ***C2: Acknowledge student's mistake without causing stress***

Yes that's correct. (secxtanx)(secxtanx)= that value you underlined

Feb 17th 7:10:49 pm

Well the part in blue is not the same as (secx tanx)(secx tanx). Can you see the difference?

Feb 17th 7:11:32 pm ✓ ***C1: Adapts explanation to student's confusion***

Should there be a ^2 above the tangent?

Feb 17th 7:12:19 pm

Well both are not correct. I just wanted to make sure you also recognize that those two expressions are different.

Feb 17th 7:12:47 pm

oh okay

Feb 17th 7:13:02 pm

no I didn't know

Feb 17th 7:13:06 pm

Let's go through the derivative of f(t) = sec^2 t together.

Feb 17th 7:13:09 pm ✓ ***C2: Use of "we" language***

We will get this together! I promise! :)

Feb 17th 7:13:20 pm ✓ ***C2: Reassure the student***

Okay =]

Feb 17th 7:13:28 pm

We have a square of a function. Are you familiar in general with how to calculate the derivative of a square of a function?

Feb 17th 7:13:41 pm ✓ ***C3: Encourages student to share existing knowledge***

(think of our chain rule)

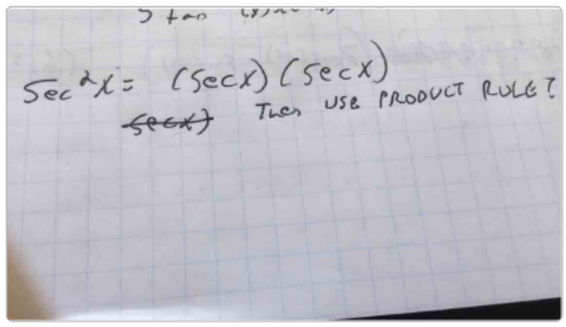
Feb 17th 7:13:52 pm

ahhh

Feb 17th 7:14:03 pm

Did you figure something out?

Feb 17th 7:14:10 pm



Feb 17th 7:14:43 pm

Ohhh nevermind now I remember

Feb 17th 7:15:00 pm

That is another way to do this problem that will completely avoid the chain rule. :)

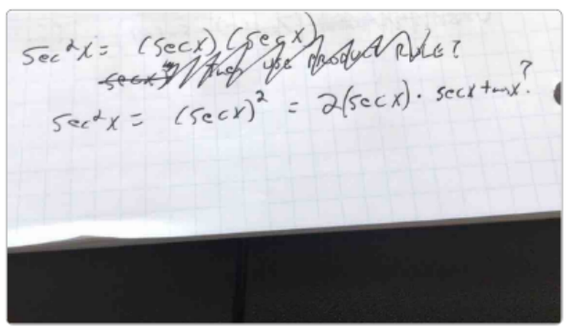
Feb 17th 7:15:08 pm ✓ ***B2: Tutor builds on student's thoughts***

But it is certainly usable!

Feb 17th 7:15:17 pm

We can do both methods if you like!

Feb 17th 7:15:21 pm ✓ ***C1: Adapt to student preferences***



Feb 17th 7:15:54 pm

Amazing! Seems you used the chain rule after all!

Feb 17th 7:16:21 pm

✓ ***C2: Motivates student with encouraging language***

Great stuff!!!

Feb 17th 7:16:24 pm

Want to tell me the final derivative now?

Feb 17th 7:16:30 pm ✓ ***C3: Encourage student to take the next step***

Let me see

Feb 17th 7:16:44 pm

Take your time!

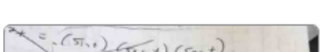
Feb 17th 7:16:49 pm ✓ ***C2: Reassuring language***

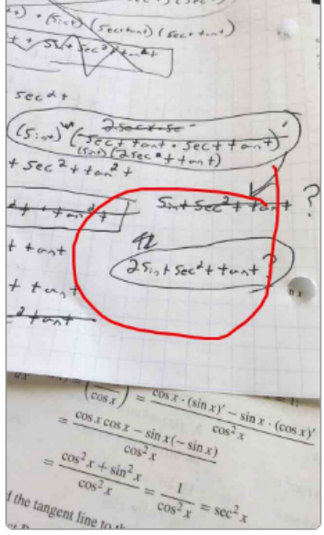
One moment pls

Feb 17th 7:16:50 pm

Course. :)

Feb 17th 7:16:54 pm





Feb 17th 7:19:40 pm

For second half of derivative

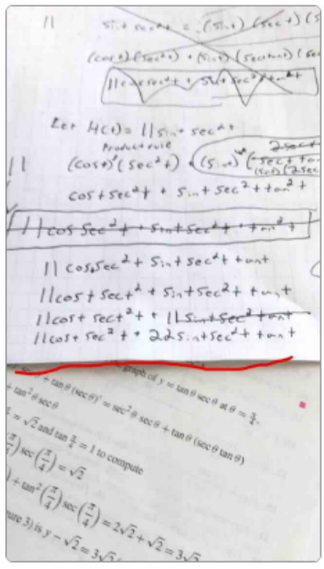
Feb 17th 7:20:04 pm

Yes! That is part of our answer. :)

Feb 17th 7:20:10 pm

Did you want to confirm you have the entire derivative correct?

Feb 17th 7:20:21 pm



Feb 17th 7:20:52 pm

Looks absolutely perfect!

Feb 17th 7:21:32 pm ✓ ***C2: Positive language***

Thanks for your persistence and participation in solving that!

Feb 17th 7:21:48 pm ✓ ***C2/C3: Praises student's efforts***

Thank you

Feb 17th 7:22:00 pm

Appreciate the help

Feb 17th 7:22:04 pm

Have a good day :)

Feb 17th 7:22:08 pm

Any doubts about anything we did?

Feb 17th 7:22:08 pm ✓ ***C1: Check with the student to ensure understanding***

You are welcome!

Feb 17th 7:22:11 pm

And same to you. :)

Feb 17th 7:22:16 pm

No I'm fine now

Feb 17th 7:22:20 pm

Good to hear!

Feb 17th 7:22:24 pm

Come back anytime that changes for some more help at Yup! :)

Feb 17th 7:22:32 pm ✓ ***Conclusion: Invites student back, warm send off***

Student ended session

Feb 17th 7:22:23 pm