

Jan 2nd 6:27:29 pm

Welcome Clancy, I'm finding you a tutor ASAP.

Jan 2nd 6:27:32 pm

The tutor will look over your problem quickly and then you can get going. 🚀

Jan 2nd 6:27:34 pm

Got it!

Jan 2nd 6:27:35 pm

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

Jan 2nd 6:27:38 pm

If so, take a 📷 of your work so I can send it to the tutor. There's no such thing as sending too little work 😊

Jan 2nd 6:27:41 pm

Naw

Jan 2nd 6:27:44 pm

No worries 😊 your tutor can help you from the beginning!

Jan 2nd 6:27:46 pm

Jan 2nd 6:27:47 pm

Sounds good 🙌

Jan 2nd 6:27:49 pm

Want the most out of Yup? Here's a tip! 📌

Jan 2nd 6:27:52 pm

All Yup tutors are real people, so please treat them with respect. ❤️

Jan 2nd 6:27:55 pm

Cool, how about another?

Jan 2nd 6:27:59 pm

Sure!

Jan 2nd 6:28:02 pm

SESSION STARTED AT 10:28 AM

Jan 2nd 6:28:05 pm

Hi Clancy. Welcome back to Yup. :)

Jan 2nd 6:28:11 pm ✓ *Introduction: Greets student by name and welcomes them to Yup*

Hi!

Jan 2nd 6:28:19 pm

With which problem do you want help with?

Jan 2nd 6:28:23 pm

Both if possible haha

Jan 2nd 6:28:34 pm

Yes, sure. :) Let's start with the first one.

Jan 2nd 6:28:51 pm

How much progress have you made so far? Or are you unsure of how to start?

Jan 2nd 6:28:55 pm ✓ *A1: Determine progress*

Perfect!

I'm unsure of how to start. I think once I get the ball rolling I'll remember how to do it. But I can't remember for the life of me!

Jan 2nd 6:29:25 pm

Oh that's okay. Let's get the ball rolling then. We are given the functions  $f(x)$  and  $g(x)$  and we need to  $f(x) / g(x)$ . What do you think  $f(x) / g(x)$  means?

Jan 2nd 6:30:37 pm ✓ *A1: Probe the student's understanding of concepts*

Maybe  $f(x)$  over  $g(x)$ ? Like division or a fraction form

Jan 2nd 6:31:12 pm

Exactly! That's correct! We simply need to divide the functions.

Jan 2nd 6:31:49 pm ✓ **B2: Clarifies step further**

Awesome!

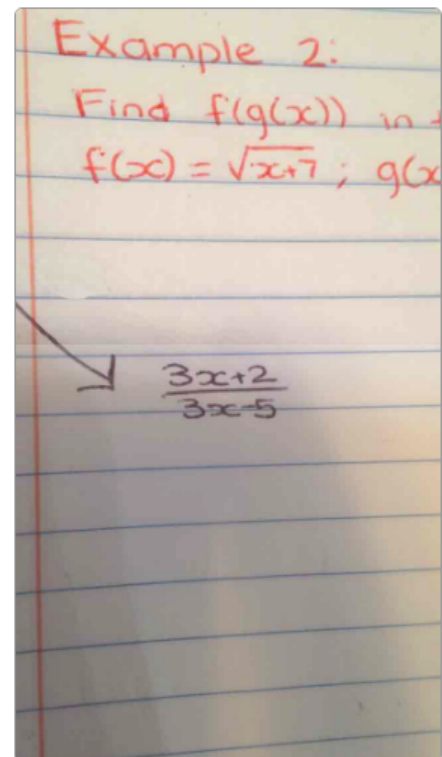
Jan 2nd 6:31:56 pm

So, what do you think  $f(x)/g(x)$  would be?

Jan 2nd 6:32:06 pm ✓ **C3: Invite student to proceed with step**

Hmmm

Jan 2nd 6:32:38 pm



Jan 2nd 6:33:07 pm

That's correct! Nice work :)

Jan 2nd 6:33:19 pm ✓ **C2: Encouraging language**

Oh cool. Easier than I thought!

Jan 2nd 6:33:45 pm

Very well then. :) Let's move to the next problem.

Jan 2nd 6:34:08 pm

Great

Jan 2nd 6:34:15 pm

What do you think  $f(g(x))$  means?

Jan 2nd 6:34:22 pm ✓ **A1: Probe the student's understanding of concepts**

I'm not too sure but maybe something to do with multiplying with foil?

Jan 2nd 6:35:13 pm

Hmm, that's a good thought but that isn't really needed here.

Jan 2nd 6:36:01 pm ✓ **C2: Acknowledge student's mistake without causing stress**

A for effort 😊

Jan 2nd 6:36:14 pm

Agreed! :) Let's consider an example to understand what  $f(g(x))$  means.

Jan 2nd 6:36:57 pm ✓ **C1: Adapt instruction to student gap**

Sounds good

Jan 2nd 6:37:08 pm

✓ **B2: Demonstrate concept using similar example**

Let's say we have a function  $f(x) = x + 4$ .

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Now, if we wanted to have  $f(a)$  for the same function, we would replace the  $x$ 's by  $a$ 's and get  $f(a) = a + 4$ , right?

Jan 2nd 6:38:04 pm

Yes sir

Jan 2nd 6:38:23 pm

Great! In the same way, if we were given another function  $g(x) = x^2$  and we want to find  $f(g(x))$  we would repeat the same thing as we did for  $f(a)$ .

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But instead of replacing all the  $x$ 's with  $a$ 's we will replace all the  $x$ 's in  $f(x)$  with the  $g(x)$ .

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Since,  $f(x) = x + 4$  and  $g(x) = x^2$ , the  $f(g(x))$  would be  $g(x) + 4$  or  $x^2 + 4$ .

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Please give me a moment to upload an image for your better understanding.

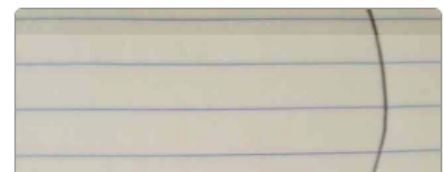
Jan 2nd 6:41:50 pm

No worries :)

Jan 2nd 6:41:59 pm

So I just tried to apply that to my problem. Not sure if it's right or not..

Jan 2nd 6:42:27 pm



$$f(8x-11) = \sqrt{x+7}$$

Jan 2nd 6:42:32 pm

You are close! Note that we have to replace ALL the x's with g(x), that includes the x on the right side too.

Jan 2nd 6:43:26 pm ✓ **C1: Tutor redirects student's mistake without causing stress**

Ohhh

Jan 2nd 6:43:37 pm

$$g(x) = 8x - 11$$
$$f(8x-11) = \sqrt{x+7}$$
$$f(8x-11) = \sqrt{(8x-11)+7}$$

Jan 2nd 6:44:11 pm

Nice work, you got it!

Jan 2nd 6:44:29 pm ✓ **C2: Positive language**

Oh sweet !

Jan 2nd 6:44:37 pm

Keep in mind that on the left side we could simply write  $f(g(x))$  instead of  $f(8x-11)$ , however both mean the same thing.

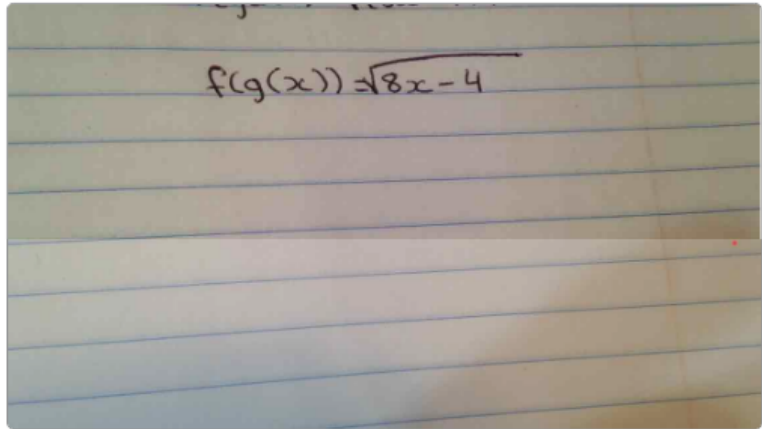
Jan 2nd 6:45:15 pm ✓ **B2: Clarifies step further**

Okay, will fix that up :)

Jan 2nd 6:45:31 pm

Great! So, what do you think would be the final answer?

Jan 2nd 6:45:49 pm ✓ **C3: Invite student to proceed independently**



A photograph of a piece of lined paper with the handwritten equation  $f(g(x)) = \sqrt{8x-4}$  written in black ink. The paper is slightly tilted and shows some texture and lighting variations.

Jan 2nd 6:47:07 pm

Maybe

Jan 2nd 6:47:08 pm

Awesome job :)

Jan 2nd 6:47:40 pm ✓ **C2: Encouraging words / punctuation**

Cool! Thanks for your help!

Jan 2nd 6:47:57 pm

You are welcome! Is there anything else that I can help you with?

Jan 2nd 6:48:05 pm ✓ **Tutor checks to see if the student needs further help**

I think that's it! Thank you very much for your time! Happy new year :)

Jan 2nd 6:48:29 pm

Happy new year to you too. :)

Jan 2nd 6:48:44 pm ✓ **Conclusion: Warm send off**

Thanks for using Yup! Have a good one. :)

Jan 2nd 6:48:49 pm ✓ **Conclusion: Tutor thanks student for using Yup**

You too!

Jan 2nd 6:49:58 pm

Student ended session

Jan 2nd 6:50:00 pm