

Jan 24th 4:51:07 pm

Hey Makayla S - welcome back 😊

Jan 24th 4:51:10 pm

You are being connected to a tutor right now!

Jan 24th 4:51:12 pm

Yuppppppp 🙌

Jan 24th 4:51:16 pm

Have you started on the problem at all?

Jan 24th 4:51:19 pm

📹 your work and share with your tutor. There's no such thing as sharing too little work 😊

Jan 24th 4:51:21 pm

Naw

Jan 24th 4:51:24 pm

TUTOR FOUND, NOW REVIEWING PROBLEM AT NO CHARGE

Jan 24th 4:51:26 pm

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

Jan 24th 4:51:27 pm

Got it!

Jan 24th 4:51:30 pm

Well.... while we wait, here's a tip to make your Yup experience even better 🏆

Jan 24th 4:51:33 pm

Yup believes teaching you how to solve problems is better than giving you answers. ¹⁰⁰

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Cool, how about another?

Jan 24th 4:51:42 pm

Sure!

Jan 24th 4:51:45 pm

Let the tutor know whenever something does not make sense. They are there to help you! ✨

Jan 24th 4:51:48 pm

SESSION STARTED AT 10:51 AM

Jan 24th 4:51:49 pm

Hi mAKAYLA s! I'll be your tutor for this session.

Jan 24th 4:52:02 pm

Hey!

Jan 24th 4:52:12 pm

How are you doing today?

Jan 24th 4:52:19 pm

Good

Jan 24th 4:52:25 pm

Can you tell me how far you have gotten on this problem?

Jan 24th 4:52:36 pm

I havent started

Jan 24th 4:52:52 pm

No worries, we'll tackle it together.

Jan 24th 4:53:17 pm

Okay

Jan 24th 4:53:26 pm

How do i know the domain of a function?

Jan 24th 4:53:47 pm

And range

Jan 24th 4:53:50 pm

We are asked if the function $f(x)=-x^4$ is even or odd?

Jan 24th 4:53:52 pm

Its even

Jan 24th 4:54:10 pm

Very good!

Jan 24th 4:54:22 pm

Let's work on domain and range.

Jan 24th 4:54:39 pm

Okay

Jan 24th 4:54:51 pm

What do you remember about the domain of a function?

Jan 24th 4:55:00 pm

I dont really know anything

Jan 24th 4:55:13 pm

The domain is the set of all possible x-values which will make the function "work", and will output real y-values.

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When finding the domain, remember:

Jan 24th 4:56:16 pm

1. The denominator (bottom) of a fraction cannot be zero.

Jan 24th 4:56:28 pm

2. The number under a square root sign must be positive in this section.

Jan 24th 4:56:41 pm

Do we have any bottom term in our function?

Jan 24th 4:57:04 pm

No

Jan 24th 4:57:11 pm

Good!

Jan 24th 4:57:16 pm

So would it just be 1

Jan 24th 4:57:29 pm

Is there any square root function in our problem?

Jan 24th 4:57:31 pm

Not quite, may I know how you got 1?

Jan 24th 4:57:48 pm

I dont know lol and yes?

Jan 24th 4:58:13 pm

Do we have square root function in our problem $f(x)=-x^4$?

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No

Jan 24th 4:58:57 pm

That is correct!

Jan 24th 4:59:04 pm

So this function does not have any restrictions on taking the values of x .

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Whatever the value of x we take, we get a real value for y .

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So what can we tell about the domain?

Jan 24th 5:00:30 pm

Im confused

Jan 24th 5:01:04 pm

Let me share an example. Is that fine with you?

Jan 24th 5:01:39 pm

Yes

Jan 24th 5:01:51 pm

Example

$$f(x) = \frac{x^3}{x+1}$$

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Do you see the image shared?

Jan 24th 5:02:16 pm

Us

Jan 24th 5:02:32 pm

Yes

Jan 24th 5:02:34 pm

Do we have any bottom term here?

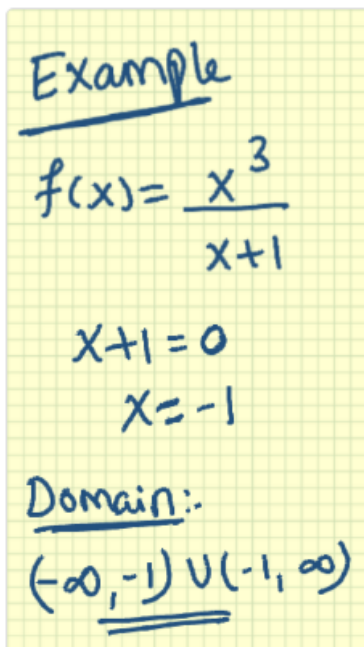
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Yes

Jan 24th 5:02:47 pm

So we just equate the bottom term to 0 and solve for x.

Jan 24th 5:03:19 pm



Example

$$f(x) = \frac{x^3}{x+1}$$
$$x+1=0$$
$$x=-1$$

Domain:

$$(-\infty, -1) \cup (-1, \infty)$$

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When we equate the denominator to 0, we get $x=-1$.

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So for $x=-1$, the denominator becomes 0 right?

Jan 24th 5:04:10 pm

Yes

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Is it possible to divide a number by 0?

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So we exclude $x=-1$ from the domain.

Jan 24th 5:05:08 pm

It means that, this function can take any value of x in the universe except $x=-1$

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For example, if you take $x=0$, we get $f(x)=0$.

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If you take $x=1$, $f(x)=1/2$.

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Student ended session

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