

Student: Shauntrell

Date: June 12th, 2017

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	Homework: Section 2.7	1
	Score: 0 of 1 pt	
	2.1.43	
(Given the function $f(x) = (x-2)^2$, $x \le 2$,	
	(a) Find $f^{-1}(x)$. (b) Graph f and f^{-1} in the same rectangular coordinate system. (c) Use interval notation to give the domain and the range of f and f^{-1}	
	(a) Find f ⁻¹ (x). Be sure to include any domain restrictions.	J
	$T^{-1}(\mathbf{x}) = \mathbf{x} \ge \mathbf{x}$	
L		
Ľ.	Enteryour answer in the edit fields and then click Check Answer	
	3 remaining	
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Jun 12th 7:10:12 pm Hello Jun 12th 7:10:43 pm

Hi Shauntrell, welcome to Yup! I'll be helping you out.

Jun 12th 7:10:49 pm

Thank you Jun 12th 7:10:55 pm

How are you doing today?

Jun 12th 7:10:59 pm

Good

Jun 12th 7:11:03 pm

Great!

Jun 12th 7:11:11 pm

Hmm.

Jun 12th 7:11:17 pm

Thank you for sharing your question. Can you please give me a moment to go over the problem?

Jun 12th 7:11:21 pm

Sure.

Jun 12th 7:11:29 pm

I've reviewed your problem. Let's work together to figure out exactly where you're stuck.

Jun 12th 7:12:09 pm

Κ

Jun 12th 7:12:15 pm

What have you tried on this problem so far?

Jun 12th 7:12:20 pm

Trying tp find the f part forst

Jun 12th 7:12:52 pm

Do you mean f^(-1)(x)?

Jun 12th 7:13:17 pm

Yes

Jun 12th 7:13:24 pm

I belive the answwr os 55 Jun 12th 7:13:35 pm

I replace f(x) = 2(x+6)

Jun 12th 7:17:07 pm

Jun 12th 7:17:47 pm

Ok

Ok.

Jun 12th 7:13:45 pm

Can you please show me your work?

Jun 12th 7:14:00 pm

I losy my papet tryong to look for it Jun 12th 7:15:07 pm

Ok, no problem.

Jun 12th 7:15:32 pm

Can you explain how you find the answer?

Jun 12th 7:15:52 pm

Not quite! But good guess.

Jun 12th 7:17:41 pm

Remember : The given function is $f(x) = (x-2)^2$.

Jun 12th 7:18:10 pm

Yws Jun 12th 7:18:17 pm

And we are supposed to find the inverse of this function.

Jun 12th 7:18:40 pm

I am not sure Jun 12th 7:19:13 pm

Can you tell me what would be our first step in finding the inverse?

Jun 12th 7:19:18 pm

Ypu re rewrite the function

Jun 12th 7:19:45 pm

Ok.

Jun 12th 7:20:10 pm

The first step is to replace f(x) with y in the given equation.

Jun 12th 7:20:38 pm

Yes

Jun 12th 7:20:49 pm

Can you tell me how our equation will look like after this step?

Jun 12th 7:21:01 pm

Y=(y-2)2

Jun 12th 7:21:58 pm

The two is squared

Jun 12th 7:22:14 pm

Almost there!

Jun 12th 7:22:18 pm

:)

Jun 12th 7:22:43 pm

We have to just replace f(x) by y and not x by y.

Jun 12th 7:22:47 pm

So, our equation will be $y = (x - 2)^2$.

Jun 12th 7:23:08 pm

Does that make sense?

Jun 12th 7:23:14 pm

Ok y=(x-2)2 Jun 12th 7:23:23 pm Right

Jun 12th 7:23:26 pm

Exactly! It's $y = (x-2)^2$.

Jun 12th 7:23:40 pm

Now, what do you think would be our next step?

Jun 12th 7:23:55 pm

Yup Jun 12th 7:23:59 pm To solve for y Jun 12th 7:24:06 pm

It's already solved for y.

So that is the answe for f-1 right

Jun 12th 7:24:58 pm

The next step would be to interchange x and y in the equation.

Jun 12th 7:25:02 pm

Ok

Jun 12th 7:25:11 pm

We have to follow some steps to find the inverse.

Jun 12th 7:25:30 pm

F^-1(y)

Jun 12th 7:25:33 pm

Right

Ok

Jun 12th 7:25:40 pm

We have to interchange x and y in the equation $y = (x - 2)^2$.

Jun 12th 7:26:05 pm

Does that make sense?

Jun 12th 7:26:12 pm

We are in the process of finding the answer.

Jun 12th 7:26:41 pm

(y-2)^2 Jun 12th 7:26:56 pm

Jun 12th 7:27:17 pm

Jun 12th 7:26:17 pm

Jun 12th 7:26:28 pm

So that is the answer

Do you mean $x = (y - 2)^2?$

Jun 12th 7:27:07 pm

Excellent!

Jun 12th 7:27:21 pm

Cool Jun 12th 7:27:27 pm

Yea

Now, what do you think would be our next step?

Jun 12th 7:27:37 pm

I dont know

Jun 12th 7:28:32 pm

Now, we have to just solve the above equation for y.

Jun 12th 7:28:48 pm

Can you tell me what would we get after solving the above equation for y?

Jun 12th 7:29:03 pm

We have to separate it

Jun 12th 7:29:18 pm

Please share an image of what you did for me to make sure that we are on the right track.

Jun 12th 7:29:44 pm

4

Jun 12th 7:30:00 pm

4u

Jun 12th 7:30:07 pm

4y

Jun 12th 7:30:11 pm

Can you explain how you find that answer?

Jun 12th 7:30:29 pm

Pemdas method from left to right

Jun 12th 7:30:49 pm

Not quite! But good guess.

Jun 12th 7:31:04 pm

Student Ended Session

Jun 12th 7:31:49 pm