

MA 109: August 25

Function Notation – Tables, Graphs, and Algebra Outside

Start of Class

Instructor Information

Name:

Email:

Office Hours:

Warm-up Questions

Notes

Example: Suppose $h(x)$ is given in the table to the right. What is $h(2)$?

inputs	outputs
x	$h(x)$
-1	-1
0	3
2	5
3	7

Strategy: find 2 in the input column, then the answer is the number in the output column

answer: 5

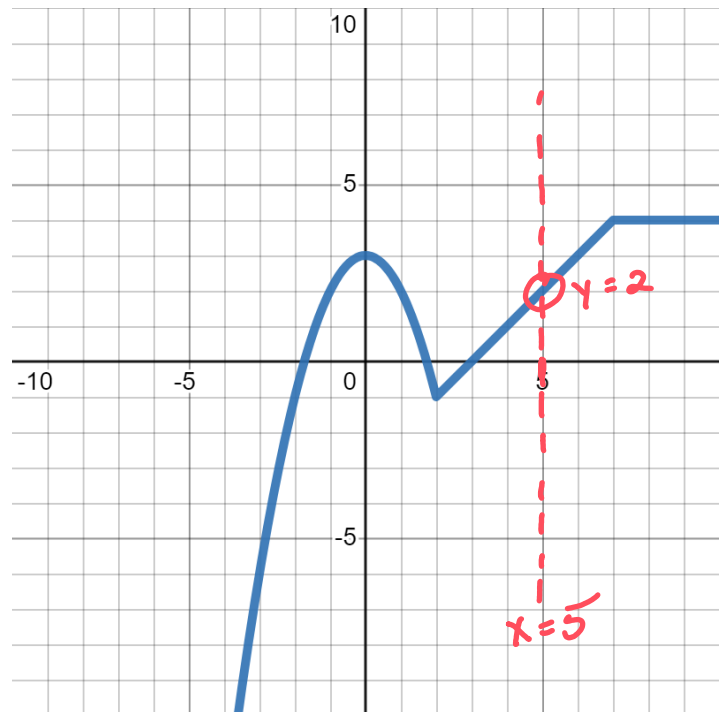
Example: Suppose $f(x)$ is given in the graph to the right. What is $f(5)$?

For graphs.

x : input

y : output

Strategy: go along the x -axis where $x = 5$, then look up/down to find the y -value on the graph



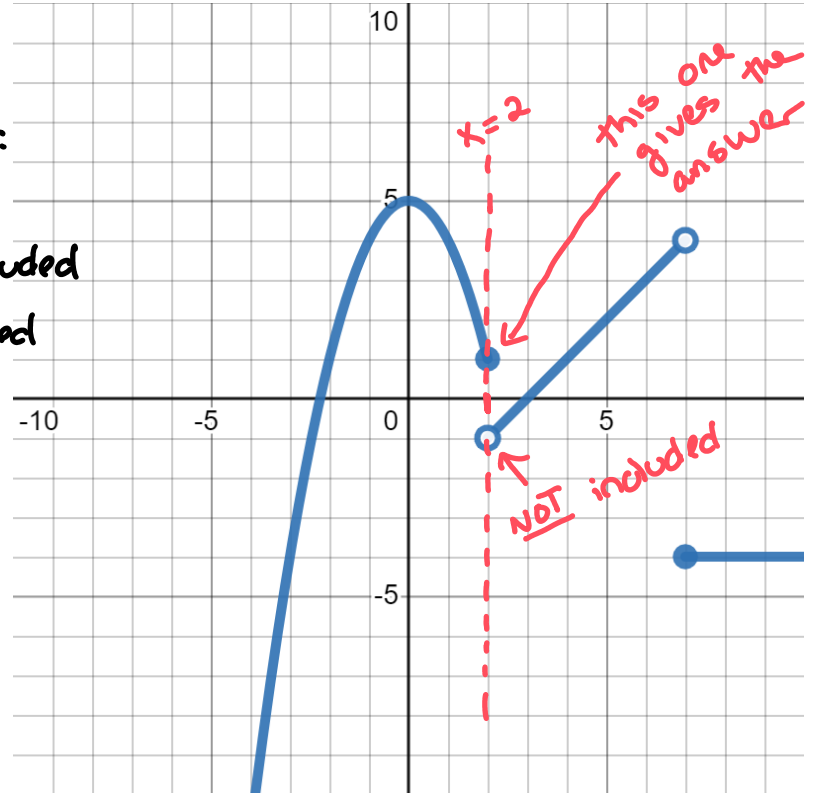
answer: 2

Example: Suppose $f(x)$ is given in the graph to the right. What is $f(2)$? *2 is the input*

Same strategy, but
with an added step:

○ : "open" dot : NOT included

● : "closed" dot : IS included



Answer: 1

Example: Suppose $f(x) = x^2 + 1$ and $g(x) = 3x - 2$. Evaluate $2f(-1) + g(3)$.

Functions are a special kind of group, so we evaluate those first.

Step 1: $\rightarrow f(-1) = (-1)^2 + 1 = 1 + 1 = 2$
 $\rightarrow g(3) = 3(3) - 2 = 9 - 2 = 7$

Step 2: $2f(-1) + g(3)$
 $2(2) + (7)$

$4 + 7$

answer: 11

Example: Suppose $f(x) = x^2 + 5x - 1$

Question 1: Evaluate $f(a) + 7$	Question 2: Evaluate $f(a + 7)$
<p>a is the input, add 7 after plug in a</p>	<p>$(a+7)$ all together is the input</p>

End of Class

Write a summary of what you learned today:

What questions do you have about the material from today?

What do you need to do between now and the next class meeting?