1 Evaluating Functions

In this activity we practice evaluating functions at numbers and other functions.

Theorem 1 (Hello)

solution Obvious![1] ■

Exercise 1 Given that $f(x) = -5x^4 + 2x^3 + x^2 - 3x + 2$, evaluate $f(3.9)$.[2]
Solution
Hint: $f(3.9) = -5(3.9)^4 + 2(3.9)^3 + (3.9)^2 - 3(3.9) + 2$.
Hint: $f(3.9) = -1032.57$.
The value of the function $f(x) = -5x^4 + 2x^3 + x^2 - 3x + 2$, evaluated at $x = 3.9$, is -1032.57.

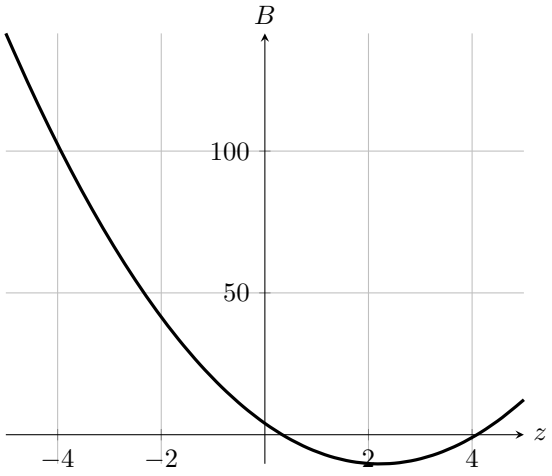
Question 2

(a) Hello! ✓

(b) NO!

Solution
Hint: *Hello is always right!*

Question 3 In the plot below, is B a function of z?



[1] Link: `http:lkjflkdjf`
[2] Video link: `hello`

(a) Yes. ✓

(b) No.

Solution

Hint: *For each input, how many outputs are there?*

Use the plot to compute $B(0)$

Solution

Hint: *To start, find* 0 *on the horizontal axis.*

Hint: *Now from this position, move up or down until you reach the curve. The value of* $B(0)$ *is the height of the curve at the point* $z = 0$.

The value of $B(0)$ is 4.

Is B^{-1} a function of z on the domain $[-10, 141]$?

(a) Yes.

(b) No. ✓

Solution

Hint: *For each input of* B^{-1}, *how many outputs are there?*

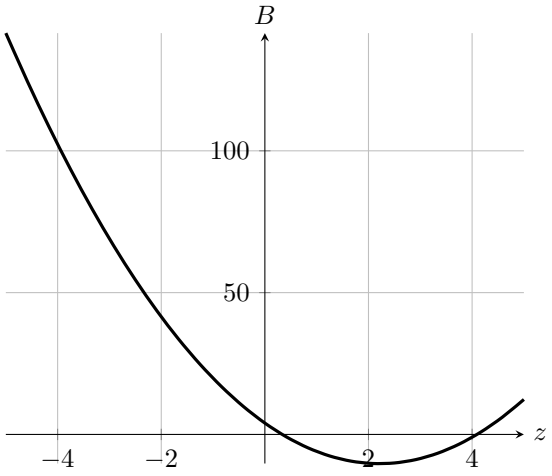
Restrict the domain of B to $[3, 5]$ and compute $B^{-1}(4)$.

Solution

Hint: *Since we are looking at* B^{-1}, *now we must find* -1 *on the vertical axis.*

The value of $B^{-1}(-1)$ is 4.

Question 4 In the plot below, is B a function of z?



(a) Yes. ✓

(b) No.

Solution

Hint: *For each input, how many outputs are there?*

Use the plot to compute $B(0)$

Solution

Hint: *To start, find* 0 *on the horizontal axis.*

Hint: *Now from this position, move up or down until you reach the curve. The value of* $B(0)$ *is the height of the curve at the point* $z = 0$.

The value of $B(0)$ is 4.

Is B^{-1} a function of z on the domain $[-10, 141]$?

(a) Yes.

(b) No. ✓

Solution

Hint: *For each input of* B^{-1}, *how many outputs are there?*

Restrict the domain of B to $[3, 5]$ and compute $B^{-1}(4)$.

Solution

Hint: *Since we are looking at* B^{-1}, *now we must find* -1 *on the vertical axis.*

The value of $B^{-1}(-1)$ is 4.