

Formal Definition of a function 3.1 Mod 5 lesson 2

Warm up: As a question about input and output.

Imagine you are running a race at a very constant speed and obviously that speed is fast. You can think of your race as a function of distance traveled over time. You travel 2 meters every second.

Think of a function as an input output machine. This machine has an input and an output. In this case the input of the machine is the time running and the output of the machine is the distance traveled.

(Draw the machine on the board)
Create an input and output table.

Also make it on a coordinate plane.

If the race is 18 meters long. What constraints are on the function?

It cannot go below a time of zero because the race didn't start before zero. It can also go past 9 because the time cannot go beyond the distance of the race.

Let's call this function f . So we can say $f(x) = 2x$

So we can also say statements such as:

f assigns the value of 4 to the value of 8

f assigns the value of 1 to the value of 2

f assigns the value of 3 to the value of 6

And so on, within our constraints.

Do exercise 1 together.

Discuss the constraints of the rock. It can only fall for four seconds.

Each input can only have exactly one output.

Use exercise 1 with a negative 2 and show why it does not work in the constraints.

Homework: Mod 5 lesson 2 exercises 2-5