

Lesson
1.1.1

FUNCTIONS

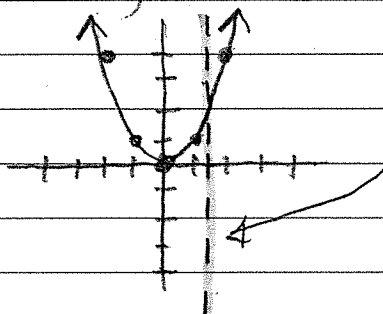
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8/18/16

Definition of a Function; A relationship between inputs and outputs where each input only has one output

Example: Table, Graph (Vertical Line Test) $f(x) = x^2$

x	y
-2	4
-1	1
0	0
1	1
2	4



Vertical Line Test

Definition of Dependent & Independent Variables:

Independent variables are always graphed on the x-axis, Dependent variables are always graphed on the y-axis.

Independent Variable

↳ influences change in the

dependent variable

Ind	Dep
Amt of Gas	How far car goes

Notation f of (x)

$f(x)$ is a notation that indicates a function. It replaces $y =$

Ex. $f(5) = 9$ · $x = 5$

$$f(x) = (x-2)^2$$

$$f(5) = (5-2)^2 = 9$$

QuestionsRevisit

- 1) Can I create a real world example of a function with a dependent and independent variable?
- 2) Can I compare a parabola that is and is not a function?
- 3) Can I construct other ways to represent a function besides an equation and a graph?

Summary Statement/Reflection

Just because you have an equation does not mean that it is a function. An easy way to determine this is to graph the function and see if an x -value has more than 1 y value and fails the vertical line test.