

# Unit: Functions

# 1.1

## Lesson: 1.1

Objective: Differentiate between functions & non-functions.

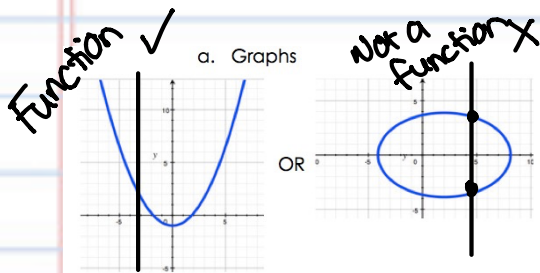
Annotations:

Definitions:

a) **Function**: A relationship where every **input** ( $x$ ) goes to only one **output** ( $y$ )

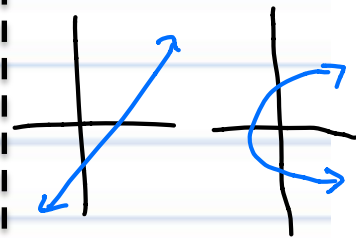
① In your own words, define a function!

Representations of Functions:



b) **Vertical line test**: Visual method for deciding if graphs are functions!

② Try this!



b. Tables

X	Y
1	2
2	4
3	6
4	8
5	10
6	12

Function ✓

X	Y
1	2
2	4
1	5
3	8
4	4
5	10

Not a function ✗

We look to see if the  $x$  values repeat!  
 yes  $\rightarrow$  same #? **Function** ✓  
 No  $\rightarrow$  different #? **Not a function**

③ Summarize this rule!

c. Coordinates  $(x, y)$

$(3, 2)$   $(3, 3)$   $(4, 5)$   $(5, 9)$   $(6, 10)$  **Not a function**

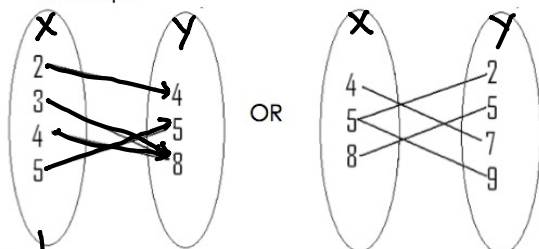
OR

$(3, 6)$   $(5, 8)$   $(7, 10)$   $(9, 12)$   $(11, 14)$  **Function!**

④ Explain why?

This is not a function because....

d. Maps



no repeats  
**Function** 😊

X	Y
4	7
5	2

**Not a function!**

⑤ Explain why #1 is a function!

5 7 2 a  
6 9  
8 | 5