

Functions ☺

Function: a rule for a relationship between an input (x) and an output (y) or $f(x)$

- The set of x -values or inputs of a function are called the domain
- The set of y -values or outputs of a function are called the range

Ex 1 Is age a function of height?

- * We say "the output is a function of the input" *
- cannot be a function, because you can be the same height at many different ages!

Is height a function of age?

- Yes!! This is a function because you can only be one height at each age.

Ex 2 Is the menu price a function of menu item

- Yes, each item has one price

Is menu item a function of menu price?

- No! Many items have the same cost/price

Ex 3 - 5 Determine if the following tables represent functions

x	f(x)
1	5
3	7
5	9
7	11
9	13

Yes!
function

x	f(x)
1	5
2	11
3	15
2	19
1	23

not a
function

x	f(x)
1	8
2	4
3	2
2	4
1	8

Yes
function

x	f(x)
-3	3
-2	3
-1	4
0	4
1	5

Yes!
function

One to one function: each input has one unique output and each output has one unique input!

Ex 7

x	f(x)
5	10
4	10
3	8
2	6
1	4

Yes
function

not a
1 to 1

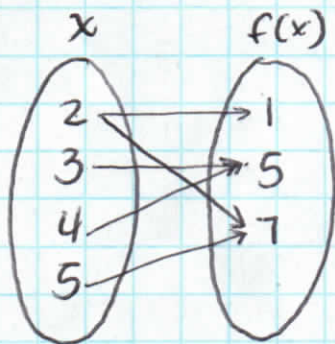
Ex 8

x	f(x)
-1	0
-3	1
-5	3
-7	5
-9	7

Ex 9

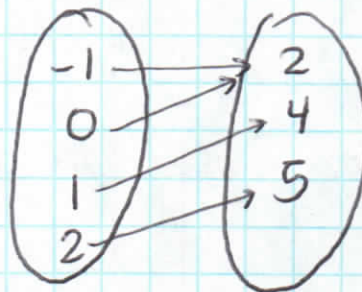
(2, 5), (3, 8), (4, 12), (5, 13) yes! One to one

Ex 10



NOT a Function

Ex 11



Yes function!
not a 1 to 1