Chapter 8 Lesson 1: Function Tables

Function: a relation that assigns exactly one output value to one input value.

- The number of eye blinks (output) depends on the number of seconds (input)

Function Rule: describes the relationship between each input and output.

Function Table: organize the input-output values and the function rule.

Input (x)	X + 3	Output
2	2 + 3	5
3	3 + 3	6

Independent Variable (input): it can be any number you choose.

Dependent Variable (output): value depends on the input value (it is DEPENDENT on the input)

Examples finding the output:

Input (x)	$x+3$	Output (y)
0	0+3	3
2	2+3	5
4	4+3	7

Input (x)	$2x-1$	Output (y)
7	2(7)-1	13
5	2(5)-1	9
4	2(4)-1	7

Find the Input for a function table:

The input and output of a function table can be represented as a set of ordered pairs, or a **relation.** (x, y)

X-values= **input**, **y**-values = **output**

Work backwards to find input:

Input (x)	$x - 3$	Output (y)
10	10-3	7
7	7-3	4
4	4-3	1

$X - 3 = 7$

$+3 = +3$

$X = 10$

$X - 3 = 4$

$+3 \quad +3$

$X = 7$

$X - 3 = 1$

$+3 \quad +3$

$X = 4$

Whitney has a total of 39 cupcakes for her guests. The function rule, $30 \div x$, where x is the number of guest, can be used to find the number of cupcakes per guest. Make a table of values that shows the number of cupcakes each guest will get if there are 6, 10, or 15 guests. Then graph the function.

Number of Guests (x)	$30 \div x$	Cupcakes per Guest (y)
6	$30 \div 6$	5
10	$30 \div 10$	3
15	$30 \div 15$	2