Functions and Function Notation

Function - works well

for every value, there is only one value of y.

input → one output

Name & SS#

Name is a function SS#
for SS#, there is only
one name.

SS# is a function of name
for each name, there is
only one SS#

for each state, name the Senator.

state → 2 senators

not a function

$y = 2x + 4$

for every value of x, there is only one y.

y is a function of x.

$y = f(x)$

$f(x) = 2x + 4$

$y = 2x + 4$

find y when $x = 0$

$f(0) = 2(0) + 4$

$f(0) = 4$

$(0, 4)$

$f(-2) = 2(-2) + 4$

$f(-2) = -4 + 4 = 0$

$(-2, 0)$

$$f(x) = 3x - 5$$

$$f(a) = 3a - 5$$

$$f(-x) = 3(-x) - 5 = -3x - 5$$

$$f(x) = 2x^2 - 3x + 1$$

$$f(-4) = 2(-4)^2 - 3(-4) + 1$$

$$f(-4) = 2(16) + 12 + 1 = 32 + 12 + 1$$

$$= 45$$

$X = 3$

x	y
3	0
3	1
3	2

$(3,0)$

$(3,1)$

$(3,2)$

not a function

$g(a) = a^2 - 4$

$g(-3) = (-3)^2 - 4 = 9 - 4 = 5$