

\*Notes ①

# Function Notation

Equation  $y = 3x + 2$



$$f(x) = 3x + 2$$

read - the "value of  $f$  at  $x$ "

or "f of  $x$ "

Next page : Example

\* you can also use other letters to name the function such as  $g$  or  $h$ .

EX:  $y = 3x + 2$

$$f(x) = 3x + 2$$

$$g(x) = 3x + 2$$

$$h(x) = 3x + 2$$

Example :

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

$$f(-2) = 3(-2) + 2$$

$$= -6 + 2$$

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

$$(-2, -4)$$

Back to 1<sup>st</sup> page

\*Notes ②

## Evaluating a Function

EX: 1  $f(x) = 2x - 3$  when  $x = -2$

$$f(-2) = 2(-2) - 3$$

$$= -4 - 3$$

$$= -7$$

$$f(-2) = -7$$

Pair ordered  $(-2, -7)$

EX: 2  $g(x) = -5x$  when  $x = 0$

$$g(0) = -5(0)$$

$$g(0) = 0$$

$(0, 0)$

$f(x)$  means the **output** of the function,  $f$ , when the **input** is  $x$ . We often refer to this as  $y$ .

$$3x + 4$$

The function

name of the function

$$f(x) =$$

tells what number to plug into the function

$$\textcircled{9.} \quad g(3a) = x^2 + 4$$

$$(3a)^2 + 4$$

$$3a \cdot 3a + 4$$

$$g(3a) = 9a^2 + 4$$

$$(3a, 9a^2 + 4)$$

---

CW: #5, 7, 8, 11