

Name: _____

Date: _____

3.3 Function Notation

Essential Question: _____

The notation $f(x)$, called **function notation**, is another name for y . This notation is read as “the value of f at x ” or “ f of x .” The parentheses do not imply multiplication. You can use letters other than f to name a function. The letters g , h , j , and k are often used to name functions.

A linear function can be written in the form _____. By naming a linear function f , you can also write the function using _____.

$$f(x) = mx + b \quad \text{Function Notation}$$

The notation $f(x)$ is another name for y . If f is a function, and ____ is in its _____, then $f(x)$ represents the output of f corresponding to the _____ x . You can use letters other than f to name a function such as ____ or _____.

EXAMPLE 1 Evaluating a Function

If $f(x) = 3x + 4$, evaluate $f(2)$, $f(7)-9$, and $f(h + 9)$

EXAMPLE 2 Interpreting Function Notation

Let $f(t)$ be the outside temperature ($^{\circ}\text{F}$) t hours after 6 A.M. Explain the meaning of each statement.

a. $f(0) = 58$

b. $f(6) = n$

c. $f(3) < f(9)$

EXAMPLE 3 Solving for the Independent Variable

For $h(x) = \frac{2}{3}x - 5$, find the value of x for which $h(x) = -7$.

EXAMPLE 4 Graphing a Linear Function in Function Notation

Graph $f(x) = 2x + 5$.

