

Bell Work

Using Function Notation to Evaluate and Interpret



You learned that a linear function can be written in the form $y = mx + b$. By naming a linear function f , you can also write the function using **function notation**.

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

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

Evaluate $f(x) = -4x + 7$ when $x = 2$ and
 $x = -2$.

Evaluate $f(x) = 2x + 1$ when $x = -4, 0, \frac{1}{2}$

Evaluate $g(x) = -x - 1$ when $x = -4, 0, \frac{1}{2}$

EXAMPLE 2**Interpreting Function Notation**

Let $f(t)$ be the outside temperature (in degrees Fahrenheit) t hours after 6 A.M.
Explain the meaning of each statement.

a. $f(0) = 58$

b. $f(6) = n$

c. $f(3.5) < f(9)$

Solving for the Independent Variable

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

Solving for the Independent Variable

For $g(x) = \frac{1}{3}x - 2$, find the value of x for which $g(x) = -4$.

Solving for the Independent Variable

For $f(x) = 6x + 9$, find the value of x for which $f(x) = 21$.

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

Graph $f(x) = 3x - 2$.