

## Vocabulary Flash Cards

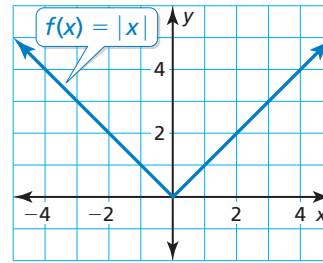
<p><b>absolute value function</b></p> <p><i>Chapter 3 (p. 156)</i></p>	<p><b>constant function</b></p> <p><i>Chapter 3 (p. 138)</i></p>
<p><b>continuous domain</b></p> <p><i>Chapter 3 (p. 114)</i></p>	<p><b>dependent variable</b></p> <p><i>Chapter 3 (p. 107)</i></p>
<p><b>discrete domain</b></p> <p><i>Chapter 3 (p. 114)</i></p>	<p><b>domain</b></p> <p><i>Chapter 3 (p. 106)</i></p>
<p><b>family of functions</b></p> <p><i>Chapter 3 (p. 146)</i></p>	<p><b>function</b></p> <p><i>Chapter 3 (p. 104)</i></p>

# Vocabulary Flash Cards

A linear equation written in the form  $y = 0x + b$ , or  $y = b$

$$y = 0x + 5, \text{ or } y = 5$$

A function that contains an absolute value expression



The variable that represents output values of a function

In the function  $y = 2x - 3$ ,  $y$  is the dependent variable.

A set of input values that consist of all numbers in an interval

All numbers from 1 to 5



The set of all possible input values of a function

For the ordered pairs  $(0, 6)$ ,  $(1, 7)$ ,  $(2, 8)$ , and  $(3, 9)$ , the domain is 0, 1, 2, and 3.

A set of input values that consists of only certain numbers in an interval

Integers from 1 to 5



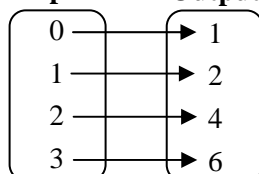
A relation that pairs each input with exactly one output

The ordered pairs  $(0, 1)$ ,  $(1, 2)$ ,  $(2, 4)$ , and  $(3, 6)$  represent a function.

**Ordered Pairs**

- $(0, 1)$
- $(1, 2)$
- $(2, 4)$
- $(3, 6)$

**Input**



**Output**

A group of functions with similar characteristics

Linear functions and absolute value functions are families of functions.

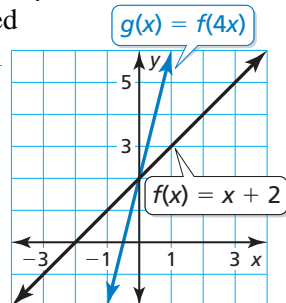
## Vocabulary Flash Cards

<p><b>function notation</b></p> <p><i>Chapter 3 (p. 122)</i></p>	<p><b>horizontal shrink</b></p> <p><i>Chapter 3 (p. 148)</i></p>
<p><b>horizontal stretch</b></p> <p><i>Chapter 3 (p. 148)</i></p>	<p><b>independent variable</b></p> <p><i>Chapter 3 (p. 107)</i></p>
<p><b>linear equation in two variables</b></p> <p><i>Chapter 3 (p. 112)</i></p>	<p><b>linear function</b></p> <p><i>Chapter 3 (p. 112)</i></p>
<p><b>nonlinear function</b></p> <p><i>Chapter 3 (p. 112)</i></p>	<p><b>parent function</b></p> <p><i>Chapter 3 (p. 146)</i></p>

## Vocabulary Flash Cards

A transformation that causes the graph of a function to shrink toward the y-axis when all the x-coordinates are multiplied by a factor  $a$ , where  $a > 1$

The graph of  $g$  is a horizontal shrink of the graph of  $f$  by a factor of  $\frac{1}{4}$ .



Another name for  $y$  denoted as  $f(x)$  and read as “the value of  $f$  at  $x$ ” or “ $f$  of  $x$ ”

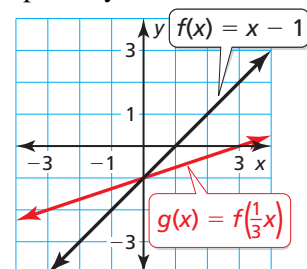
$y = 5x + 2$  can be written in function notation as  $f(x) = 5x + 2$ .

The variable that represents the input values of a function

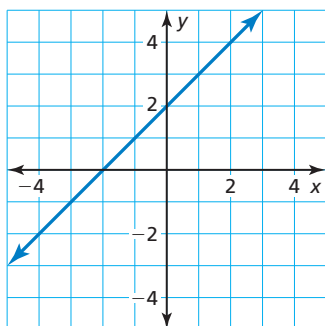
In the function  $y = 5x - 8$ ,  $x$  is the independent variable.

A transformation that causes the graph of a function to stretch away from the y-axis when all the x-coordinates are multiplied by a factor  $a$ , where  $0 < a < 1$

The graph of  $g$  is a horizontal stretch of the graph of  $f$  by a factor of  $1 \div \frac{1}{3} = 3$ .



A function whose graph is a nonvertical line



An equation that can be written in the form  $y = mx + b$ , where  $m$  and  $b$  are constants

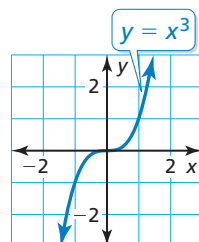
$$y = 4x + 3$$

$$6x + 2y = 0$$

The most basic function in a family of functions

For linear functions, the parent function is  $f(x) = x$ .

A function that does not have a constant rate of change and whose graph is not a line

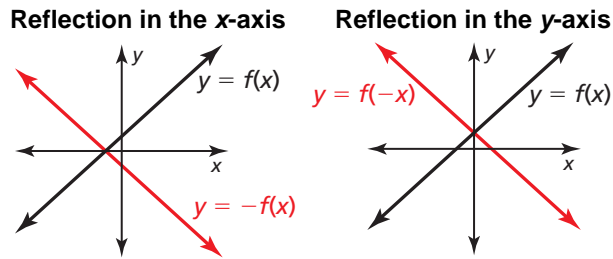


## Vocabulary Flash Cards

<p><b>range of a function</b></p> <p><i>Chapter 3 (p. 106)</i></p>	<p><b>reflection</b></p> <p><i>Chapter 3 (p. 147)</i></p>
<p><b>relation</b></p> <p><i>Chapter 3 (p. 104)</i></p>	<p><b>rise</b></p> <p><i>Chapter 3 (p. 136)</i></p>
<p><b>run</b></p> <p><i>Chapter 3 (p. 136)</i></p>	<p><b>slope</b></p> <p><i>Chapter 3 (p. 136)</i></p>
<p><b>slope-intercept form</b></p> <p><i>Chapter 3 (p. 138)</i></p>	<p><b>solution of a linear equation in two variables</b></p> <p><i>Chapter 3 (p. 114)</i></p>

# Vocabulary Flash Cards

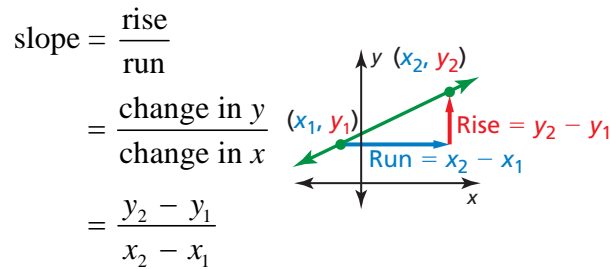
A transformation that flips a graph over a line called the *line of reflection*



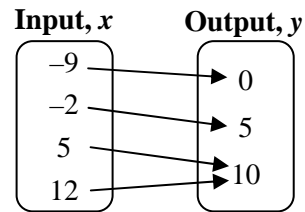
The set of all possible output values of a function

For the ordered pairs (0, 6), (1, 7), (2, 8), and (3, 9), the range is 6, 7, 8, and 9.

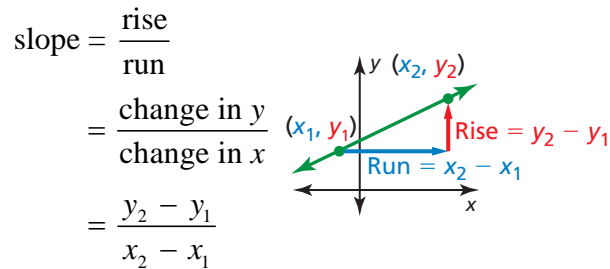
The change in  $y$  between any two points on a line



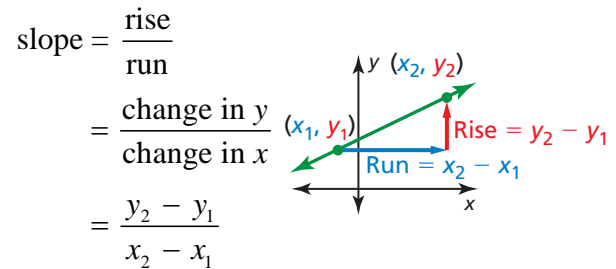
A pairing of inputs with outputs



The rate of change between any two points on a line



The change in  $x$  between any two points on a line

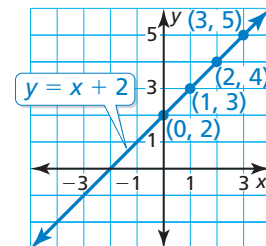


An ordered pair  $(x, y)$  that makes an equation true

A solution of  $x + 2y = -6$  is  $(2, -4)$ .

A linear equation written in the form  $y = mx + b$

The slope is 1 and the  $y$ -intercept is 2.



## Vocabulary Flash Cards

<p><b>standard form of a linear equation</b></p> <p><i>Chapter 3 (p. 130)</i></p>	<p><b>transformation</b></p> <p><i>Chapter 3 (p. 146)</i></p>
<p><b>translation</b></p> <p><i>Chapter 3 (p. 146)</i></p>	<p><b>vertex</b></p> <p><i>Chapter 3 (p. 156)</i></p>
<p><b>vertex form of an absolute value function</b></p> <p><i>Chapter 3 (p. 158)</i></p>	<p><b>vertical shrink</b></p> <p><i>Chapter 3 (p. 148)</i></p>
<p><b>vertical stretch</b></p> <p><i>Chapter 3 (p. 148)</i></p>	<p><b>x-intercept</b></p> <p><i>Chapter 3 (p. 131)</i></p>

## Vocabulary Flash Cards

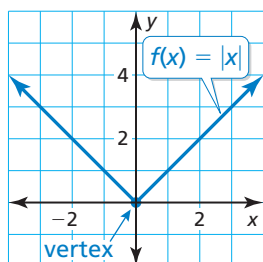
A change in the size, shape, position, or orientation of a graph

See translation, reflection, horizontal shrink, horizontal stretch, vertical shrink, and vertical stretch.

A linear equation written in the form  $Ax + By = C$ , where  $A$ ,  $B$ , and  $C$  are real numbers and  $A$  and  $B$  are not both zero

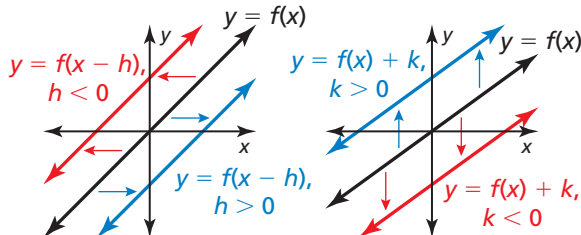
$$-2x + 3y = -6$$

The point where a graph changes direction



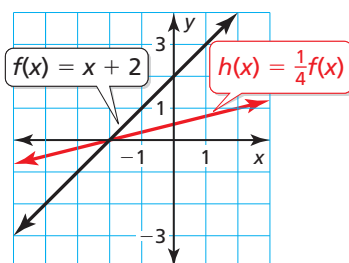
A transformation that shifts a graph horizontally and/or vertically but does not change the size, shape, or orientation of the graph

**Horizontal Translations**      **Vertical Translations**



A transformation that causes the graph of a function to shrink toward the  $x$ -axis when all the  $y$ -coordinates are multiplied by a factor  $a$ , where  $0 < a < 1$

The graph of  $h$  is a vertical shrink of a graph of  $f$  by a factor of  $\frac{1}{4}$ .

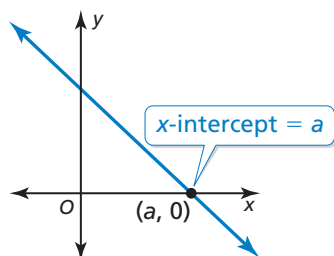


An absolute value function written in the form  $f(x) = a|x - h| + k$ , where  $a \neq 0$

$$f(x) = |x + 1| - 2$$

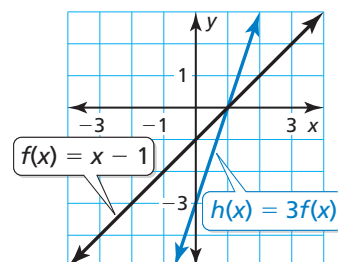
$$g(x) = 2|x - 3| + 1$$

The  $x$ -coordinate of a point where the graph crosses the  $x$ -axis



A transformation that causes the graph of a function to stretch away from the  $x$ -axis when all the  $y$ -coordinates are multiplied by a factor  $a$ , where  $a > 1$

The graph of  $h$  is a vertical stretch of the graph of  $f$  by a factor of 3.





## Vocabulary Flash Cards

**y-intercept**

*Chapter 3 (p. 131)*

## Vocabulary Flash Cards

The  $y$ -coordinate of a point where the graph crosses the  $y$ -axis

