

## Function Tables

AB-WAF 1

**Instructions:** Complete each Function Table by calculating the output 'y' (or f(x)) for each input value 'x'.

1

$$y = 3x$$

Input x	Output y
0	0
1	3
2	6
3	9
4	12

2

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

Input x	Output f(x)
-2	0
-1	1
0	2
1	3
2	4

3

$$y = 2x - 3$$

Input x	Output y
2	1
4	5
6	9
8	13
10	17

4

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

Input x	Output f(x)
-2	-7
-1	-6
0	-5
1	-4
2	-3

5

$$y = \frac{x}{2}$$

Input x	Output y
-10	-5
-4	-2
0	0
4	2
10	5

6

$$f(x) = \frac{x}{2} + 3$$

Input x	Output f(x)
-8	-1
-6	0
-4	1
-2	2
0	3

## Function Tables & Graphs

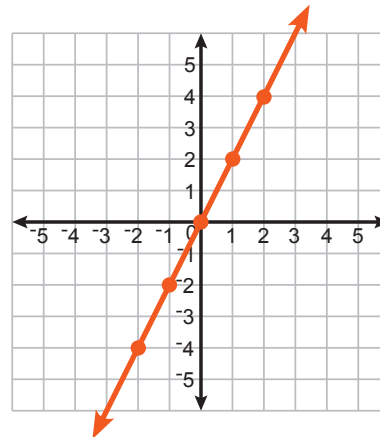
AB-WAF 2

**Instructions:** Complete each Function Table and then graph the function. Remember that each row of the function table forms an ordered pair (x, y).

1

$$y = 2x$$

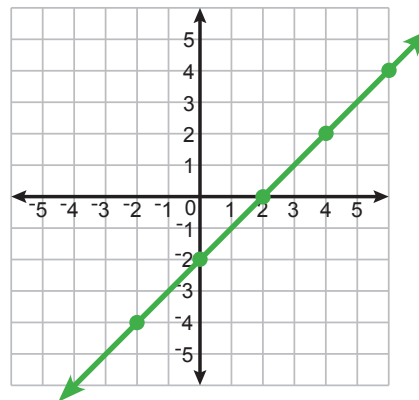
Input x	Output y
-2	-4
-1	-2
0	0
1	2
2	4



2

$$y = x - 2$$

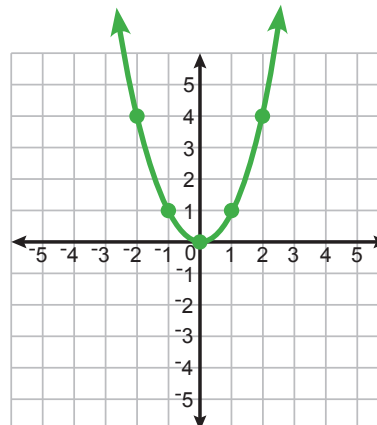
Input x	Output y
-2	-4
0	-2
2	0
4	2
6	4



3

$$y = x^2$$

Input x	Output y
-2	4
-1	1
0	0
1	1
2	4

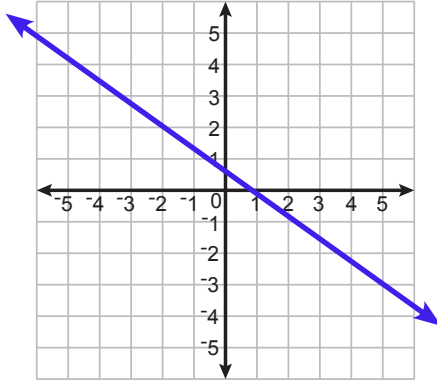


## The Vertical Line Test - Set 1

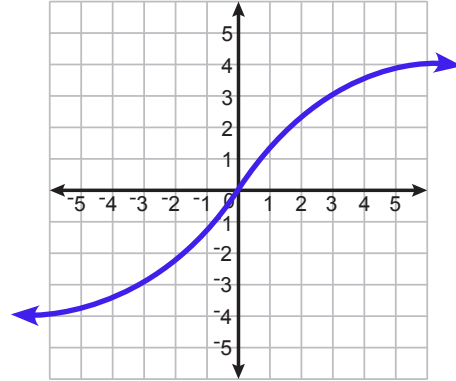
AB-WAF 3

**Instructions:** Use the Vertical Line Test to determine if each of these graphs qualifies as a function.

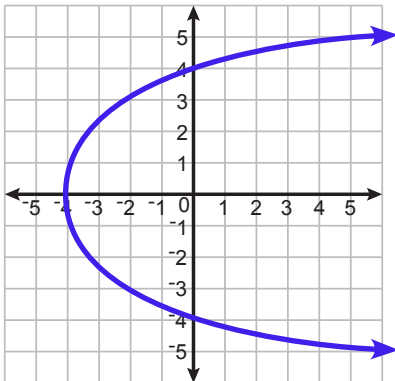
**1** Function?  Yes  No



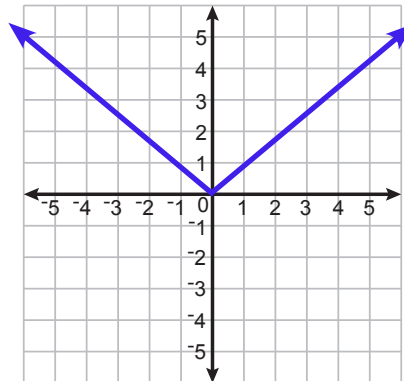
**2** Function?  Yes  No



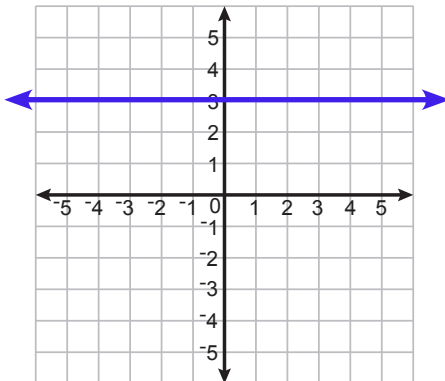
**3** Function?  Yes  No



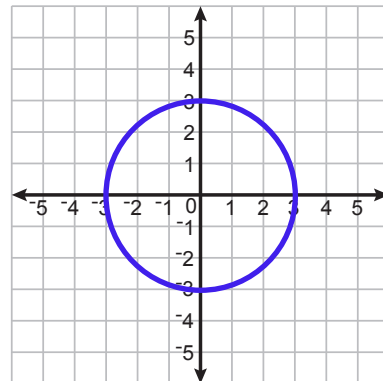
**4** Function?  Yes  No



**5** Function?  Yes  No



**6** Function?  Yes  No

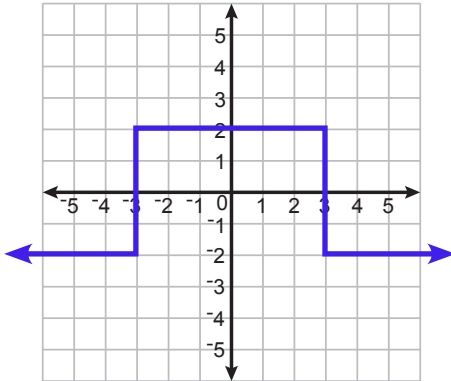


## The Vertical Line Test - Set 2

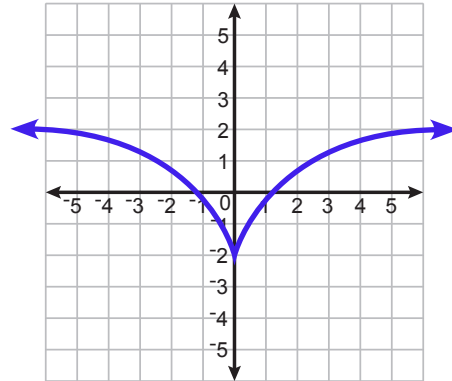
AB-WAF 4

**Instructions:** Use the Vertical Line Test to determine if each of these graphs qualifies as a function.

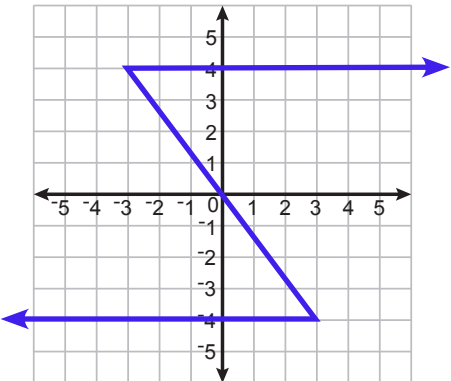
**1** Function?  Yes  No



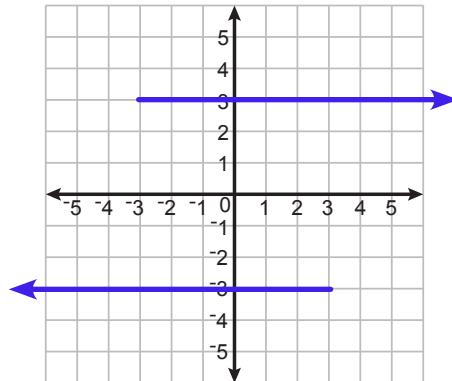
**2** Function?  Yes  No



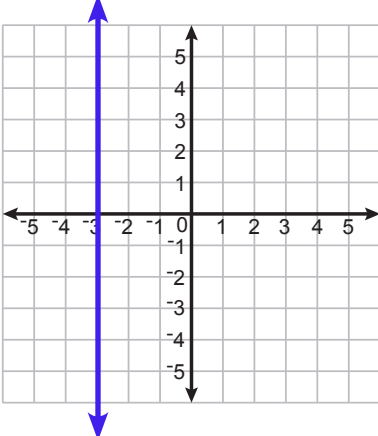
**3** Function?  Yes  No



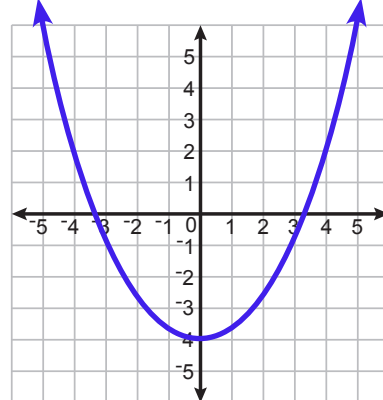
**4** Function?  Yes  No



**5** Function?  Yes  No



**6** Function?  Yes  No



## Evaluating Functions

AB-WAF 5

**Instructions:** Evaluate each function for the specified value. In other words, calculate the function's output value for the given input value.

1 Let  $f(x) = 4x - 3$   
Evaluate  $f(2)$

$$\begin{aligned} f(2) &= 4(2) - 3 \\ &= 8 - 3 \\ f(2) &= 5 \end{aligned}$$

2 Let  $f(x) = 2x + 1$   
Evaluate  $f(0)$

$$\begin{aligned} f(0) &= 2(0) + 1 \\ &= 0 + 1 \\ f(0) &= 1 \end{aligned}$$

3 Let  $g(a) = a^2 + 1$   
Evaluate  $g(-2)$

$$\begin{aligned} g(-2) &= (-2)^2 + 1 \\ &= 4 + 1 \\ g(-2) &= 5 \end{aligned}$$

4 Let  $f(x) = x^2 + x$   
Evaluate  $f(3)$

$$\begin{aligned} f(3) &= (3)^2 + 3 \\ &= 9 + 3 \\ f(3) &= 12 \end{aligned}$$

5 Let  $g(a) = \frac{a}{2} + 3a$   
Evaluate  $g(-4)$

$$\begin{aligned} g(-4) &= \frac{-4}{2} + 3(-4) \\ &= -2 + (-12) \\ g(-4) &= -14 \end{aligned}$$

6 Let  $f(t) = \frac{t^2}{2} + t$   
Evaluate  $f(-4)$

$$\begin{aligned} f(-4) &= \frac{(-4)^2}{2} + (-4) \\ &= 8 - 4 \\ f(-4) &= 4 \end{aligned}$$

7 Let  $f(x) = 3x^2 - 2x$   
Evaluate  $f(5)$

$$\begin{aligned} f(5) &= 3(5)^2 - 2(5) \\ &= 75 - 10 \\ f(5) &= 65 \end{aligned}$$

8 Let  $g(a) = 3a^3 + 5$   
Evaluate  $g(-1)$

$$\begin{aligned} g(-1) &= 3(-1)^3 + 5 \\ &= -3 + 5 \\ g(-1) &= 2 \end{aligned}$$