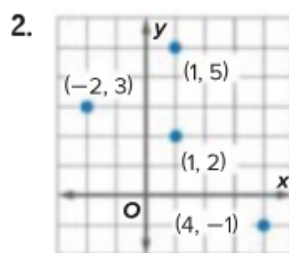
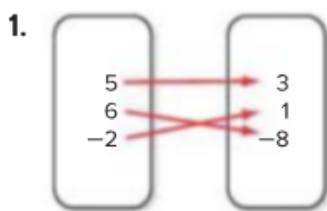


**MP STRUCTURE** State the domain and range of each relation. Then determine whether each relation is a *function*. If it is a function, determine if it is *one-to-one*, ~~onto~~, ~~both~~, or ~~neither~~.



3. 

x	y
-2	-4
1	-4
4	-2
8	6

4.  $\{(-3, 4), (2, -1), (-2, -1), (6, 2), (5, 4)\}$

Evaluate each function.

10.  $f(-3)$  if  $f(x) = -4x - 8 \rightarrow -4(-3) - 8 = 12 - 8 = 4 \quad (-3, 4)$

11.  $g(5)$  if  $g(x) = -2x^2 - 4x + 1$   
 $-2(5)^2 - 4(5) + 1 = -50 - 20 + 1 = -69 \quad (5, -69)$

Find each value if  $f(x) = 3x + 2$ ,  $g(x) = -2x^2$ , and  $h(x) = -4x^2 - 2x + 5$ .

28.  $f(-5)$   $(-5, -13)$       29.  $f(9)$

31.  $g(-6)$       32.  $h(3)$

$$3(-5) + 2 = -13$$

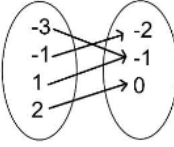
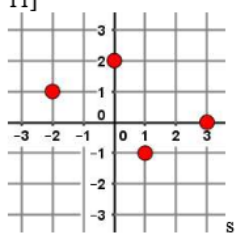
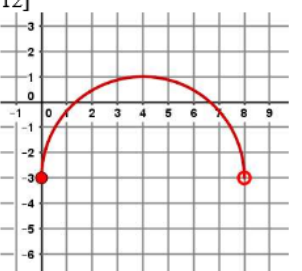
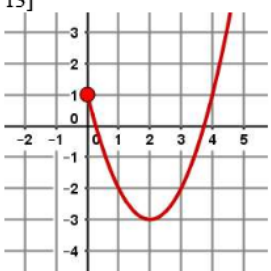
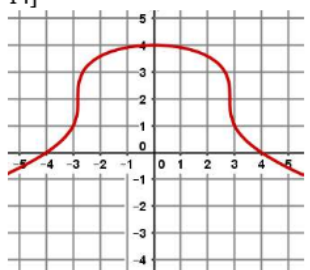
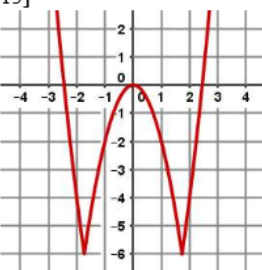
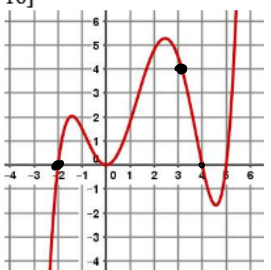
$$-4(6)^2 - 2(6) + 5$$

$$-256 - 16 + 5 = -267$$

30.  $g(-3)$   $-2(-3)^2 = -18$   $(-3, -18)$

33.  $h(8)$

Identify the domain and range, then evaluate each function for the given value of x.

<p>8] <math>f = \{(10,7), (-2,4), (5,3), (4,10)\}</math></p> <p>Domain:</p> <p>Range:</p> <p><math>f(10) =</math></p>	<p>9]</p> <table border="1" style="display: inline-table; vertical-align: middle;"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>-3</td> <td>3</td> </tr> <tr> <td>-1</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> </tr> </tbody> </table> <p>Domain:</p> <p>Range:</p> <p><math>f(-1) =</math></p>	X	Y	-3	3	-1	1	0	0	1	1	<p>10]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(-3) =</math></p>
X	Y											
-3	3											
-1	1											
0	0											
1	1											
<p>11]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(3) =</math></p>	<p>12]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(0) =</math></p>	<p>13]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(4) =</math></p>										
<p>14]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(-3) =</math></p>	<p>15]</p>  <p>Domain:</p> <p>Range:</p> <p><math>f(2) =</math></p>	<p>16]</p>  <p>Domain: <math>\{x \mid x \in \mathbb{R}\}</math></p> <p>Range: <math>\{y \mid y \in \mathbb{R}\}</math></p> <p><math>f(-2) = 0</math></p> <p><math>f(4) = 0</math></p> <p><math>f(3) = 4</math></p>										

Domain and Range Notes

NAME: \_\_\_\_\_

State the domain and range for each graph and then tell if the graph is a function (write yes or no).  
If the graph is a function, state whether it is discrete, continuous or neither.

1) Domain  $\{-3, -2, 1, 4\}$   
Range  $\{-4, 5, 3, -2, 0\}$   
Function? NO  
**DISCRETE**

2) Domain  $\{x | -3 \leq x \leq 3\}$   
Range  $\{y | -4 \leq y \leq 3\}$   
Function? NO  
**cont.**

3) Domain  $\{x | -4 < x\}$   
Range  $\{y | 1 < y \leq 3\}$   
Function? yes  
**cont.**  
 $\{y | y \geq 2\}$

4) Domain  $\{x | -2 \leq x \leq 2\}$   
Range  $\{y | 0 \leq y \leq 4\}$   
Function? NO  
**cont.**

5) Domain  $\{x | x \in \mathbb{R}\}$   
Range  $\{y | y \in \mathbb{R}\}$   
Function? yes

6) Domain  $\mathbb{R}$   
Range  $\{y | y \geq -5\}$   
Function? yes

7) Domain  $\{x | x \geq 0\}$   
Range  $\{y | y \in \mathbb{R}\}$   
Function? NO

8) Domain  $\{x | x \in \mathbb{R}\}$   
Range  $\{1, 3\}$   
Function? NO

9) Domain  $\{x | x < 2\}$   
Range  $\{y > 2\}$   
Function? yes  
 $-5 \leq x < 0$