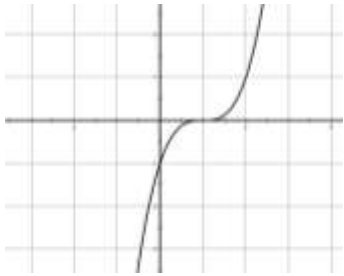
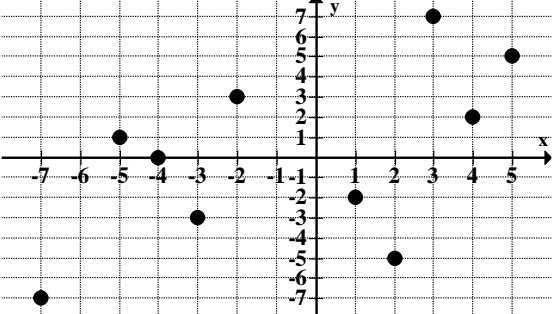


Unit 4: Functions Review Guide

What you need to know & be able to do	Things to remember	Examples											
<p>1. Determine if a relation is a function.</p>	<p>Every input only has one output (each 'x' only has one 'y')</p> <p>Use the vertical line test on graphs.</p>	<p>1. Determine if the graph is a function.</p> 	<p>2. Determine if the table represents a function.</p> <table border="1" data-bbox="1237 489 1344 646"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-1</td> <td>4</td> </tr> <tr> <td>0</td> <td>5</td> </tr> <tr> <td>2</td> <td>6</td> </tr> <tr> <td>-1</td> <td>7</td> </tr> </tbody> </table>	x	y	-1	4	0	5	2	6	-1	7
x	y												
-1	4												
0	5												
2	6												
-1	7												
<p>2. Create an input-output table for a function.</p>	<p>"x-y chart" – choose the x-values & plug them in</p>	<p>3. Create an input-output table for the function $f(x) = 2x - 3$. Use $x = -2, -1, 0, 1,$ and 2.</p>	<p>4. Create an input-output table for the function $f(x) = 6$. Use $x = -2, -1, 0, 1,$ and 2.</p>										
<p>3. Evaluate functions.</p>	<p>$f(x)$ function notation $f(2)$ means you must substitute a '2' for every 'x' in the function!</p>	<p>5. Evaluate $f(4)$.</p> $f(x) = x^2 + 3x - 1$	<p>6. Find the value of $f(x) = 4x - 2$ when $x = -1$.</p>										
		<p>7. a. Find $f(5)$.</p> <p>b. Find the value of x for $f(x) = 2$.</p> <p>c. What is the maximum and minimum? Write in function notation.</p>											

4. Write a function.

8.

Time Worked (h)	1	2	3	4
Amount Earned f(h)	5	10	15	20

9.

x	1	2	3	4
y	-2	-1	0	1

5. Create a function & use it to solve a problem.

10. You join a kickboxing class at a local gym. The cost is \$5 per class plus \$30 for the initial membership fee. Write a rule for the total cost of the class as a function of x. How much will it cost if you attend 7 classes?

11. Air Force One can travel 630 miles per hour. Let h be the number of hours traveled. Write a function rule that represents the total number of miles traveled. Then, determine how hours Air Force One flew if $f(h) = 5040$.

Swine flu is attacking Porkopolis. The function below determines how many people have swine where t = time in days and $S(t)$ = the number of people in thousands.

$$S(t) = 9t - 4$$

a. Find $S(4)$.

b. What does $S(4)$ mean?

c. Find t when $S(t) = 23$.

d. What does $S(t) = 23$ mean?