Unit 4B

Name _____ Date _____ Period _____

Secondary Math 3 – Unit 4B Review

Name the parent graph of each function below. Then graph the parent graph of each function and label the graph. Next graph each function below using transformations. List the transformations used to the right of the graph. Then use your graph to determine the domain and range of each function.

1. $f(x)=\frac{1}{2}x^2-3$ Parent graph: _____

Parent

x	*f(x)*

Reflections

x	*f(x)*

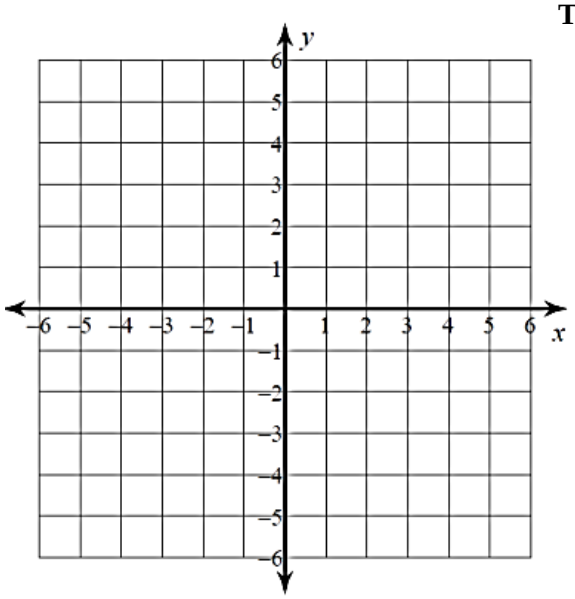
Stretches/ Compressions

x	*f(x)*

Translations (Shifts)

x	*f(x)*

Transformations:



Domain: _____ Range: _____

2. $f(x)=-\sqrt[3]{x+1}-2$ Parent graph: _____

Parent

x	*f(x)*

Reflections

x	*f(x)*

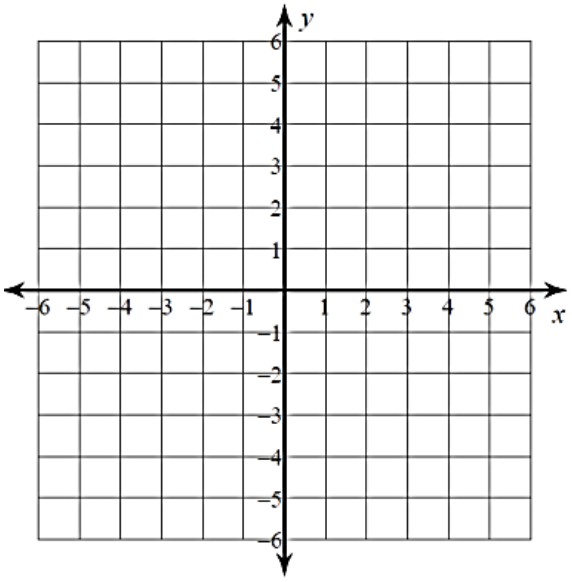
Stretches/ Compressions

x	*f(x)*

Translations (Shifts)

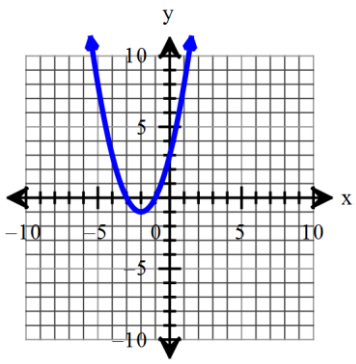
x	*f(x)*

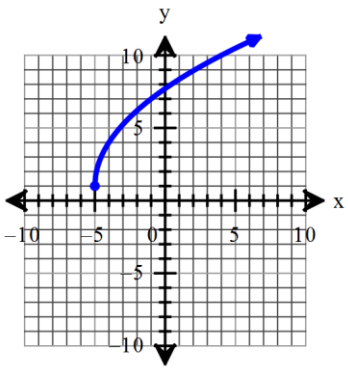
Transformations:

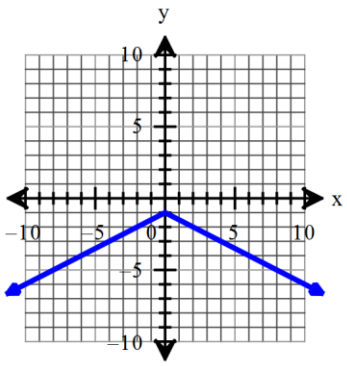


Domain: _____ Range: _____

Determine the transformations that were used to change the given parent function to the function that is graphed. Then write an equation for the function graphed.

3. 

4. 

5. 

Given the parent function, and a list of the transformations; write an equation f or the function.

6. **Parent Function:** $f(x)=\sqrt{x}$

Transformations: Up 5, left 2, reflection over the y-axis

7. **Parent Function:** $f(x)=\sqrt[3]{x}$

Transformations: Down 2, right 4, vertical stretch by 3

8. **Parent Function:** $f(x)=x$

Transformations: Down 7, Right 6, Horizontal stretch by 3

9. **Parent Function:** $f(x)=x^3$

Transformations: Up 4, Reflection over the x-axis

10. A salesperson is paid commission of 30% of the total sales for the year. Let $S=f(x)$ where S is the annual salary of the salesperson and x is the total sales for the year.

Match each situation below to one of the expressions at the right. Then list what the transformation does to the graph of the function.

Matching Function Number	**Situation**
	The salesperson has an excellent year and sales 3 times as much.
	The salesperson makes 3 additional sales the last day of the year.
	The salesperson is salesperson of the week and receives a 3 dollar bonus.

Function	**Transformation**
1. $S=f(x+3)$	
2. $S=f(3x)$	
3. $S=f(x)+3$	