Quarter 1 Review
Secondary Math 3

Unit 2

1. In the blank provided, name and write the equation for each parent function that corresponds to graphs given below. **(2-1a)**

_____ A)

_____ B)

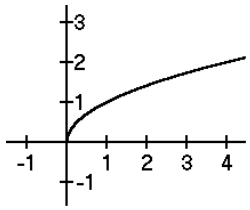
_____ C)

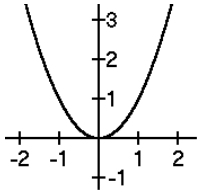
_____ D)

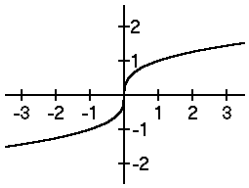
_____ E)

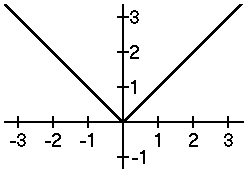
_____ F)

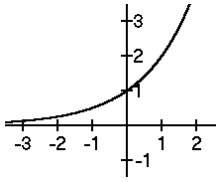
_____ G)

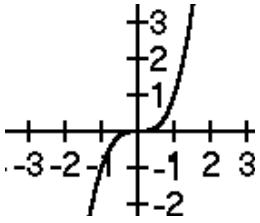
A) 

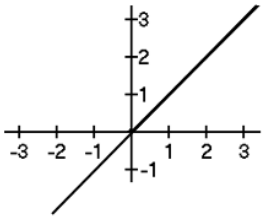
B) 

C) 

D) 

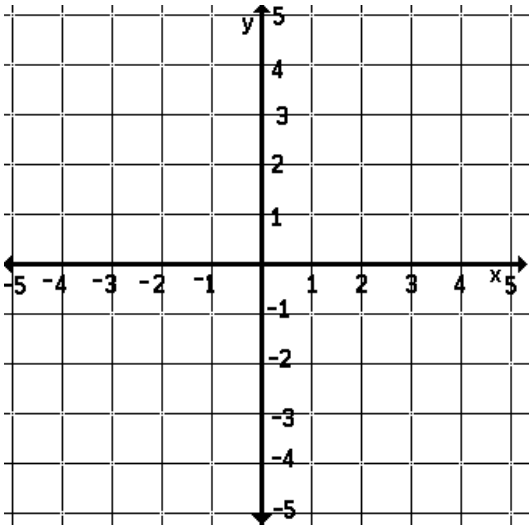
E) 

F) 

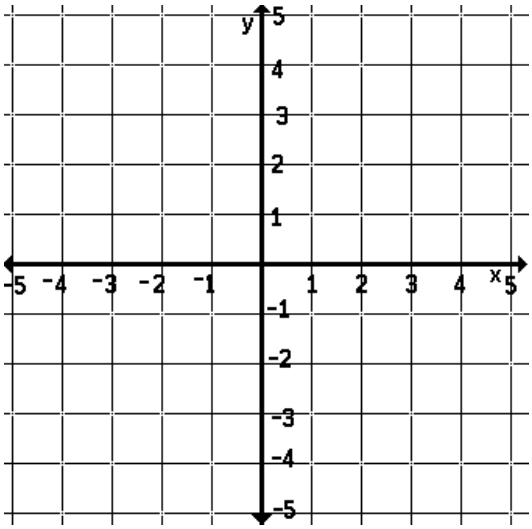
G) 

Graph the piece-wise functions **(2-3a)**

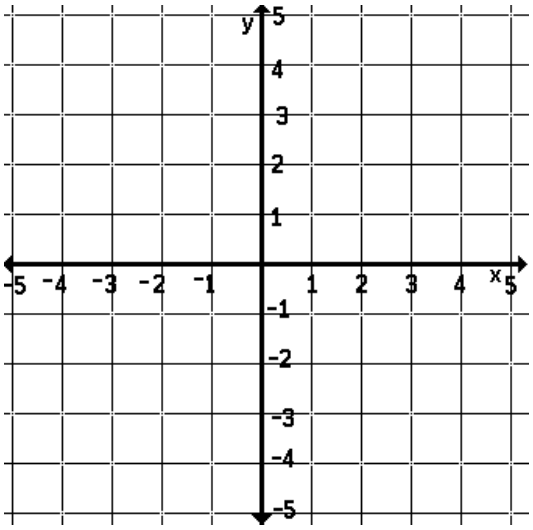
2. $f(x)=\begin{cases} x, x<0 \\ x^2, x\geq 0 \end{cases}$



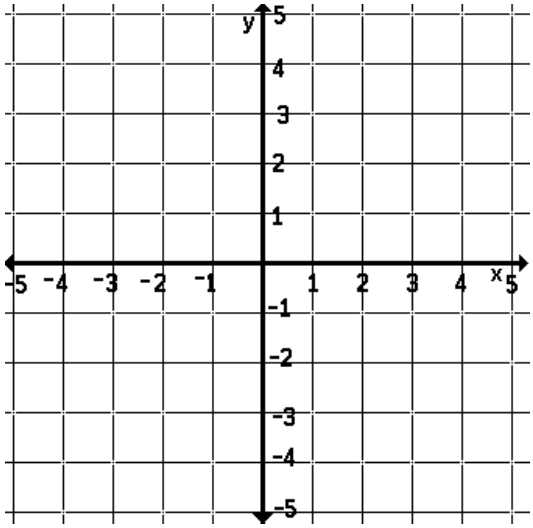
3. $f(x)=\begin{cases} -|x|, x\geq 0 \\ x^2, x<0 \end{cases}$



4. $f(x) = \begin{cases} x^3, x \geq 0 \\ -x^2, x < 0 \end{cases}$

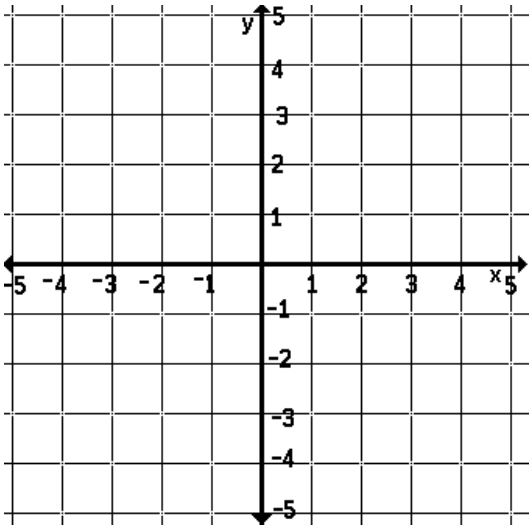


5. $f(x) = \begin{cases} |x+3|, x \leq -1 \\ x+3, x > -1 \end{cases}$



Graph the piece-wise functions **(2-3a),** then determine the Domain, Range, Increasing, Decreasing, and end behavior.

6. $f(x) = \begin{cases} 2^x, x \geq 0 \\ x^2 + 1, x < 0 \end{cases}$



Domain: _____

Range: _____

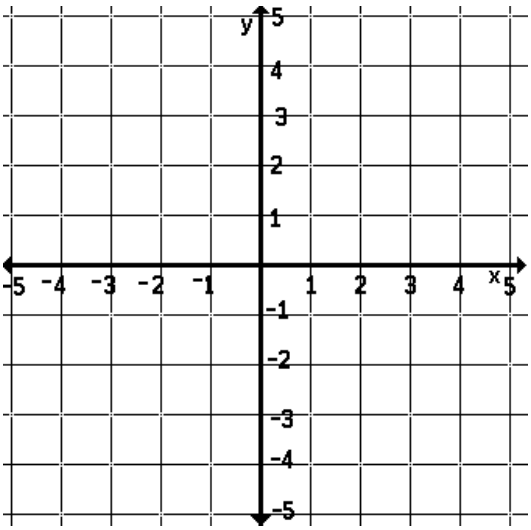
Inc: _____

Dec: _____

Left EB: _____

Right EB: _____

7. $f(x) = \begin{cases} x, x \leq 0 \\ x^3, > 0 \end{cases}$



Domain: _____

Range: _____

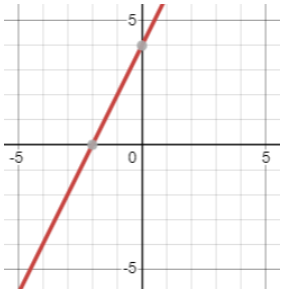
Inc: _____

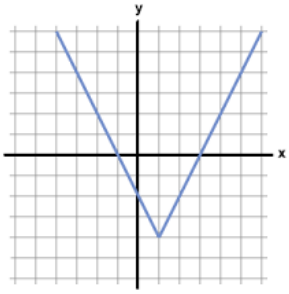
Dec: _____

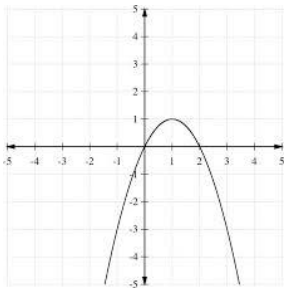
Left EB: _____

Right EB: _____

For the following functions, identify the **parent function**, list the **transformations** involved, state the **domain and range**, where it is **increasing and decreasing**, and the **end behavior**. **(2-1b, 2-2a)**







8. $f(x) = 2x + 4$

Parent Function: _____

List the transformations in words:

_____

_____

_____

_____

Domain: _____

Range: _____

Inc: _____

Dec: _____

Left EB: _____

Right EB: _____

9. $f(x) = 2|x-1|-4$

Parent Function: _____

List the transformations in words:

_____

_____

_____

_____

Domain: _____

Range: _____

Inc: _____

Dec: _____

Left EB: _____

Right EB: _____

10. $f(x) = -(x-1)^2 + 1$

Parent Function: _____

List the transformations in words:

_____

_____

_____

_____

Domain: _____

Range: _____

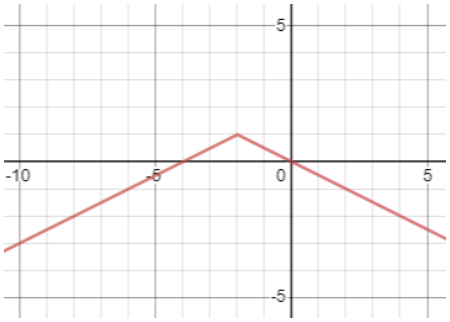
Inc: _____

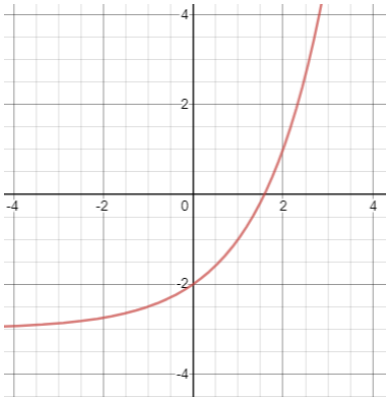
Dec: _____

Left EB: _____

Right EB: _____

For the following functions, identify the **parent function**, list the **transformations** involved, state the **domain and range**, where it is **increasing and decreasing**, and the **end behavior**. **(2-1b, 2-2a)**





11. $f(x) = -\frac{1}{2}|x+2|+1$

Parent Function: _____

List the transformations in words:

_____

_____

_____

_____

Domain: _____

Range: _____

Inc: _____

Dec: _____

Left EB: _____

Right EB: _____

12. $f(x) = 2^x - 3$

Parent Function: _____

_____

_____

_____

_____

Domain: _____

Range: _____

Inc: _____

Dec: _____

Left EB: _____

Right EB: _____

13. $f(x) = -(x-1)^3 + 2$

Parent Function: _____

_____

_____

_____

_____

Domain: _____

Range: _____

Inc: _____

Dec: _____

Left EB: _____

Right EB: _____