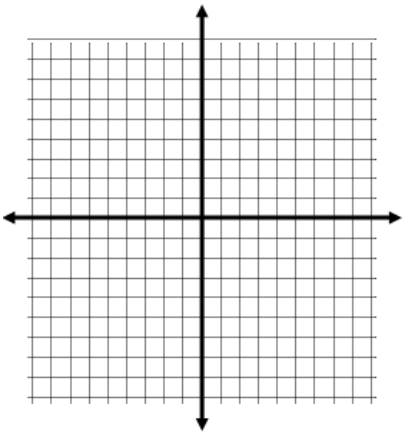
Name: _____ Date: _____ Per: _____

SLO #2 Review: Graphing and Features of Graphs

Use the given function to sketch the graph, then answer the questions about its key features.

1. $f(x)=(x+2)^2-4$



Inc:

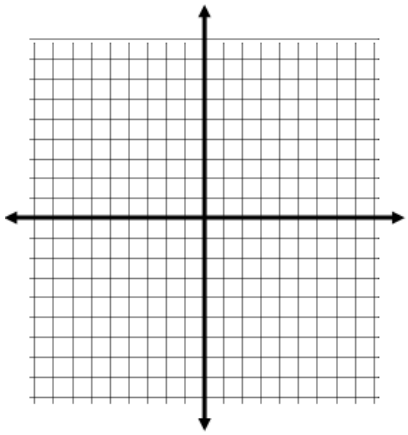
Dec:

Pos:

Neg:

End Behavior:

2. $y=-(x-3)^2+4$



Inc:

Dec:

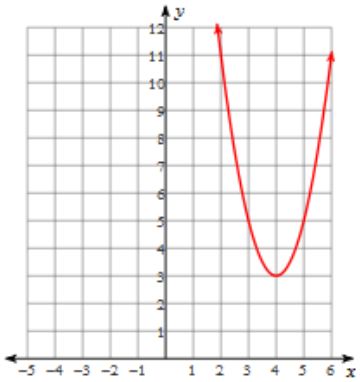
Pos:

Neg:

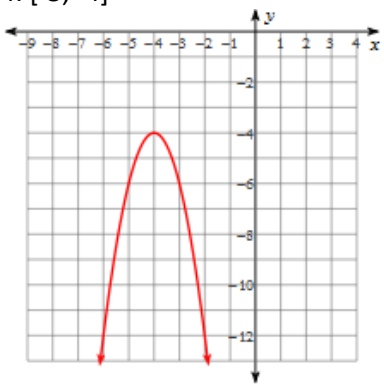
End Behavior:

Use the graphs below to find the average rate of change for the given interval.

3. [2, 5]

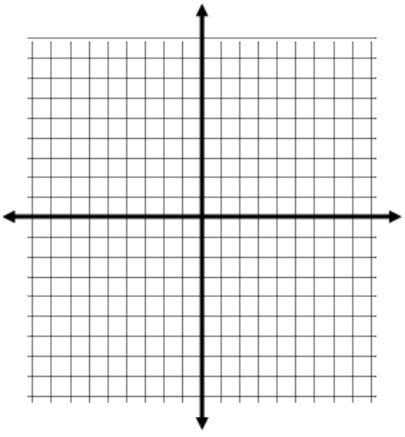


4. [-5, -4]

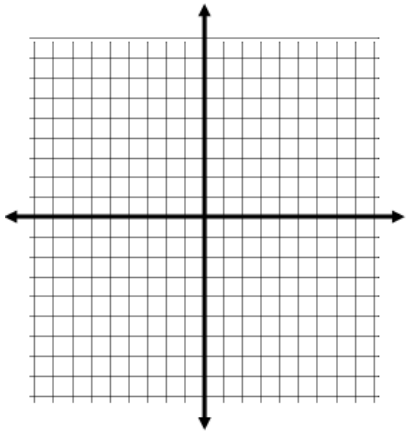


Graph the given functions:

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



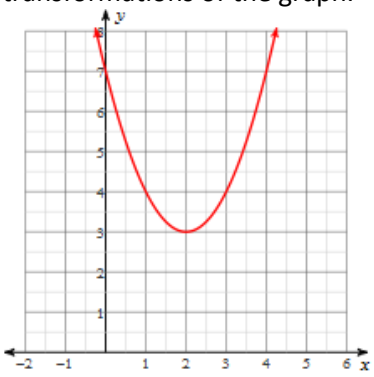
6. $f(x)=-2(x+1)^2+3$



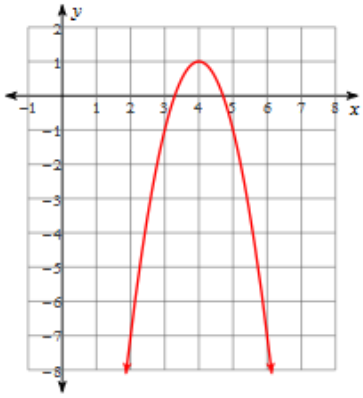
7. What is the vertex form of the equation $f(x) = -2x^2 + 12x - 14$?

8. What is the intercept form of the equation $f(x) = 3x^2 - 15x - 42$?

9. The function $f(x) = x^2$ has been transformed and is graphed below, write a new function to model the transformations of the graph.



10. The function $f(x) = x^2$ has been transformed and is graphed below, write a new function to model the transformations of the graph.



11. Which of these functions has the greatest maximum value?

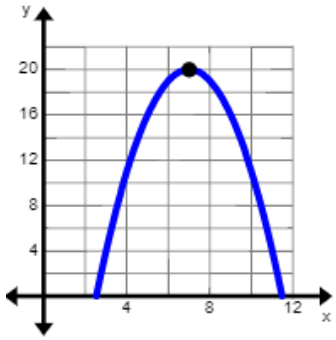
A. $f(x) = -x(x+14)$

B. $f(x) = -(x+4)^2 + 18$

C.

x	0	1	2	3	4
y	-1	8	19	8	-1

D.



12. For x = 4 , order the functions from least to greatest.

x	$f(x)$	$g(x)$	$h(x)$
0	8	1	2
1	2	3	6
2	1	9	10
3	2	27	14