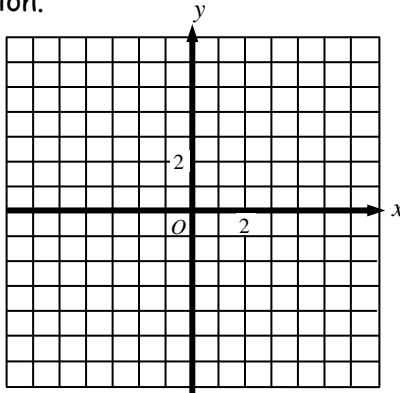


The parent function for all Quadratic Equations is $y = x^2$. (where $a = 1$, $b = 0$, and $c = 0$)

1. Graph the parent function in y_1 of your calculator. Then complete the table and sketch the graph of the function.

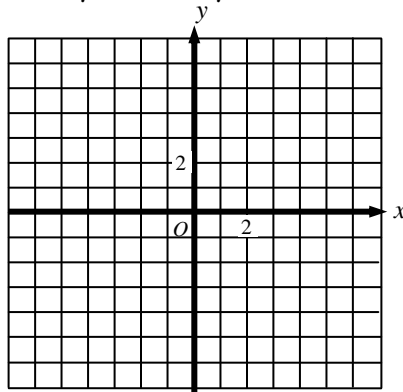
x	y
-2	
-1	
0	
1	
2	



- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

2. Leave $y = x^2$ in y_1 and enter $y = 3x^2$ in y_2 .

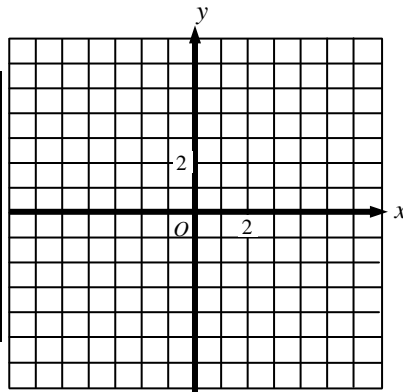
x	$y = x^2$	$y = 3x^2$
-2		
-1		
0		
1		
2		



- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

3. Leave $y = x^2$ in y_1 and enter $y = \frac{1}{3}x^2$ in y_2 .

x	$y = x^2$	$y = \frac{1}{3}x^2$
-3		
-1		
0		
1		
3		

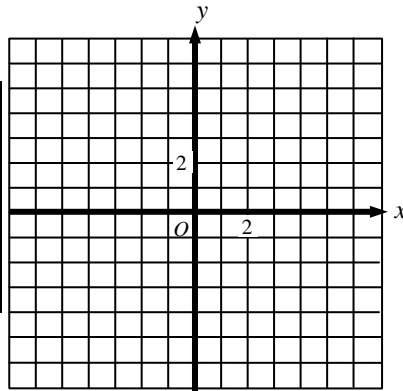


- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

4. What affect does the "a" value have on the graph?

5. Leave $y = x^2$ in y_1 and enter $y = -x^2$ in y_2 .

x	$y = x^2$	$y = -x^2$
-2		
-1		
0		
1		
2		

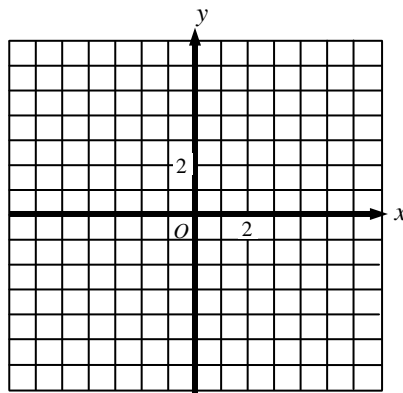


- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

6. What affect does the sign have on the "a" value?

7. Leave $y = x^2$ in y_1 and enter $y = x^2 + 4$ in y_2 .

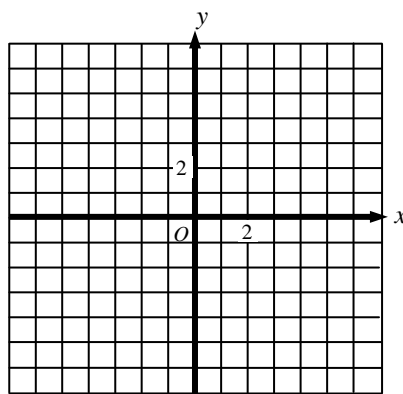
x	$y = x^2$	$y = x^2 + 4$
-2		
-1		
0		
1		
2		



- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

8. Leave $y = x^2$ in y_1 and enter $y = x^2 - 4$ in y_2 .

x	$y = x^2$	$y = x^2 - 4$
-2		
-1		
0		
1		
2		



- What is the vertex?
- Is it a maximum or minimum point?
- What are the roots of the function?
- What is the line of symmetry?

9. What affect does the "c" have on the graph?