

Algebra 1: 11.1 Homework
Graphing Quadratics

Name _____ Period _____

Sketch the graph of each quadratic function. Identify the vertex and axis of symmetry. Tell whether the graph is a maximum or minimum.

1) $y = \frac{1}{2}x^2$

Vertex (0, 0)

Minimum or Maximum? minimum

Axis of Symmetry $x = 0$

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

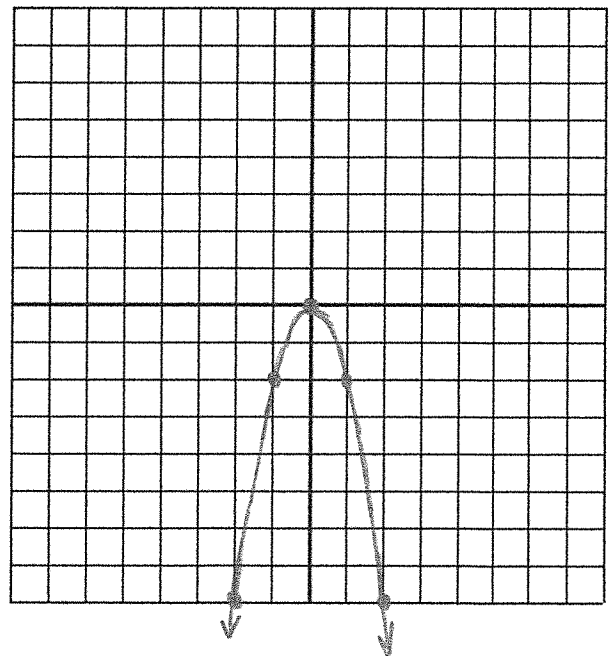
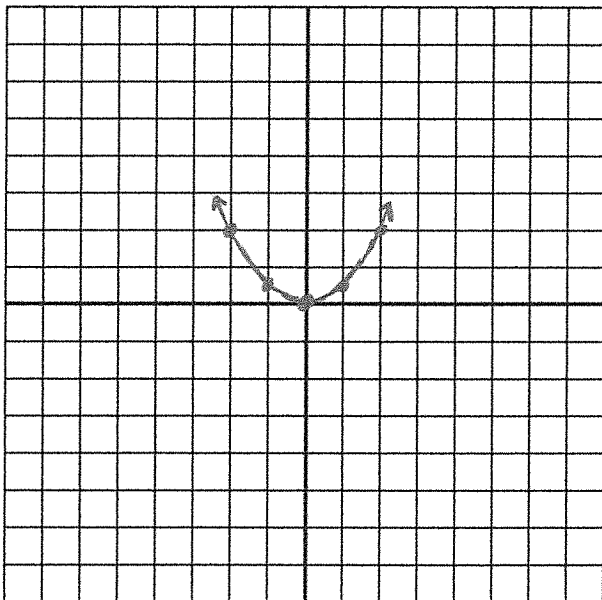
2) $y = -2x^2$

Vertex (0, 0)

Minimum or Maximum? maximum

Axis of Symmetry $x = 0$

x	$y = -2x^2$
-2	-8
-1	-2
0	0
1	-2
2	-8



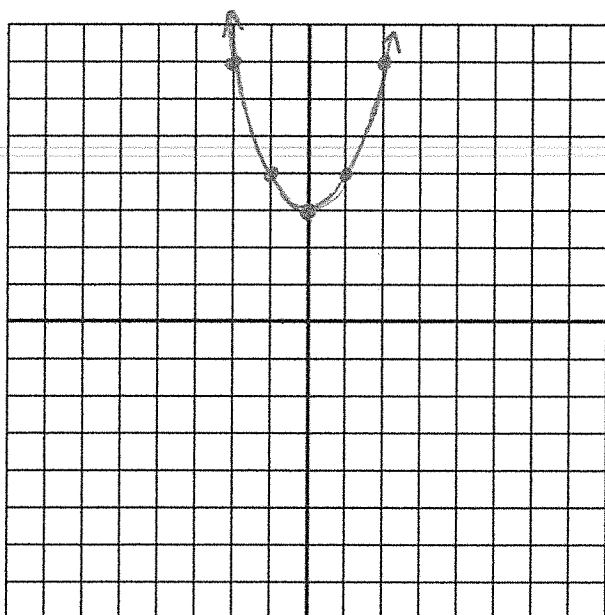
3) $y = x^2 + 3$

Vertex (0, 3)

Minimum or Maximum? minimum

Axis of Symmetry $x = 0$

x	$y = x^2 + 3$
-2	7
-1	4
0	3
1	4
2	7



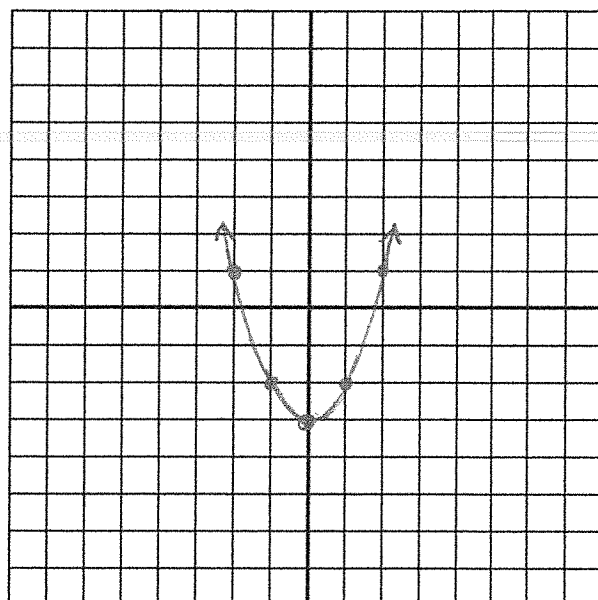
4) $y = x^2 - 3$

Vertex (0, -3)

Minimum or Maximum? minimum

Axis of Symmetry $x = 0$

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



5) $y = x^2 - 4x + 3$

Vertex (2, -1)

Minimum or Maximum? minimum

Axis of Symmetry $x = 2$

x	$y = x^2 - 4x + 3$
-2	15
-1	8
0	3
1	0
2	-1

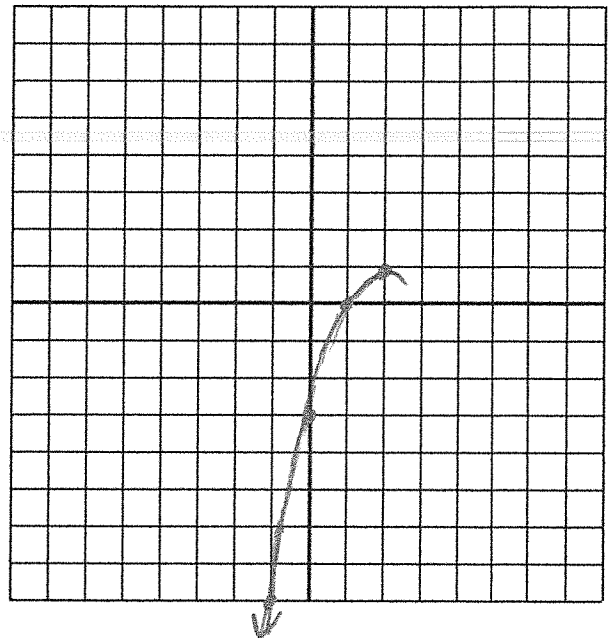
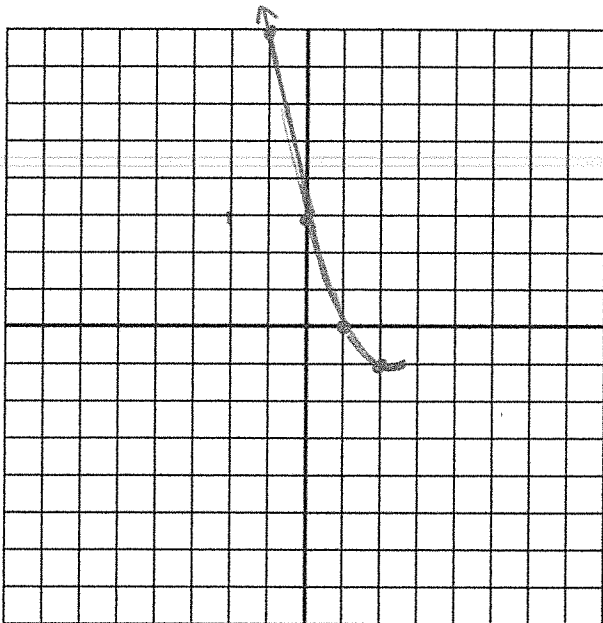
6) $y = -x^2 + 4x - 3$

Vertex (2, 1)

Minimum or Maximum? maximum

Axis of Symmetry $x = 2$

x	$y = -x^2 + 4x - 3$
-2	-15
-1	-8
0	-3
1	0
2	1



What's wrong with these graphs?