

NAME: Key

DATE: \_\_\_\_\_

# 10.1 / 10.2 Graphing Quadratics

Graph the following **BY HAND!** Then use your graph to answer the questions. You may check answers with a calculator.

1.  $y = x^2$

**FIND**  
axis of symmetry

$x = 0$

vertex =  $(0, 0)$

**GRAPH**

x	y
-2	4
-1	1
0	0
1	1
2	4

2.  $y = -x^2 + 3$

**FIND**  
axis of symmetry

$x = 0$

vertex =  $(0, 3)$

**GRAPH**

x	y
-2	-1
-1	2
0	3
1	2
2	-1

3.  $y = x^2 - 6$

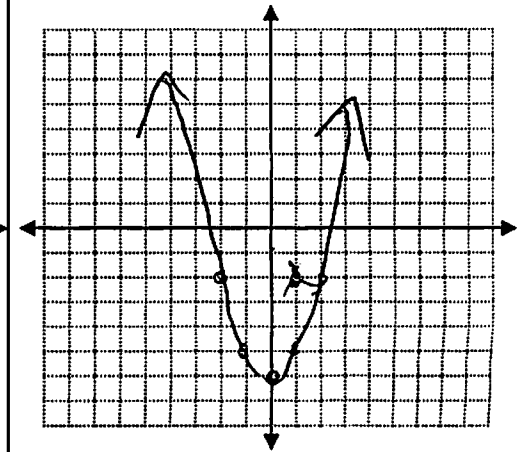
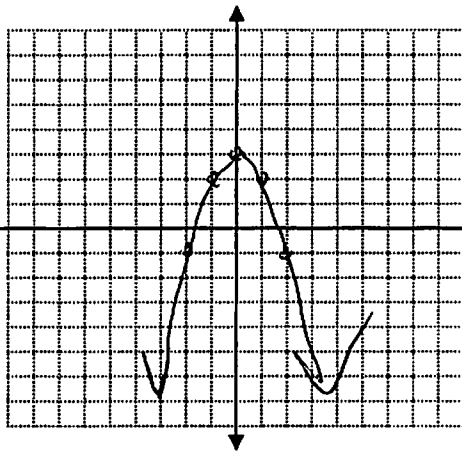
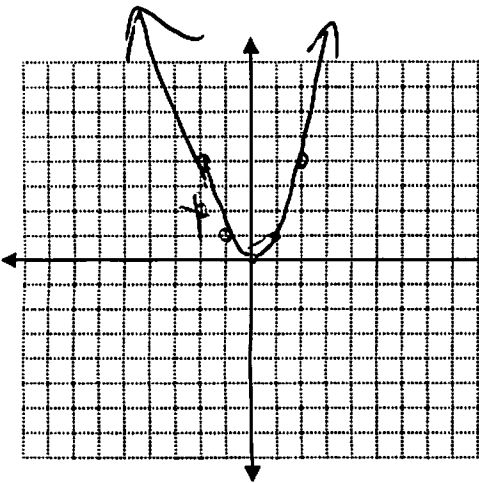
**FIND**  
axis of symmetry

$x = 0$

vertex =  $(0, -6)$

**GRAPH**

x	y
-2	-2
-1	-5
0	-6
1	-5
2	-2



4.  $y = (1/2)x^2 - 4$

**FIND**

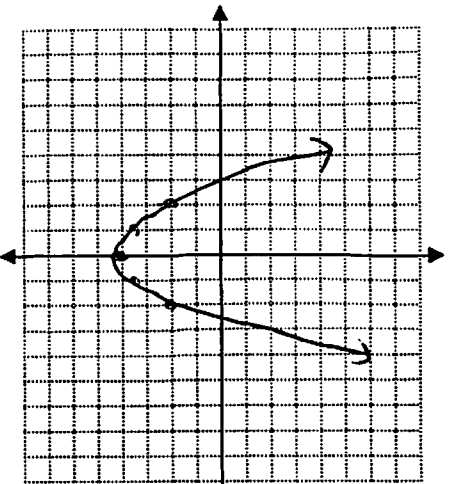
axis of symmetry

$x = 0$

vertex =  $(0, -4)$

**GRAPH**

x	y
-2	-2
-1	-3.5
0	-4
1	-3.5
2	-2



5.  $y = -2x^2 + 8x - 3$

**FIND**

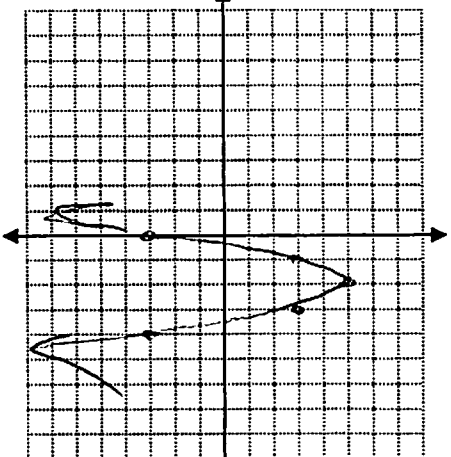
axis of symmetry

$x = 2$

vertex =  $(2, 5)$

**GRAPH**

x	y
0	-3
1	3
2	5
3	3
4	-3



6.  $y = x^2 - x - 6$

**FIND**

axis of symmetry

$x = 1/2$

vertex =  $(1/2, -25/4)$   $6\frac{1}{4}$

**GRAPH**

x	y
-2	0
-1	-4
0	-6
1	-6
2	-4

