

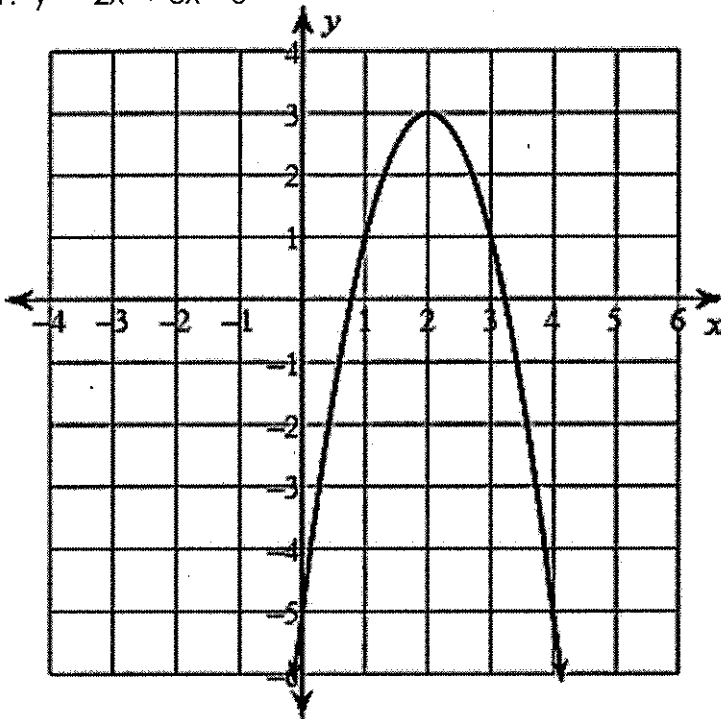
Algebra 1
 Quadratic Characteristics & Graphing Standard Form

Name: _____

Date: _____

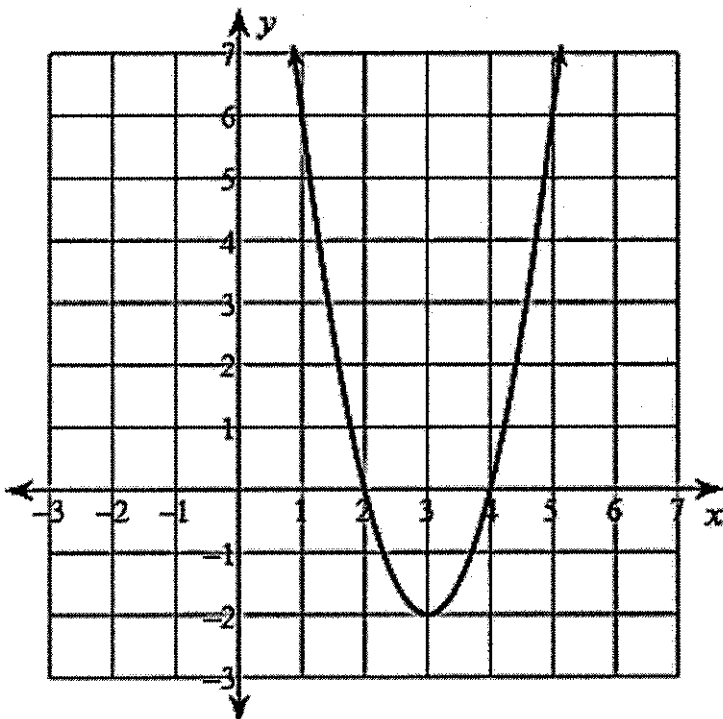
Fill in the characteristics of the graphs below.

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



CHARACTERISTICS	
Vertex	
Domain	
Range	
Increasing Interval	
Decreasing Interval	
Zeros	
Y-intercept	
Maximum	
Minimum	
Axis of Symmetry	
Left End Behavior	As $x \rightarrow -\infty, y \rightarrow$
Right End Behavior	As $x \rightarrow \infty, y \rightarrow$

2. $y = 2x^2 - 12x + 16$

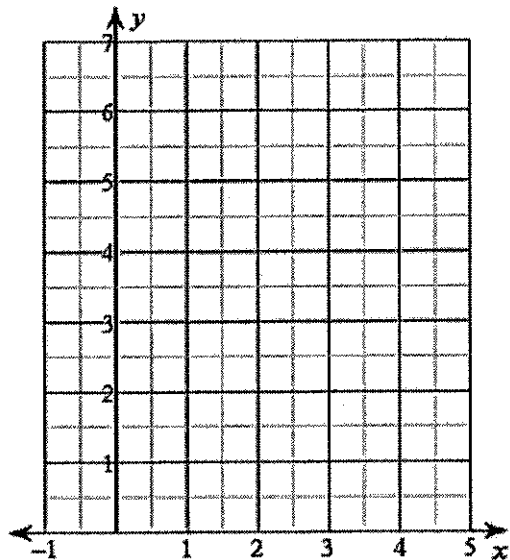


CHARACTERISTICS	
Vertex	
Domain	
Range	
Increasing Interval	
Decreasing Interval	
Zeros	
Y-intercept	
Maximum	
Minimum	
Axis of Symmetry	
Left End Behavior	As $x \rightarrow -\infty, y \rightarrow$
Right End Behavior	As $x \rightarrow \infty, y \rightarrow$

Graph each of the following equations. Answer the given questions.

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

x	y



Opens: up or down

Is the vertex a max or a min? _____

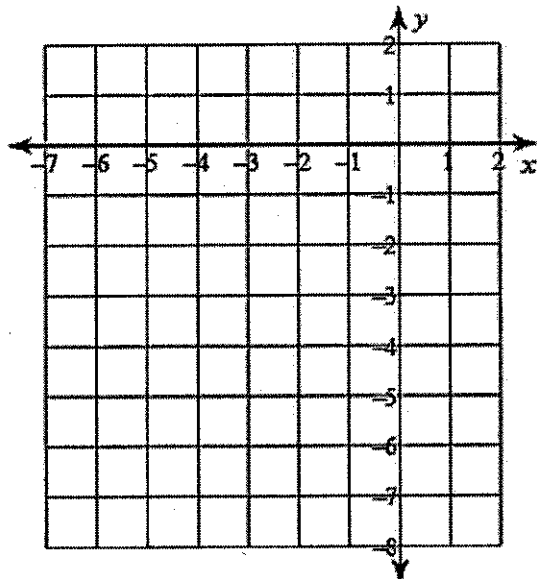
Axis of Symmetry: _____

Vertex: _____

y-intercept: _____

4. $y = -2x^2 - 16x - 31$

x	y



Opens: up or down

Is the vertex a max or a min? _____

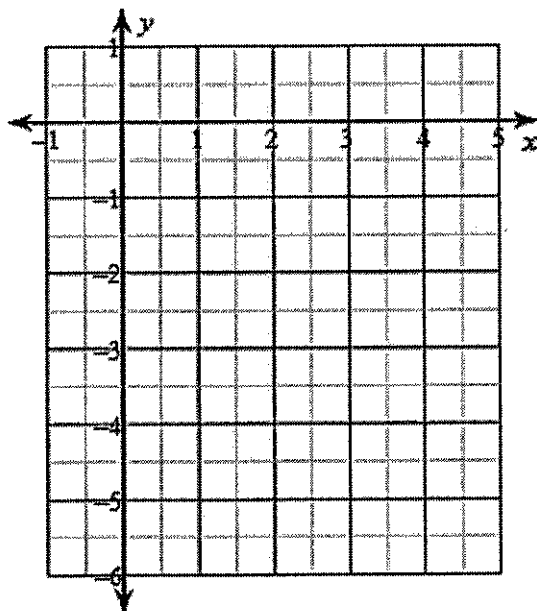
Axis of Symmetry: _____

Vertex: _____

y-intercept: _____

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

x	y



Opens: up or down

Is the vertex a max or a min? _____

Axis of Symmetry: _____

Vertex: _____

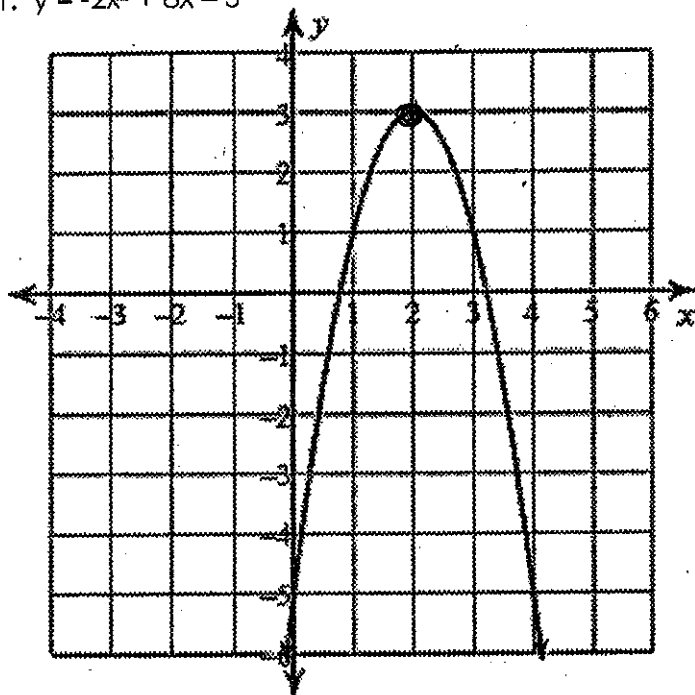
y-intercept: _____

Algebra 1 – Quiz Review
 Quadratic Characteristics & Graphing Standard Form

Name: ANSWER KEY
 Date: _____

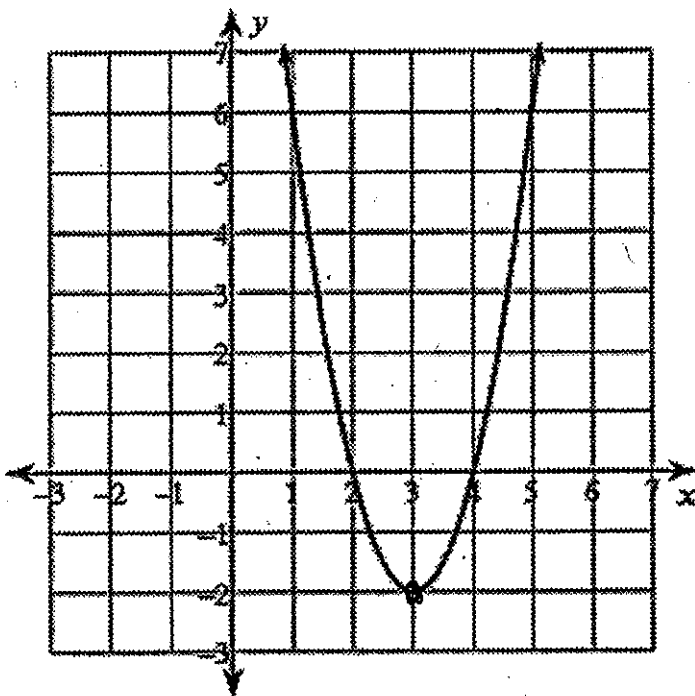
Fill in the characteristics of the graphs below.

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



CHARACTERISTICS	
Vertex	(2, 3)
Domain	$(-\infty, \infty)$
Range	$(-\infty, 3]$
Increasing Interval	$(-\infty, 2)$
Decreasing Interval	$(2, \infty)$
Zeros	$(\frac{1}{2}, 0)$ $(\frac{3}{2}, 0)$
Y-intercept	(0, -5)
Maximum	$y = 3$
Minimum	—
Axis of Symmetry	$x = 2$
Left End Behavior	As $x \rightarrow -\infty, y \rightarrow -\infty$
Right End Behavior	As $x \rightarrow \infty, y \rightarrow -\infty$

2. $y = 2x^2 - 12x + 16$



CHARACTERISTICS	
Vertex	(3, -2)
Domain	$(-\infty, \infty)$
Range	$[-2, \infty)$
Increasing Interval	$(3, \infty)$
Decreasing Interval	$(-\infty, 3)$
Zeros	(2, 0) (4, 0)
Y-intercept	
Maximum	—
Minimum	$y = -2$
Axis of Symmetry	$x = 3$
Left End Behavior	As $x \rightarrow -\infty, y \rightarrow \infty$
Right End Behavior	As $x \rightarrow \infty, y \rightarrow \infty$

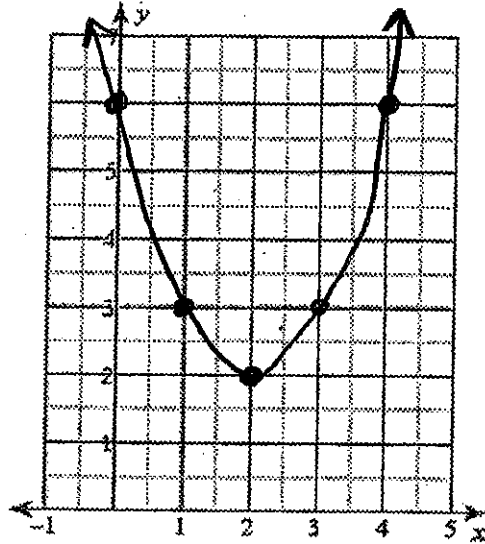
Graph each of the following equations. Answer the given questions.

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

$2^2 - 4(2) + 6$

x	y
0	6
1	3
2	2
3	3
4	6

$x = \frac{4}{2(1)} = 2$



Opens: up or down

Is the vertex a max or a min? Min

Axis of Symmetry: $x = 2$

Vertex: (2, 2)

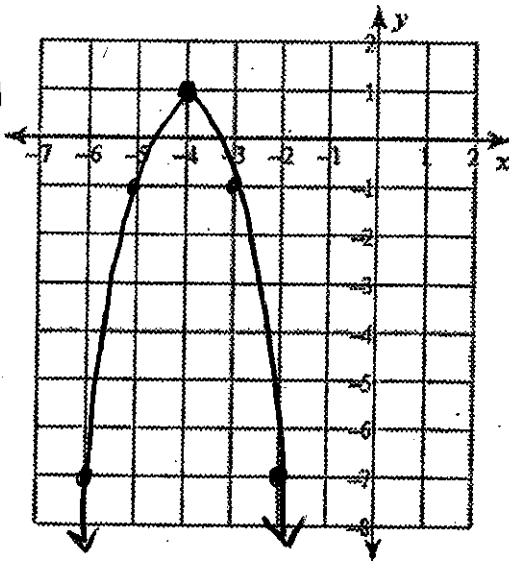
y-intercept: (0, 6)

4. $y = -2x^2 - 16x - 31$

$-2(-4)^2 - 16(-4) - 31$

x	y
-6	
-5	-1
-4	1
-3	-1
-2	-7

$x = \frac{16}{2(-2)} = -4$



Opens: up or down

Is the vertex a max or a min? Max

Axis of Symmetry: $x = -4$

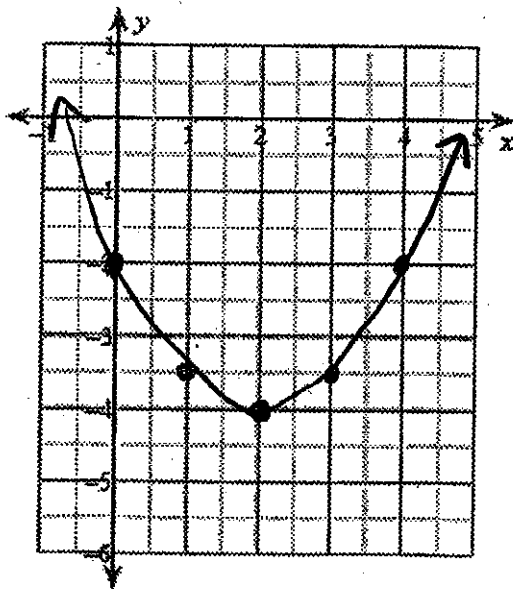
Vertex: (-4, 1)

y-intercept: (0, -31)

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

x	y
0	-2
1	-3.5
2	-4
3	-3.5
4	-2

$x = \frac{2}{2(\frac{1}{2})} = 2$



Opens: up or down

Is the vertex a max or a min? Min

Axis of Symmetry: $x = 2$

Vertex: (2, -4)

y-intercept: (0, -2)