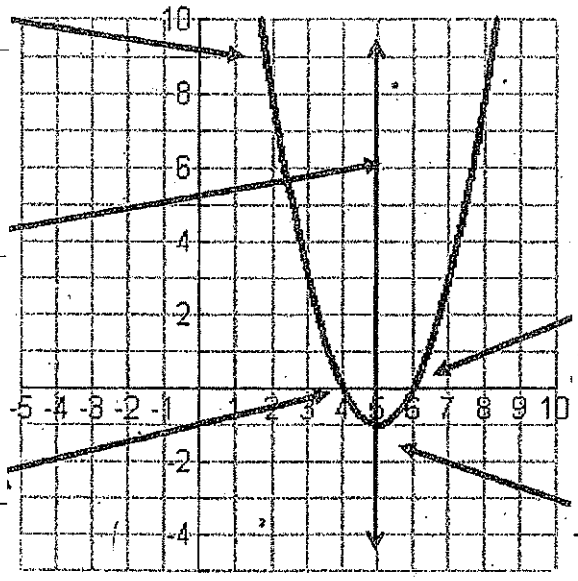
Algebra 1
Intro to Quadratic Characteristics

Name: _____

Date: _____

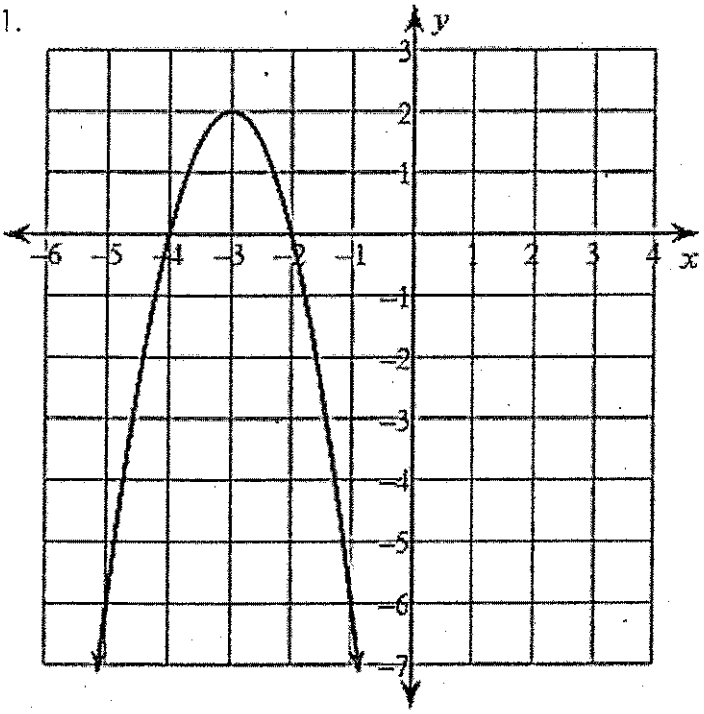
Look at the graph below. Are there any similarities or characteristics you know based on what you learned about linear equations? Are there any characteristics applying to quadratics that are new or different?



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

Let's try some more!

1.



CHARACTERISTICS	
Vertex	
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Left End Behavior	As $x \to -\infty$, $y \to$
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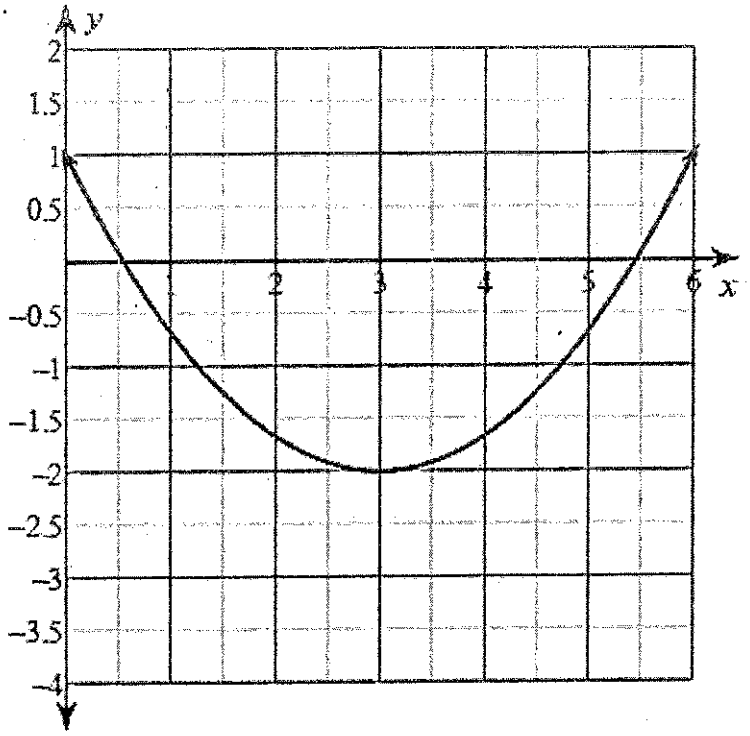
2.



CHARACTERISTICS	
Vertex	
Domain	
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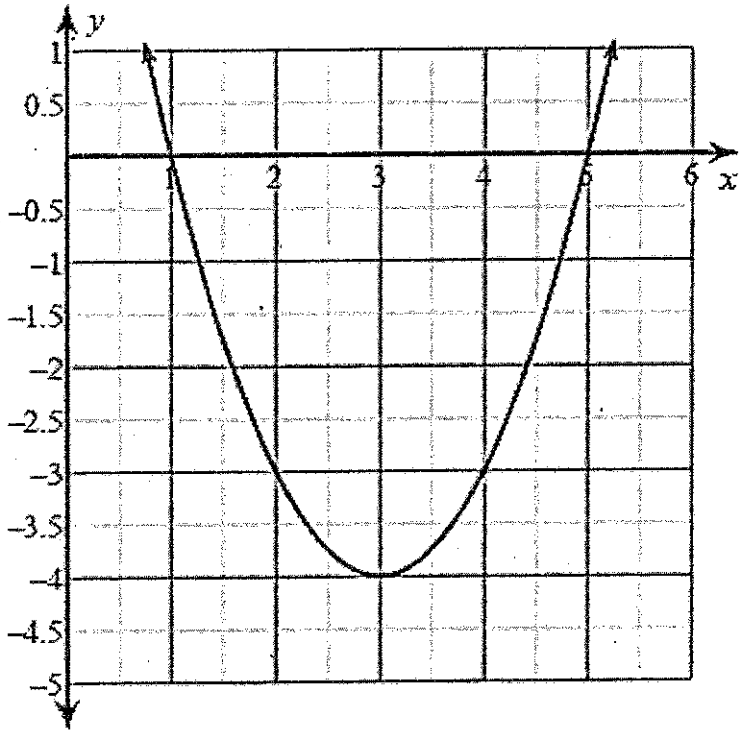
3. $y = x^2 - 6x + 5$



CHARACTERISTICS	
Vertex	
Domain	
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Increasing Interval	
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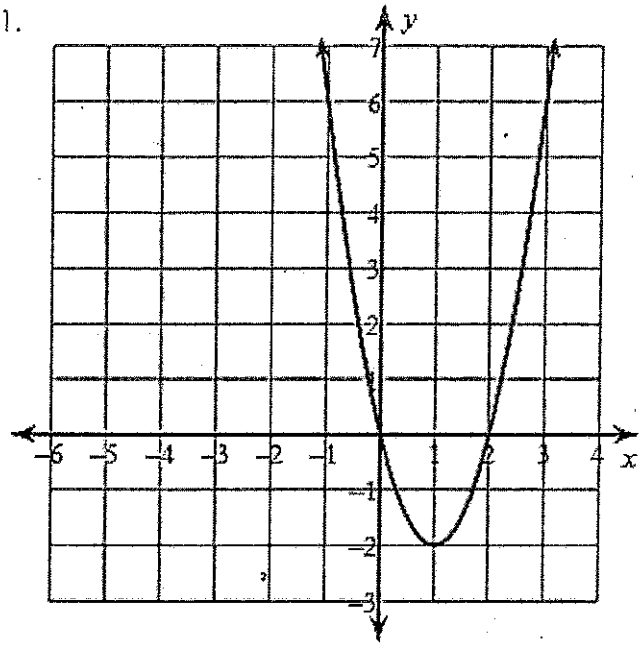
How could you find the zeros without looking at the graph? *Think back to last semester!*

Algebra 1 Name: _____

Homework – Quadratic Characteristics Date: _____

Fill in the characteristics of the given quadratic equation.

1.



CHARACTERISTICS	
Vertex	
Domain	
Range	
Increasing Interval	
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Zeros	
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Left End Behavior	As x→-∞, y→
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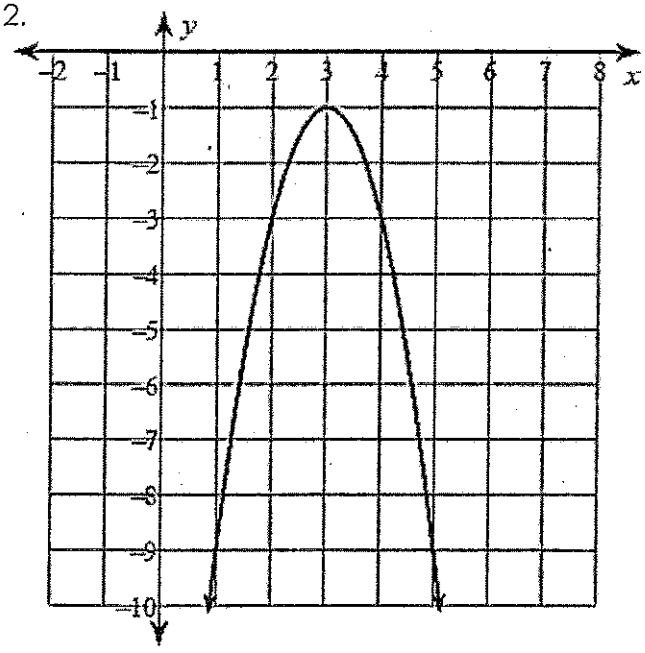
2.



CHARACTERISTICS	
Vertex	
Domain	
Range	
Increasing Interval	
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Zeros	
Y-intercept	
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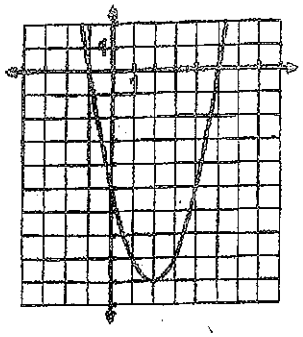
1. Domain: _____ Range: _____

Vertex: _____ Extrema: _____

X intercept(s): _____ Y Intercept: _____

Increasing: _____ Decreasing: _____

Axis of Symmetry: _____



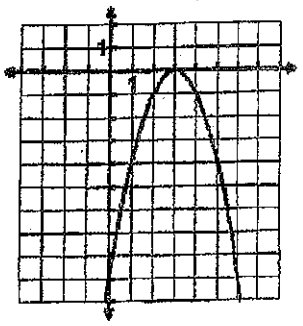
2. Domain: _____ Range: _____

Vertex: _____ Extrema: _____

X intercept(s): _____ Y Intercept: _____

Increasing: _____ Decreasing: _____

Axis of Symmetry: _____



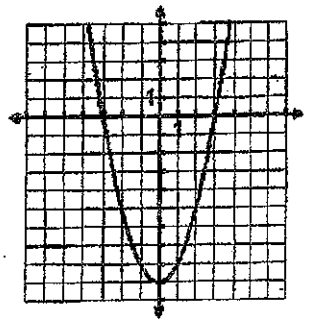
3. Domain: _____ Range: _____

Vertex: _____ Extrema: _____

X intercept(s): _____ Y Intercept: _____

Increasing: _____ Decreasing: _____

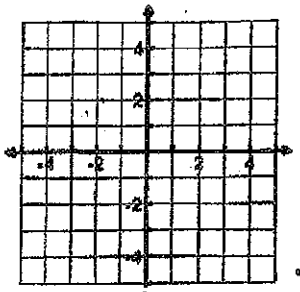
Axis of Symmetry: _____



Use the information to sketch a quadratic.

4. Domain: all real numbers
   Range: $y \geq 1$

   Increasing: $-2 < x < \infty$
   Decreasing: $-\infty < x < -2$
   There is no stretch or shrink ($a = 1$)



5. Domain: all real numbers
   Vertex: (1,2)

   Increasing: $-\infty < x < 1$
   Decreasing: $1 < x < \infty$
   There is no stretch or shrink ($a = 1$)