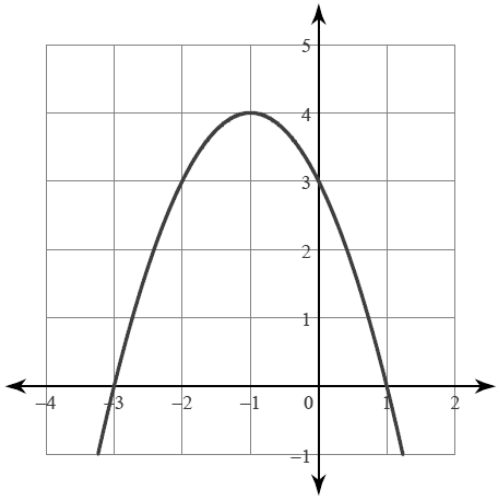
Algebra 1
Unit 6 # 2 Remediation
Version B

Name: _____
Date: _____ Period: ___

Vertex Form	**Standard Form**	**Find the Vertex in Standard Form**
$y = a(x-h)^2 + k$	$y = ax^2 + bx + c$	$x = \frac{-b}{2a}$, substitute in to find y

1) Describe the characteristics of the graph below.



Vertex: _____ **Axis of Symmetry:**_____

Interval of Increase:_____

Interval of Decrease:_____

Extrema: _____ **Max/Min Value:** _____

Domain: _____ **Range:** _____

Y-Intercept: _____ **Zeroes:** _____

End Behavior: As x → -∞, f(x) → _____

As x → ∞, f(x) → _____

Rate of change on the interval -3 ≤ x≤ -1 _____

2. Convert the following to standard form:

$$y = 2(x+1)^2 + 3$$

3. Convert the following to vertex form:

$$y = 3x^2 + 12x + 6$$

4. A missile is launched along the path determined by the equation $f(x) = -2x^2 + 72x$, where $f(x)$ is the height of the missile in feet x seconds after it has been launched. A plane is also flying at a constant height of 700 feet. Is the plane in danger? Why or why not? (you have to show why using MATH!)