Algebra I Name _____

Date _____ Period ___

Graphing Exploration for Quadratics

Standard form of a Quadratic Equation $y = ax^2 + bx + c$	Standard form of a Quadratic Function $f(x) = ax^2 + bx + c$

1. To graph the function $f(x) = x^2 + x + 1$ you need to enter a=1, b=1, and c=1
   What does the graph look like?

2. Before changing the values, try to predict what will happen (Hint: try evaluating the value of the function for the same value of x but slightly changing the value of the number that is represented by the slider bar.

   a) What happens when you change a to a positive number, 0, a negative number?
   Try the following values $a = 2$, $a = 0$, $a = -2$ (don't forget b=1 and c=1 still).

   b) What happens when you change b to a positive number, 0, a negative number?
   Try the following values $b = 2$, $b = 0$, $b = -2$ (don't forget a=1 and c=1 still).

   c) What happens when you change c to a positive number, 0, a negative number?
   Try the following values $c = 2$, $c = 0$, $c = -2$ (don't forget a=1 and b=1 still).