Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date:\_\_\_\_\_\_\_\_\_\_ Score:\_\_\_\_\_\_\_

**Objective:** The goal is to create an elegant design on a coordinate plane using various piecewise functions. You may use either string of linear functions, quadratic functions, absolute value function, or any other functions of your choice.

|  |  |  |
| --- | --- | --- |
| Linear function | Y=mx+b | http://www.ck12.org/flx/show/image/user%3AamhhdGVydEB5c3NjaG9vbHMub3Jn/M7-07-08-11.png-201208061344273878796904.png |
| Quadratic function | Y= | http://hotmath.com/images/gt/lessons/genericalg1/parabola_width.gif |
| Absolute value function | Y= | http://images.tutorvista.com/cms/images/67/graph-of-absolute-value.JPG |

Consider the following guidelines when creating a piecewise function design.

1. Piecewise function project must have at least 20 equations.
2. Each piecewise function must be graphed on the coordinate plane and labeled using lowercase letters. (40 points)
3. Each piecewise function must be written in equation form on a separate piece of paper in alphabetical order. Appropriate domain must be written next to each function. (40 points)
4. You must be able to reproduce your design on a graphing calculator by entering each equation and its domain. (20 points)

