**Secondary Math 2 8.1 Homework Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Graphing and Analyzing Quadratic Equations (By Plotting Points)**

**Graph the quadratic function by plotting points. Identify the key features.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  | | --- | --- | | x | y | | -1 |  | | 0 |  | | 1 |  | | 2 |  | | 3 |  | |  | **Vertex (**Max/Min)**:**  **Axis of Symmetry:**  **y-intercepts:**  **x-intercepts:**  **Domain:**  **Range:** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  | | --- | --- | | x | y | | 1 |  | | 0 |  | | -1 |  | | -2 |  | | -3 |  | |  | **Vertex (**Max/Min)**:**  **Axis of Symmetry:**  **y-intercepts:**  **x-intercepts:**  **Domain:**  **Range:** |

**Review Problems:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Solve for x: |  | Solve for x by factoring: |
|  | Simplify: |  | Simplify: |

**Extended Understanding:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Given the equation:  a) Set the equation equal to zero and solve for x:  b) Set and solve for y.  c) Plot the following points:   |  |  | | --- | --- | | x | y | | 1 |  | | 2 |  | | 3 |  | | 4 |  | | 5 |  |   d) What do you notice about the lowest point on the graph and the equation of the parabola?  e) Graph the quadratic equation |  | Given the equation:  a) Set the equation equal to zero and solve for x:  b) Set and solve for y.  c) Plot the following points:   |  |  | | --- | --- | | x | y | | 1 |  | | 2 |  | | 3 |  | | 4 |  | | 5 |  |   d) What do you notice about the x-intercepts of the graph and the equation of the parabola?  e) Graph the quadratic equation |