**Quadratic Functions**

Identifying a Quadratic Function from a Table

Follow along with Mr. Ward on the front white board.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **x** | -4 | -2 | 0 | 2 | 4 |
| **y** | 8 | 2 | 0 | 2 | 8 |

Identifying a Quadratic Function from an Equation

The standard form for a quadratic equation is , where a, b, and c are real numbers. (Box that equation!)

When a > 0, the quadratic equation will open upward. (Example: y = x2 + 4x)

When a < 0, the quadratic equation will open downward. (Example: y = –2x2 + 1

Identify (Yes or No) which of the following equations are quadratic functions.

 \_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_

Identifying a Quadratic Function from a Graph

Graph the following points on a graph.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **x** | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| **y** | 9 | 4 | 1 | 0 | 1 | 4 | 9 |

Now connect those points with a smooth curve.

The points you have just plotted are for the equation . This is our most basic quadratic equation. Take a quick second to become familiar with this type of shape because all quadratic equations will look very similar to this.

You should now be able to do the following things:

* I can identify a quadratic from its graph.
* I can identify a quadratic from its equation.
* I can identify a quadratic from its table.

***Assignment:*** ***pg 594 #2-15 (all) and #22-32 (evens)***