

NAME _____

Module 14 Graphing Quadratic Relations
Lesson 1 Graphing Simple Quadratic Relations

guided
notes

Lesson Objectives

- Graph a quadratic relation by finding five to seven points on the graph.
- Graph a quadratic relation by finding the vertex and using symmetry.

The U-shaped curve of the equation $y = x^2$ is called a parabola.

The point where the parabola turns is called the **vertex** _____.

The vertical line through the vertex is called the **axis of symmetry** _____.

The graphs of the quadratic relations $y = x^2$ and $y = -x^2$ are both **functions** _____.

The standard form equation for a parabola that opens up or down is **$y = ax^2 + bx + c$** _____, where **$a \neq 0$** _____.

For a parabola with equation, $y = ax^2 + bx + c$, the axis of symmetry has the equation **$x = \frac{-b}{2a}$** _____.

1 Graph $x^2 = y + 8$.

Equation for the axis of symmetry:

$x = 0$ _____

Vertex:

$(0, -8)$ _____



