

Name: _____

Class: _____

Topic: _____

Date: _____

Main Ideas/Questions

Notes

Standard Form

All quadratic equations are written in the form:

Graph

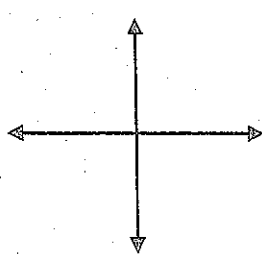
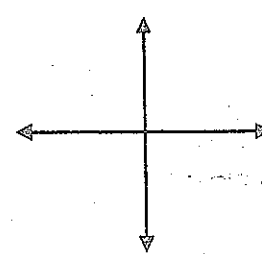
When graphed, a quadratic equation creates a U-shaped curve called a _____.

Types of Parabolas

Use your graphing calculator to sketch the following:

$y = x^2 + 2x - 5$

$y = -x^2 + 3x + 7$

- If 'a' is _____, then the parabola opens _____, like a smile 😊
- If 'a' is _____, then the parabola opens _____, like a frown ☹️

Axis of Symmetry

Formula for the axis of symmetry:

Vertex

- When the vertex is the lowest point, it is called a _____.
- When the vertex is the highest point, it is called a _____.

Example
 $y = x^2 + 8x + 15$

Axis of Symmetry: _____ Vertex: _____ Sketch: _____