Name: _____   Date: _____

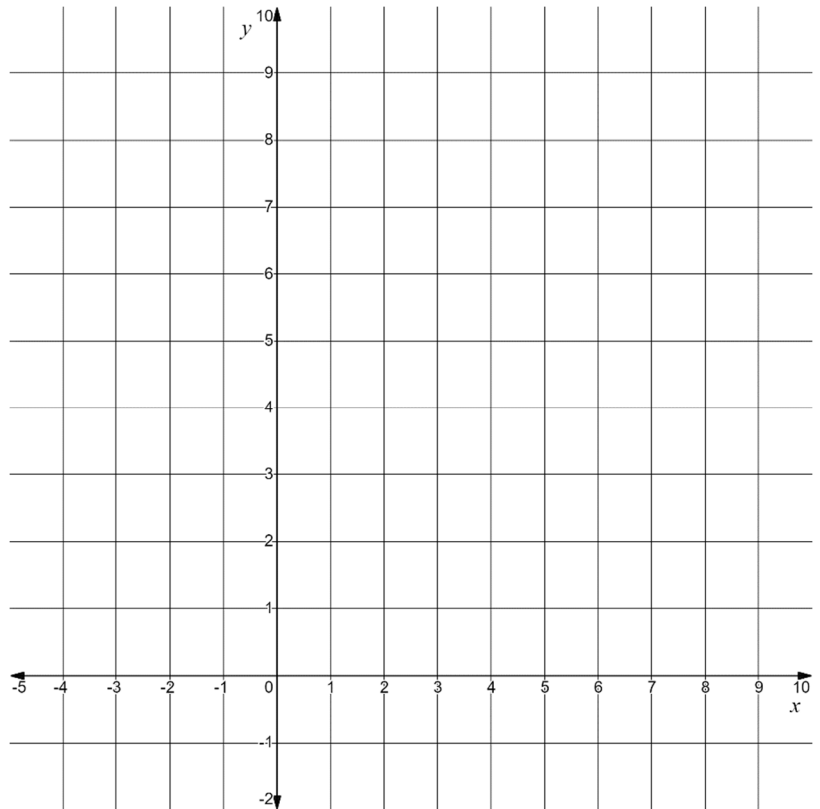| **Learning Goal 4.1**	Given a quadratic equation, identify the number of solutions, zeros, roots or $x-$ intercepts.

<div align="center">
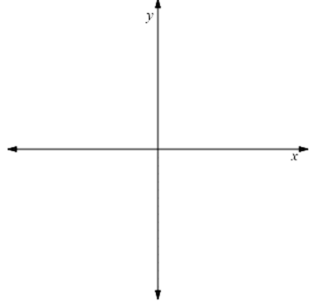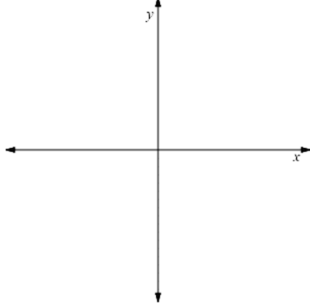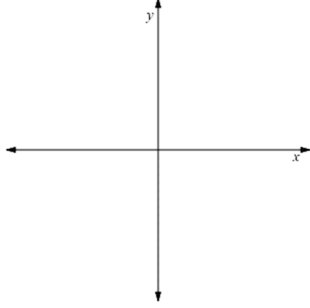
Equations   vs.   Functions

</div>

Recall Graphing Quadratic Functions

- Vertex Form
- Standard Form
- Factored Form

Example Determine the roots of the quadratic equation $x^2 - 6x + 9 = 0$ by graphing.

Example Solve $3m^2 + 6m = -6$ by graphing.

😊 or 🙁	Vertex	Number of $x -$ intercepts or solutions

Example Determine the number of zeros of the following functions.

a. $y = -0.07(x - 3.1)^2 - 4.25$ b. $y = x^2 + 18x + 81$ c. $y = -x^2 + 4x - 1$