8 Algebra CC Zoom #4 – Unit 15

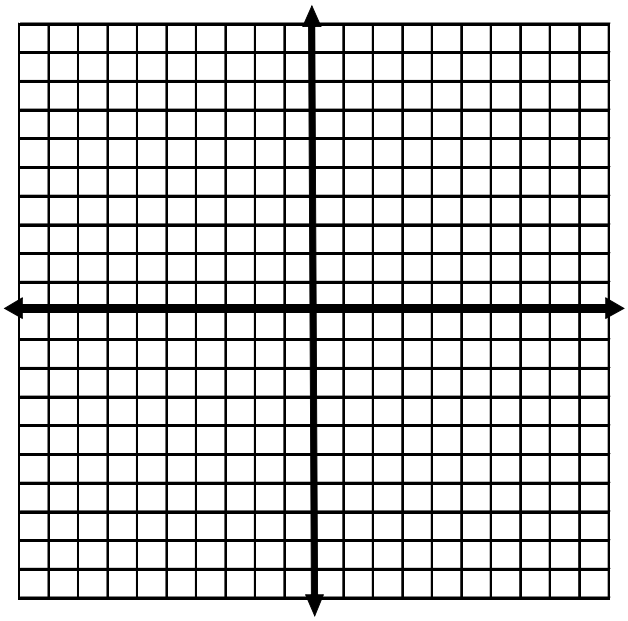
GRAPHING QUADRATIC FUNCTIONS

Reminders:

- Find the ***x***-coordinate of the **vertex** (turning point) using the formula, $x = \frac{-b}{2a}$
- Create a **table of values** using three ***x***-values smaller than the vertex, and three ***x***-values larger than the vertex.

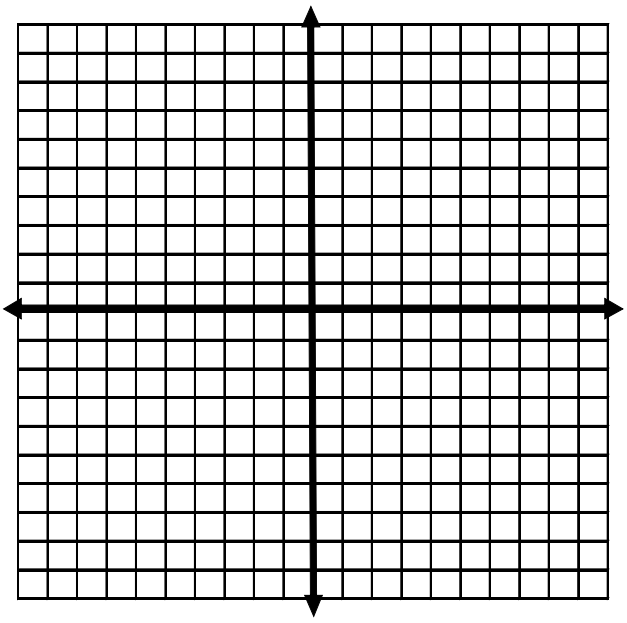
1. $y = -x^2 + 2x + 5$

x	y



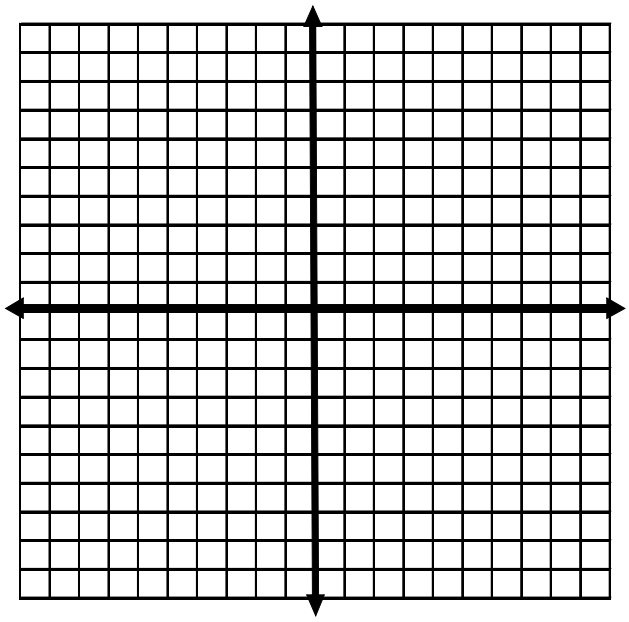
2. $y = \frac{1}{2}x^2 - 3$

x	y



3. $y = x^2 + 5x + 4$

x	y



THE ROOTS OF A QUADRATIC FUNCTION

The "**roots**" of a parabola are the ***x*-coordinates** of the points where the curve intercepts the x-axis. These values are also known as the "**zeros**" of the function.

A. Identify the **x-intercepts** of the function in example # 3.

x-intercepts: (____, ____) (____, ____)

B. Identify the **roots** of the function in example #3.

C. How can we determine the roots *algebraically*?

D. Identify the **roots** (zeros) of the function.