WAY COOL Algebra Name _____ Period ____

Parabolas Putting It All Together Assign #____

1) Declare the **coeffiecients** of each Quadratic.

$$y = \frac{1}{2}x^2 + x - 12$$

$a =$ _____ $b =$ _____ $c =$ _____

$$y = -x^2 + 8x - 1$$

$a =$ _____ $b =$ _____ $c =$ _____

2) Deterimine the parabola's a) **y-intercept** and b) **direction**.

a) b)

a) b)

3) Use the **Discriminant** to explain **how many solutions** and **if factorable** each Quadratic has. SHOW WORK!

4) Find the **Roots** by solving each **Quadratic**. **If factorable, then Factor, otherwise use Formula.** SHOW WORK!

5) Find the **Vertex** of each quadratic's parabola and use it to help make a table of values. SHOW WORK.

(____, ____)

(____, ____)

6) Make a **table** and **graph**. **LABEL** the Vertex, x-intercepts, and y-intercept.