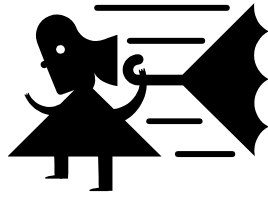


Algebra 2 Trig C

5.2 Notes

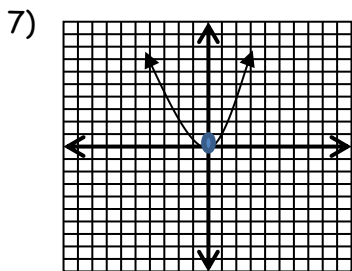


Name Key
Date _____ Hour _____

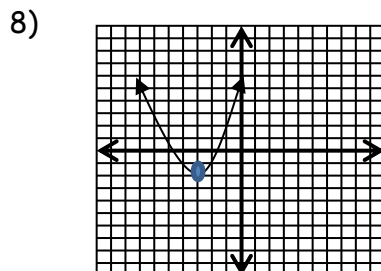
Part I: Does the parabola point up or down?

- 1) $y = -x^2 - 3x + 5$ **Down** 2) $y = x^2$ **UP** 3) $y = -5x^2 - 3x$ **Down**
 4) $y = -5x^2 - 3x + 5$ **Down** 5) $y = 3x + 5x^2$ **UP** 6) $y = -10x^2 - 3.8x + 500$ **Down**

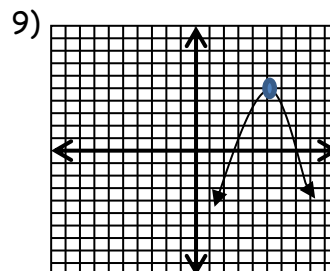
Part II: Find the domain and range.



D: all reals
R: $y \geq 0$



D: all reals
R: $y \geq -2$



D: all reals
R: $y \leq 5$

Part III: Sketch a graph of the parabola.

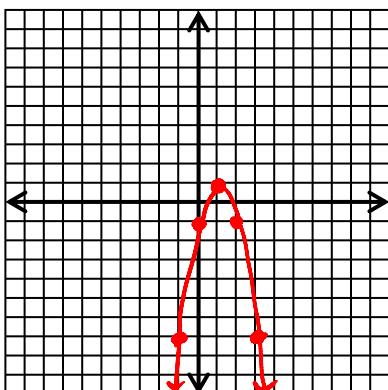
- Remember the 3 steps: 1) Find the vertex. $x = -\frac{b}{2a}$, plug in to find y
 2) Find another point. (The y-intercept might be helpful.)
 3) Use a table to graph the symmetric points. (**2nd** **Graph**)

13) $y = -2x^2 + 4x - 1$

14) $y = -x^2 + 8x - 5$

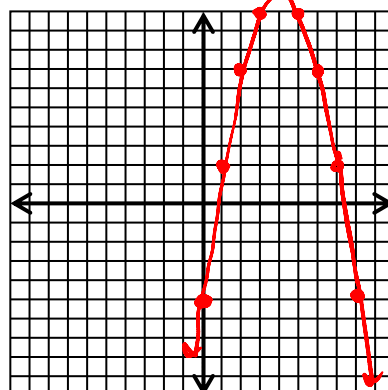
15) $y = -4x^2$

13) $y = -2x^2 + 4x - 1$



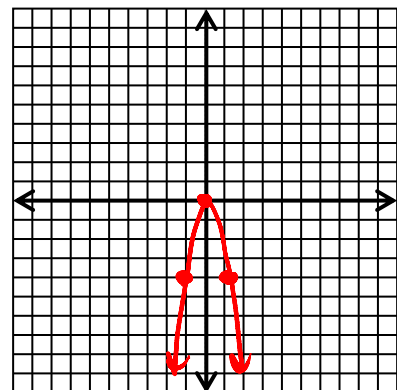
Vertex = (1, 1)

14) $y = -x^2 + 8x - 5$



Vertex = (4, 11)

15) $y = -4x^2$



Vertex = (0, 0)