Name_____

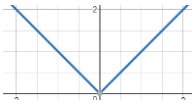
Date_____

Advanced Algebra-Assignment#2

Unit 6: Advanced Systems of equations **Non- Linear Shades**

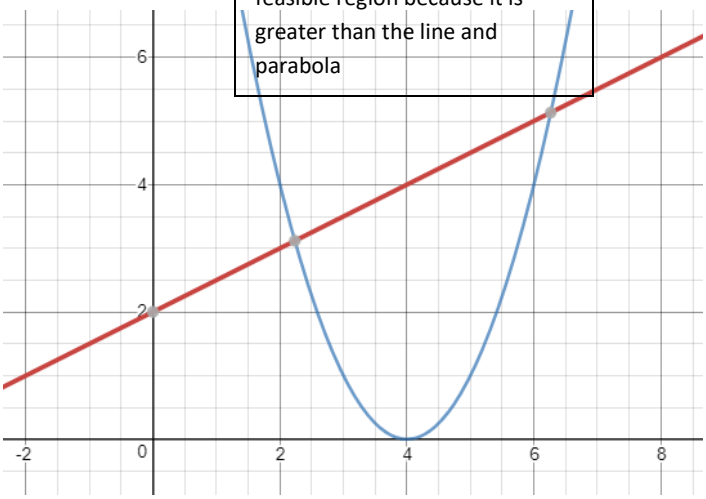
Graph the following and shade the Feasible Region

You are graphing a quadratic that is given to you in vertex form and a line or you are graphing an absolute value equation in vertex for and a line.

The parent graph of an absolute value (y=$|x|$)from Unit 2 is shown here 

Number 1 is shown as an example. I am first going to quickly graph the parabola. I then am going to graph the line. I know the y intercept and the slope of this line.

1) $\begin{cases} y \geq (x-4)^2 \\ y \geq \frac{1}{2}x + 2 \end{cases}$



2) $\begin{cases} y \leq -x^2 + 4 \\ y \leq -1x + 2 \end{cases}$

3) $\begin{cases} y \geq |x - 3| \\ y \leq -x^2 + 5 \end{cases}$

4) $\begin{cases} y \geq x^2 + 8x - 4 \\ y \leq -|x + 4| + 3 \end{cases}$

5) $\begin{cases} y \geq x^2 - 6x + 5 \\ y \leq x - 4 \end{cases}$

6) $\begin{cases} y \geq |x + 1| \\ y \leq -(x + 1)^2 \end{cases}$

7) $\begin{cases} y > (x + 1)^2 - 3 \\ y < x \end{cases}$

8) $\begin{cases} y \geq |x| \\ y \leq -2|x| + 2 \end{cases}$

9) $\begin{cases} y \geq x^2 \\ y \leq |x| \end{cases}$

10) $\begin{cases} y > (x + 3)^2 + 1 \\ y \leq -x + 2 \end{cases}$

11) $\begin{cases} y < -|x| \\ y \geq (x - 2)^2 \end{cases}$

12) $\begin{cases} y < -|x| \\ y > (x - 2)^2 \end{cases}$

13) $\begin{cases} y < -|x| \\ y > x^2 - 3 \end{cases}$

14) $\begin{cases} y > |x| \\ y > |x + 2| \\ y > |x - 2| \end{cases}$

15) $\begin{cases} y > x^2 \\ y < -x^2 + 1 \end{cases}$

16) $\begin{cases} y \geq |x + 1| \\ y \leq -(x + 1)^2 + 1 \end{cases}$