

Name \_\_\_\_\_

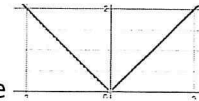
Date \_\_\_\_\_

### Advanced Algebra-Assignment#2

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

Graph the following and shade the Feasible Region

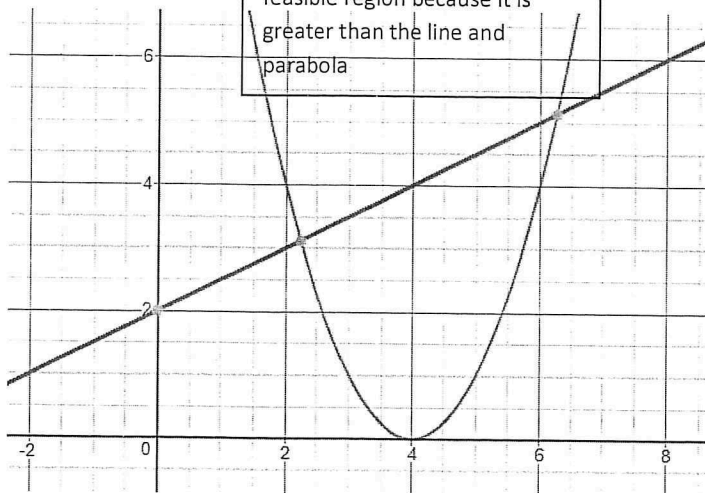
You are graphing a quadratic that is given to you in vertex form and a line or you are graphing an absolute value equation in vertex form and a line.



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

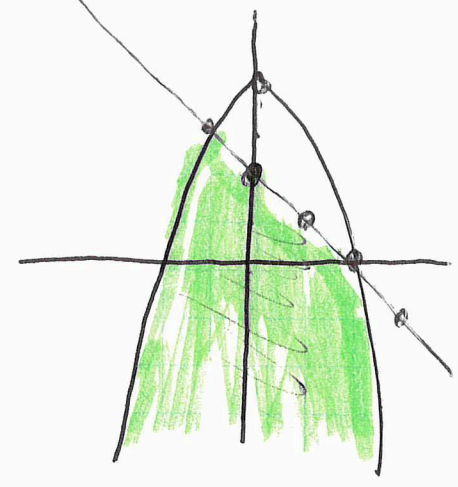
Number 1 is shown as an example. I am first going to quickly graph the parabola. I then am going to graph the line. I know the y intercept and the slope of this line.

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

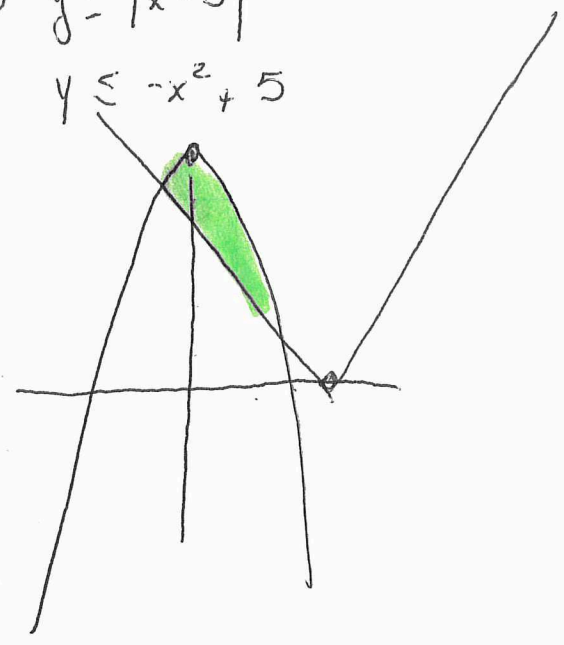


# Advanced Algebra Assignment #2

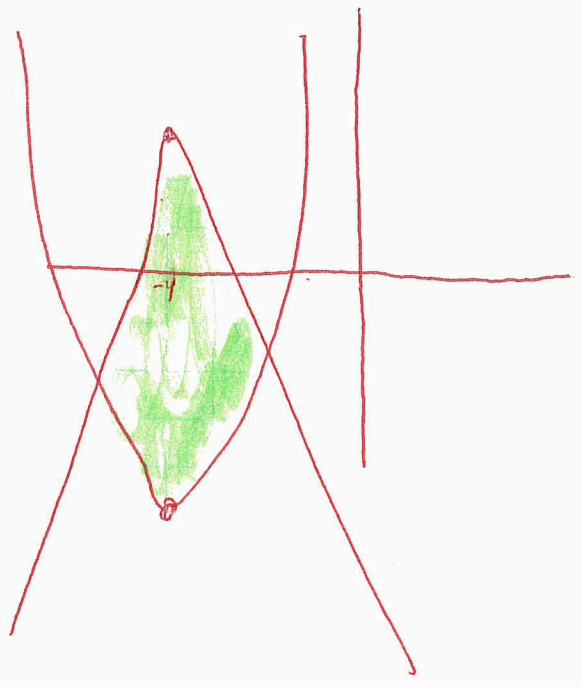
②  $y \leq -x^2 + 4$   
 $y \leq -x + 2$



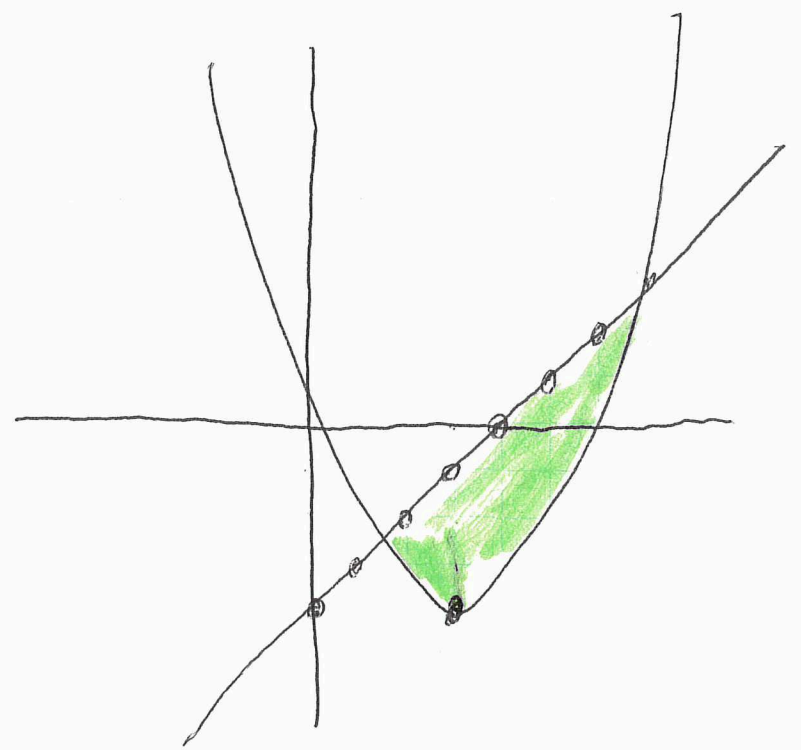
③  $y \geq |x - 3|$   
 $y \leq -x^2 + 5$



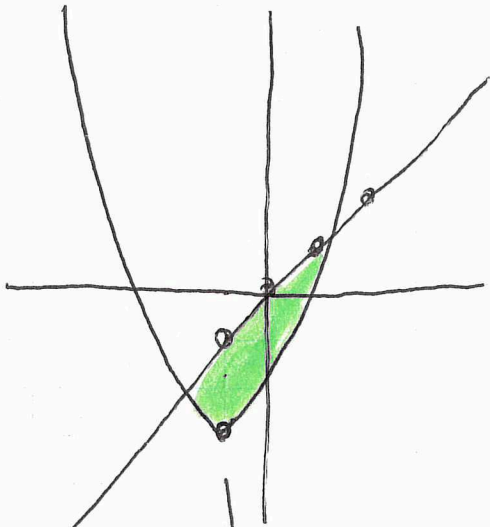
④  $y \geq x^2 + 8x - 4$   $(-4, -20)$   
 $y \leq -|x + 4| + 3$



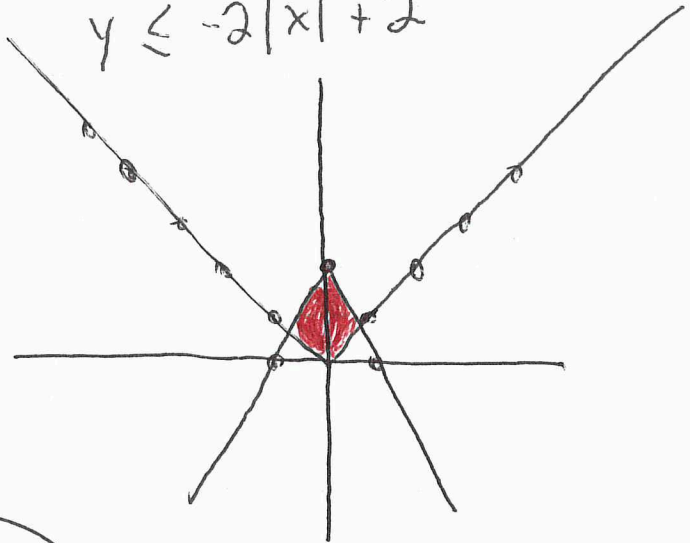
⑤  $y \geq x^2 - 6x + 5$   $\frac{6}{2} = (3, -4)$   
 $y \leq x - 4$



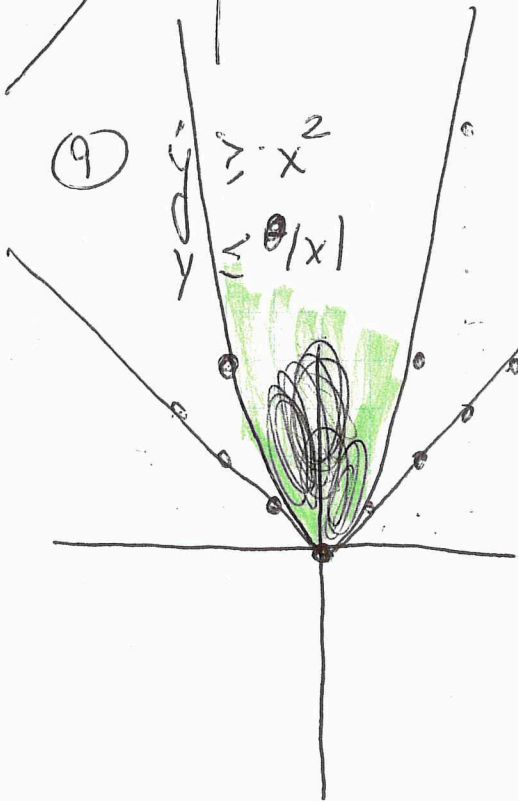
⑦  $y > (x+1)^2 - 3$   
 $y < x$



⑧  $y \geq |x|$   
 $y \leq -2|x| + 2$



⑨  $y \geq x^2$   
 $y \leq |x|$



(0,0)

