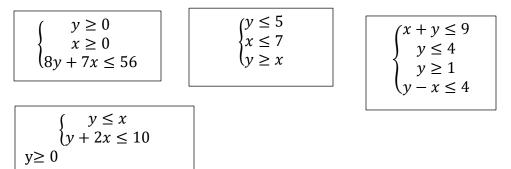
Name_____ Date_____

Advanced Algebra Unit 6: Advanced Systems of Equations Assignment #5

Graph the following problems, identify the corner points, and shade in the feasible region.



Finding where the line intersects the curve.

For the following problems, do the following:

- Make a graph of both functions on paper, guess your intersections
- Use algebra to solve where f(x)=g(x). This is setting a quadratic equal to a linear. So after you do this, get everything to 1 side and use the quadratic formula.
- Check your work by using the intersect feature on your calculator.

1)
$$\begin{cases} f(x) = -x^2 + 6x - 5 \\ g(x) = -x + 5 \end{cases}$$
 2)
$$\begin{cases} f(x) = -x^2 + 5 \\ g(x) = -x + 1 \end{cases}$$

3)
$$\begin{cases} f(x) = x^2 + 4x + 2\\ g(x) = \frac{-1}{2}x + 2 \end{cases}$$
4)
$$\begin{cases} f(x) = x^2 - 12x + 36\\ g(x) = \frac{-1}{3}x + 6 \end{cases}$$

5)
$$\begin{cases} f(x) = -x^2 + 8x - 10 \\ g(x) = -x + 8 \end{cases}$$
 6)
$$\begin{cases} f(x) = x^2 - 8x + 12 \\ g(x) = 3x - 4 \end{cases}$$