1. Graph the system of inequalities. 
   \( x \geq 5 \)
   \( y \geq -3 \)
   \( y \geq 2x - 6 \)

2. Graph the system of inequalities. 
   \( x < 6 \)
   \( y > -6 \)
   \( y < -2x + 8 \)

3. Find the minimum value and the maximum value of the objective function \( C = 3x + 2y \) subject to the given constraints. 
   \( x \geq 2 \)
   \( y \geq 1 \)
   \( x \leq 6 \)
   \( y \leq 6 \)

4. Find the minimum value and the maximum value of the objective function \( C = -2x + y \) subject to the given constraints. 
   \( x \geq -2 \)
   \( y \geq 0 \)
   \( 2x + y \leq 6 \)
   \( 3x + 2y \geq 6 \)

5. You are sewing doll clothes to sell at a craft show. Party dresses take 2.5 hours to make while casual sets take 1 hour. You make a profit of $9.00 on each party dress and $4.00 on each casual set. If you have no more than 30 hours available to sew and can make at most 15 outfits to sell, how many of each kind should you sew to maximize your profit? 

**Answers**

1. See grid at left.
2. See grid at left.
3. 
4. 
5. 

*Algebra 2*

Chapter 3 Resource Book

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