Do all your work and calculations on the test. Use the back of the page if you need additional work space. You may use a graphing or other calculator. You can use your book.

1. Solve: $2(x + 1) > x - 1$

2. Graph: $2(x - y) \geq x - 2$

3. Graph, shade the solution region, and find the corner points for the solution region:

   $x + 4y \leq 60$
   $4x + 2y \leq 100$
   $x \geq 0, y \geq 0$

4. Solve the following linear programming problem:

   Minimize $g = 22x + 17y$
   $8x + 5y \geq 100$
   $12x + 25y \geq 360$
   $x \geq 0, y \geq 0$

5. A company manufactures backyard swing sets of two different sizes. The larger requires 5 hours of labor to complete, the smaller requires 2 hours, and there are 700 hours of labor available each week. The packing department can pack at most 185 swing sets per week. If the profit is $100 on each larger set and $50 on each smaller set, how many of each should be produced to yield maximum profit? What is the maximum profit?