Extra Credit 2/5/14

Is the following inequality/equation *sometimes*, *always*, or *never* true? Why?

1. $2(10x-5)-9x \le 11x+13$

2. $8+6x-10=10x+11-4x$

Write a linear inequality that passes through the given point with the given slope and has as a solution (0,0) but not (-2,-1).

3. $(-3,-4), m=3$

Solve the equation.

4. $\frac{1}{4}r-\frac{1}{16}+\frac{1}{2}r=\frac{1}{2}+r$

   a. $\frac{9}{4}$ b. $\frac{7}{4}$ c. $-\frac{9}{4}$ d. $-\frac{7}{4}$

Use an algebraic equation to solve the problem.

5. Two cars leave Denver at the same time and travel in opposite directions. One car travels 10 mi/h faster than the other car. The cars are 300 mi apart in 3 h. How fast is each car traveling?

Use your knowledge of linear inequalities to answer the questions below.

6. $-3y+9 \le 5x$

   a) What is the slope of the boundary line? y-intercept?

   b) Should the line be solid or dashed?

   c) Shade above the line or below?

   d) Is the point (0,0) a solution to the inequality?

   e) Is the point (6,-7) a solution to the inequality?