SM2-A HW #6-11 (Solve Systems of Eq's by Graphing and Substitution) Period____

1) One order at "In-n-Out Burger" had 4 hamburgers and 5 large milkshakes. The total cost (without tax) was $21.56. Another order had 13 hamburgers and 8 milkshakes. The total cost (without tax) was $57.57. Let x = cost of a hamburger, y = cost of a milkshake

   (a) Write two equations that relate the total cost of the order to the number/cost of the hamburgers and drinks.

   (b) Solve the sytem of equations by graphing. What is the cost of a hamburger? What is the cost of a milkshake?

2) One order at "Joe's Pizza Bar" had 12 large pizzas and 5 small pizzas. The total cost (without tax) was $135.75. Another order had 3 large pizzas and 7 small pizzas. The total cost (without tax) was $72.75. Let x = cost of a large pizza, y = cost of a small pizza

   (a) Write two equations that relate the total cost of the order to the number/cost of the large/small pizzas

   (b) Solve the sytem of equations by graphing. What is the cost of a large pizza? What is the cost of a small pizza?

Solve each inequality. Provide the solution in "interval notation."

3) $(x-2)(x-6)>0$

Simplify.

4) $3\sqrt[4]{3}-2\sqrt[4]{48}$

Solve each system by graphing.

5) $y=\frac{1}{4}x+1$
   $y=x-2$

6) $y=\frac{1}{2}x-1$
   $y=\frac{5}{2}x+3$

7) $y = -x - 1$
$2x + 2y = -2$

8) $y = -\frac{1}{4}x + 4$
$y = -\frac{1}{4}x + 2$

Solve each system by substitution.

9) $y = 2x + 2$
$y = -5x + 9$

10) $y = x - 3$
$y = -7x - 19$

11) $8x - 3y = -13$
$y = -7x - 15$

12) $2x - 3y = 1$
$y = 4x + 3$

13) $x + 6y = 5$
$-5x - 2y = 3$

14) $x - 7y = 9$
$-5x - 4y = -6$