

MATH 102  
SPRING 2012  
EXAM 4

NAME:

1. 10 pts. each Solve each equation

(a)  $14 = 3x + 5$

(b)  $\frac{y}{3} + 4 = \frac{2y}{5} - 6$

2. 15 pts. Vinny receives a weekly salary of \$400 at Abbott's Appliances. He also receives a 7% commission on the total dollar amount of all sales he makes. What must his total sales be in a week if he is to make a total of \$790?

3. 15 pts. Jim is building a rectangular deck and wants the length to be 3 feet greater than the width. What will be the dimensions of the deck be if the perimeter is to be 54 feet?

4. 10 pts. Graph  $2x + 3y = 7$  by plotting at least three points. Make it neat!

5. 10 pts. Draw the graph of the inequality  $x < 3$  in the rectangular coordinate system.

6. 10 pts. Draw the graph of the inequality  $4y - 3x \geq 9$ .

7. 10 pts. Graph the system of linear inequalities and indicate the solution set

$$\begin{cases} x - 3y \leq 3 \\ x + 2y \geq 4 \end{cases}$$

8. 10 pts. Graph the system of linear inequalities and indicate the solution set

$$\begin{cases} y \leq 4 \\ x - y < 1 \end{cases}$$