## EXAM 2 - MATH 102 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 10 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. (a) Use the two intercepts to graph the line with equation 2x + 3y = 6.

(b) Find the slope m of the line that is perpendicular to the line with equation 5y + 10x = 3.

2. (a) Find the slope m of the line that passes through the points (1,0) and (-1,-1).

(b) Find an equation for the line that is parallel to the line of Part (a) and passes through the point (-1,3).

3. (a) Find the slope m and the y-intercept b of the line with equation y + 4 = -2(x - 5).

(b) Find an equation for the line passing through the points (6,0) and (9,1) and put it in the standard form with integer coefficients and positive x-coefficient.

4. (a) Solve the inequality  $2x + 3y \ge 6$ .

(b) Solve the compound inequality

x - 4y < 0 and  $3x + 2y \ge 6$ .

5. (a) Use substitution to solve the system 
$$\begin{cases} 2x + y = 9\\ 2x - 5y = 15 \end{cases}$$
.

(b) Use the addition method to solve the system  $\begin{cases} 2x - 5y = 13\\ 3x + 4y = -15 \end{cases}$ .