EXAM 1 - 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. Solve the linear equation 2(4x - 3) - 5x = 12.

2. JD is organizing a party. He would like to mix 2 pounds of peanuts selling for \$ 2.50 per pound with some amount of walnuts selling for \$ 5.50 per pound so as to obtain a party mix of nuts that cost \$ 4.30 per pound. Can you help JD determine how many pounds of walnuts he should buy?

3. Solve the absolute value inequality $|7 - 3x| \le 17$ and graph the solution set.

4. Find an equation for the straight line that passes through the point (1, 8) and is perpendicular to the line passing through the points (-2, 7) and (0, -3). Put your answer in the standard form with integer coefficients and positive x-coefficient.

5. Graph the solution set of the compound inequality in two variables

-2x - 3y > 6 and 5x - 2y < 10.