## HOMEWORK 5 - MATH 110 DUE DATE: Friday, October 11 INSTRUCTOR: George Voutsadakis

Read each problem very carefully before starting to solve it. Each problem is worth 3 points. It is necessary to show your work. Correct answers without explanations are worth 0 points.

## GOOD LUCK!!

- 1. Solve the equation 2x 5 = 7x 6.
- 2. Two speedboats start racing on a straight line at speeds of 30 mph and 45 mph, respectively. If the first needs 2 hours more to reach the destination point, how far away is the destination point from the starting point?
- 3. You are attending a party where the organizers are offering two kinds of booze. One has alcohol content 4 % and the second has alcohol content 12 %. A superstitious friend of yours that likes his liquor containing exactly 7 % asks you to mix him a 16 oz glass from the two drinks containing exactly 7%. How many oz of each liquor do you need?
- 4. Solve the equation 6y = 8x + 12.
- 5. Find the equation of the line that goes through the points (-1, 3) and (5, -3).
- 6. Find the equation of the line that is perpendicular to the line going through (5, 1) and (3, -2) and goes through the point (2, 1).