MTH 135 REVIEW GUIDE for Test 7

I. Solve the following systems of equations algebraically.

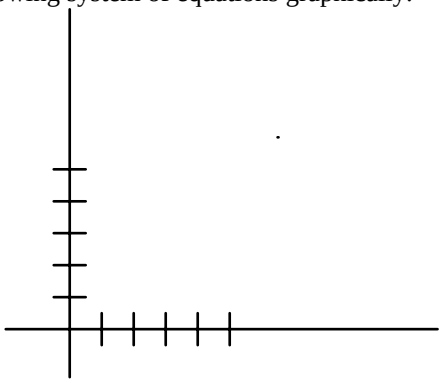
1.) $2y = 4x - 1$
$y = 3 + 2x$

2.) $3x + 5y = 11$
$2x - y = 3$

3.) $x = 3x - 2y + 4$
$y = x - 3y + 14$

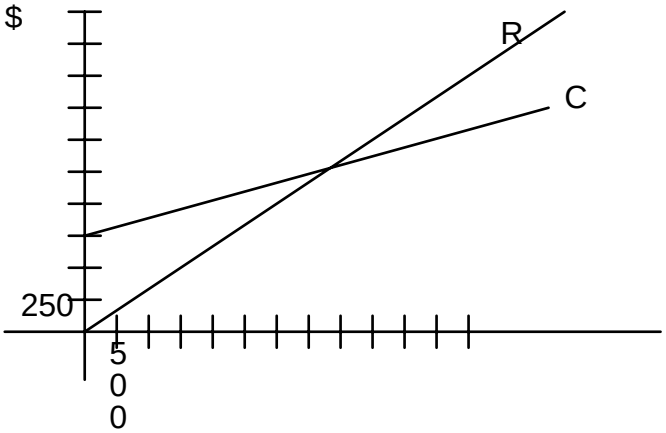
4.) $3x + 2y = 4$
$6x + 4y = 8$

II. Solve the following system of equations graphically.



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

III. The cost C, for a company to manufacture a certain candy bar is depicted below. The revenue R, for the number of candy bars sold is drawn on the same graph. The profit is the revenue minus the cost.



(1.) What is the startup cost of making the candy bars? _____
(2.) How many candy bars can be made for $1000? (hint: Look at the cost line.)
(3.) What is the revenue when 2000 candy bars are sold? _____
(4.) How many candy bars must be sold for the company to break even? _____
(5.) What is the profit when 6000 candy bars are sold? _____

IV. Solve the following application problems.

1.) A messenger is sent from the rear to the front of a column of soldiers 3 kilometers long. If the column is marching forward at a rate of 5 kilometers per hour, how long does it take the messenger to deliver the message?

2.) Herb of WKRP is going to produce a rock concert. The band will cost $20,000, promotions will cost $10,000 and the arena has 8000 seats. He decides to sell reserved seats at $9 each and general seats at $5 each. Assuming a full house, how many reserved seats must be sold to realize a profit of $30,000?

3.) There will be something similar to supplementary problem #1 in the homework.

4.) Expect a mixture problem involving money.

Additionally, make sure you understand all of the homework problems.