LINEAR WORD PROBLEMS IN STANDARD FORM Moundros – Algebra Name:
Sometimes there is no slope given or there <i>appears</i> to be 2 slopes! These two numbers are the number per x and the number per y. Each of these is multiplied to x and y, respectively. There is no beginning amount, nor are there points given. However, there may be a TOTAL involved. In this case, the equation can be written in $Ax + By = C$ form with C being the total amount. <i>Neither variable is dependent on the other in this case!</i>
1. A 100-point test has x questions worth 2 points apiece and y questions worth 4 points apiece.
a. Write an equation that describes all possible numbers of questions that may be on the test.
b. If you have 24 questions worth 4 points apiece, how many questions will be worth 2 points apiece?
2. Louise has \$36 in five-dollar bills and singles. How many of each type of bill does she have?
a. Write an equation.
b. If Louse has 2 five-dollar bills, how many singles does she have?

3. The Ramy family bought 4 sandwiches and 3 salads. They spent \$24. Let x be the cost of a sandwich and y be the cost of a salad.

- a. Write an equation.
- b. If each sandwich costs \$3.75, how much did each salad cost?

4. The store at which Andy usually shops is having a sale. Roast beef costs \$4 a pound and shrimp costs \$10 a pound.
a. Write an equation to describe different possible combinations of Roast beef and shrimp that he can buy for \$96.
b) What is the greatest amount of shrimp he can buy?
5. It will take 20 points to make the playoffs, the hockey team coach told the players. "We get 2 points for a win and 1 point for a tie." Let W be the number of wins and T the number of ties.
a. Write an equation to describe the values of W and T that will let the team make the playoffs.
b. If the team wins 7 games, how many tie games will need to occur?