

LINEAR WORD PROBLEMS IN STANDARD FORM $Ax + By = C$

1. A 100-point test has x questions worth 2 points apiece and y questions worth 4 points apiece.

What is the total that is given? _____

What do the variables stand for:

$x =$ _____, $y =$ _____

- 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?

What is the total that is given? _____

What do the variables stand for:

$x =$ _____, $y =$ _____

- a. Write an equation.
- b. If Louise has 2 five-dollar bills, how many singles does she have?

3. The Remy 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.

What is the total that is given? _____

What do the variables stand for:

$x =$ _____, $y =$ _____

- 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.

Identify the variables in this situation: $x =$ _____ $y =$ _____

What is the given information in this problem (find all that apply)?

y-intercept _____ slope _____ Total: _____

one point (_____ , _____) a second point: (_____ , _____)

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.

Identify the variables in this situation: $x =$ _____ $y =$ _____

What is the given information in this problem (find all that apply)?

y-intercept _____ slope _____ Total: _____

one point (_____ , _____) a second point: (_____ , _____)

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?