
 NAME _____

- Module 7** Solving Linear Equations and Inequalities of Two Variables
- Lesson 4** Solving Consumer/Business Problems Using Linear Equations and Inequalities of Two Variables


 guided
practice
Set 1

1. Fliegle Airways charges \$475 for a first-class ticket from St. Paul to Chicago and \$280 for a business-class ticket. On a recent flight between St. Paul and Chicago, Fliegle Air collected \$10,045 in ticket sales. If 7 passengers were flying first-class, how many passengers were in business class?

Twenty-four passengers were in business class.

2. Jacinda owns a music and video resale store called Rewind. She charges \$10 for used DVDs and gives customers a \$6.25 store credit for the used CDs that the customer trades. A customer recently paid \$20 for a group of used DVDs after bringing in a group of CDs to exchange. If the customer took home 7 used DVDs, how many used CDs did he bring to the store?

The customer brought in 8 used CDs.

3. Roxy plans to sell printed T-shirts at her dance. The one time set-up fee for printing the shirts is \$45.50, and the cost per shirt is \$3.25. If Roxy spent \$416 on the shirts and set-up fee, how many shirts did she get?

Roxy got 114 T-shirts.

Set 2

1. Tracy will compete in a 2-minute free throw competition on a local basketball court. She will earn 1 point for each free throw she makes in the first minute and 2 points for each free throw she makes in the second minute. Tracy needs to earn over 25 points to advance to the regional competition. Write an inequality to model the situation.

f = number of free throws in minute 1

t = number of free throws in minute 2

$1f + 2t > 25$

2. Use the equation you wrote for question 1 to answer this question. What is the minimum number of free throws Tracy will need to make in the second minute if she makes 7 free throws in the first minute?

The minimum number of free throws Tracy needs in the second minute is 10.

3. Roxy charged boys \$6 each for dance tickets and girls \$9 each. A group of students came to the dance and spent a total of \$48 on tickets. Find all the possible combinations of boys and girls who were in this group.

b = number of boys

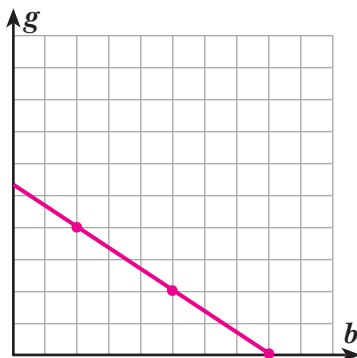
g = number of girls

$$6b + 9g = 48$$

(2, 4) 2 boys and 4 girls

(5, 2) 5 boys and 2 girls

(8, 0) 8 boys and 0 girls



4. Joe, Don, and Phil went to a baseball game. They had \$24 to spend on food. If hamburgers cost \$4 and hot dogs cost \$3, find all possible combinations of hamburgers and hot dogs they could buy.

x = number of hamburgers

y = number of hot dogs

$$4x + 3y = 24$$

(6, 0) 6 hamburgers, 0 hot dogs

(3, 4) 3 hamburgers, 4 hot dogs

(0, 8) 0 hamburgers, 8 hot dogs

