Wisdom Lane Middle School Homework #54 Date:_____
Name:_____ Period:_____
Teacher: Mr. Tomeo

Standard Form Word Problems

- The standard form of a line is of the form $Ax + By = C$.

Solve each of the following by first writing the line in **standard form**. An example is done for you.

Example:

You are running a concession stand at the basketball game. You sell hot dogs for $1 and sodas for $0.50. At the end of the night, you made $200. Let x represent the number of hot dogs sold and y represent the number of sodas sold.

Ax + By = C
Hot dogs + Sodas Total

1x + .50y = 200

x + .50y = 200 (We don't need the coefficient of 1 in front of the x.)

$1 • # of hot dogs + 0.50 • # of sodas = Total

1. You are in charge of buying food for your family reunion. You spend $90 on hamburgers and turkey burgers. You pay $1.50 for each hamburger and $2 for each turkey burger. Let x be the number of hamburgers and y be the number of turkey burgers.

   a. Write an equation in standard form that represents the situation.

   b. If you bought 30 turkey burgers, how many hamburgers did you buy?

2. You are selling drinks at the carnival to raise money for your club. You sell lemonade for $2 per cup and orange drinks for $3 per cup. Your sales totaled $240. Let x be the number of cups of lemonade and y be the number of orange drinks.

    a. Write an equation in standard form that represents the situation.

    b. If you sold 60 cups of lemonade, how many cups of orange drink did you sell?

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3. A weightlifter uses 45 pound plates and 10 pound plates to lift 260 pounds. Let x represent the number of 45 pound weights and y represent the number of 10 pound weights.

    a. Write an equation in standard form the represents the situation.

    b. If the weightlifter uses eight 10-pound weights, how many 45 pound weights did he use?

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4. You have $.80 in your backpack in dimes and quarters. Let x represent the number of dimes and y represent the number of quarters.

    a. Write an equation in standard form that represents the situation.

    b. If you have 2 quarters in your backpack, how many dimes do you have?