Assignment: Solve by Elimination

Choose any three (3) of the following four problems to solve.

1. A local movie theater charges $12 for an adult ticket and $10 for a child's ticket. A group of eight people spent a total of $86 on tickets to a movie. How many adults and how many children were in the group?

    a. Write a system of linear equations based on the description. Use x to represent the number of adults and y to represent the number of children.

    b. Solve the system using the elimination method. Show all the steps leading to your answer.

    c. Write 1-2 sentences to explain what the solution means for this situation.

2. A child has a piggy bank that contains only quarters and dimes. Altogether, there are 27 coins in the bank and the total value of the coins is $4.50. How many quarters and how many dimes are in the piggy bank?

    a. Write a system of linear equations based on the description. Use x to represent the number of quarters and y to represent the number of dimes.

    b. Solve the system using the elimination method. Show all the steps leading to your answer.

    c. Write 1-2 sentences to explain what the solution means for this situation.

3. A new online store charges all customers one price to download any song and another price to download any game. Jenna paid $20.50 to download eight songs and three games, and Dwayne paid $22.50 to download four songs and five games. How much does the store charge to download each song and game?

a. Write a system of linear equations based on the description. Use x to represent the cost of each song and y to represent the cost of each game.

b. Solve the system using the elimination method. Show all the steps leading to your answer.

c. Write 1-2 sentences to explain what the solution means for this situation.

4. A seafood company sells salmon and shrimp to local restaurants. The company charges its customers one price for salmon and another price for shrimp. One restaurant pays $166.83 for ten pounds of salmon and seven pounds of shrimp, while another pays $143.86 for five pounds of salmon and nine pounds of shrimp. How much does each seafood product cost per pound?

a. Write a system of linear equations based on the description. Use x to represent the number of pounds of salmon and y to represent the number of pounds of shrimp.

b. Solve the system using the elimination method. Show all the steps leading to your answer.

c. Write 1-2 sentences to explain what the solution means for this situation.