

# Solving Systems by Elimination

## Word Problems (Value Problems)

Name \_\_\_\_\_

Date \_\_\_\_\_ Per \_\_\_\_\_

- ① 1. One taco deluxe and two shakes provide 1460 calories. <sup>What are we talking about?</sup> Two taco deluxes and three shakes provide 2360 calories. Find the caloric content of each item.

Let  $t$  = taco's caloric content  
 Let  $s$  = shake's caloric content

Equation:  $1t + 2s = 1460$

\*Equation:  $2t + 3s = 2360$

$$\begin{array}{r} -2[1t + 2s = 1460] \\ -2t - 4s = -2920 \\ + 2t + 3s = 2360 \\ \hline -s = -560 \\ \hline -1 \quad -1 \\ s = 560 \end{array}$$

Sentence: Tacos have 340 calories and shakes have 560 calories.

2. Seven hot dogs and four hamburgers cost \$13.00. Four hot dogs and seven hamburgers cost 14.50. Find the cost of one hot dog and the cost of one hamburger.

Let \_\_\_\_\_ = \_\_\_\_\_

Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence: \_\_\_\_\_

3. Your club is selling boxes of cookies for a fund raiser. Peanut wafers cost \$4 a box and chocolate crisps cost \$6 a box. Together the club sells 525 boxes of cookies and collects \$2876. How many of each type of cookie did the club sell?

Let \_\_\_\_\_ = \_\_\_\_\_

Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence: \_\_\_\_\_

4. The Booster Club voted to go to a baseball game for their annual trip. They bought some children's tickets and some adult tickets for a total of 29 tickets. The children's tickets cost \$21 dollars each and the adult tickets cost \$27 dollars each for a total of \$675. How many of each ticket did they buy?

Let \_\_\_\_\_ = \_\_\_\_\_

Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence: \_\_\_\_\_

**Solving Systems by Elimination**  
**Word Problems (Coin Problems)**

Name \_\_\_\_\_  
 Date \_\_\_\_\_ Per \_\_\_\_\_

1. Jane saved up 20 coins, all nickels and quarters, and when she counted it, she had \$3.00. How many nickels and how many quarters did she have?

Let  $n$  = # of nickels  
 Let  $q$  = # of quarters

Equation:  $n + q = 20$

\* Equation:  $.05n + .25q = 3.00$

$$\begin{array}{r}
 100 [.05n + .25q = 3.00] \\
 * 5n + 25q = 300 \\
 -5[n + q = 20] \\
 \hline
 -5n - 5q = -100 \\
 * +5n + 25q = 300 \\
 \hline
 20q = 200 \\
 \frac{20q}{20} = \frac{200}{20} \quad q = 10
 \end{array}$$

$$\begin{array}{r}
 n + 10 = 20 \\
 \underline{-10 \quad -10} \\
 n = 10
 \end{array}$$

Sentence: Jane has 10 nickels and 10 quarters

2. Joey has 12 coins consisting of dimes and nickels. If the total value of the coins is .75¢, how many are dimes and how many are nickels.

Let \_\_\_\_\_ = \_\_\_\_\_  
 Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence:

3. A jar of dimes and quarters contains \$15.25. There are 103 coins in all. How many dimes are there, and how many quarters?

Let \_\_\_\_\_ = \_\_\_\_\_  
 Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence:

4. When Julio cracked open his piggy bank, he found 94 coins all quarters and dimes. He found that he had \$17.20. How many quarters and how many dimes did Julio have?

Let \_\_\_\_\_ = \_\_\_\_\_  
 Let \_\_\_\_\_ = \_\_\_\_\_

Equation: \_\_\_\_\_

Equation: \_\_\_\_\_

Sentence: