

More Word Problems - Yay!

Use the questions below to write a set of equations to solve the problems.



1. Samantha has 30 coins, quarters and dimes, which total \$5.70. How many of each does she have?

Let's analyze the problem...

a) We are being asked to find the number of _____ and _____.



b) Since we are finding the number of _____ and _____ these are our two variables. We are going to assign _____ the letter _____ and _____ the letter _____.

c) The two totals we are given are _____ coins and \$ _____.

Because we have been given two variables to solve for, and two totals, we will need to write two equations.

Equation 1 – Total Number of Coins

Equation 2 – Total Value of Coins

$$\frac{\text{total coins}}{\text{total coins}} = \frac{\text{nickels}}{\text{nickels}} + \frac{\text{dimes}}{\text{dimes}}$$

$$\frac{\text{total value of coins}}{\text{total value of coins}} = \frac{\text{nickel value}}{\text{nickel value}} + \frac{\text{dime value}}{\text{dime value}}$$

Solve the system of equations:

2) If 4 apples and 2 oranges equals \$1 and 2 apples and 3 orange equals \$0.70, how much does each apple and each orange cost?

a) We are being asked to find the cost of each _____ and each _____.



b) Since we are finding the cost of _____ and _____ these are our two variables. We are going to assign _____ the letter _____ and _____ the letter _____.



c) The two totals we are given are \$_____ for 4 apples (____) and 2 oranges (____) AND \$ _____ for 2 apples (____) and 3 oranges (____).

Equation 1

$$\frac{\text{cost}}{\text{cost}} = \frac{\text{apples}}{\text{apples}} + \frac{\text{oranges}}{\text{oranges}}$$

Equation 2

$$\frac{\text{cost}}{\text{cost}} = \frac{\text{apples}}{\text{apples}} + \frac{\text{oranges}}{\text{oranges}}$$

Solve the system of equations:

3) The school's dance team had their spring show last night. The admission price for students was \$4 per person; the admission price for adults was \$2 per person. If 105 tickets were sold, and \$270 was collected in admissions, how many adult, and how many student tickets were sold?



a) We are being asked to find _____ and _____.

b) Since we are finding the number of _____ and the number of _____ these are our two variables. We are going to assign _____ the letter _____ and _____ the letter _____.

c) The two totals we are given are \$_____ the total amount collected in admissions and _____ the total number of adults and students attending.



Equation 1 – Total Number of Tickets Equation 2 – Total Value of Tickets

$$\frac{\text{total tickets}}{\text{students}} = \frac{\text{students}}{\text{students}} + \frac{\text{adults}}{\text{adults}} \quad \frac{\text{total value of tickets}}{\text{student value}} = \frac{\text{student value}}{\text{student value}} + \frac{\text{adult value}}{\text{adult value}}$$

Solve the system of equations: