

**Lesson #2 C-2: Understanding and Solving Systems of Equations-Applications of Systems of Equations**  
(Reference: Lesson #15, #21 & #24 in book)**Problem**

- 1. For each of the following application word problems, please create two equations from the given information and then solve the system of equations using the method of your choice. (SHOW ALL OF YOUR WORK.)**
  1. A motel clerk counts his \$1 and \$10 bills at the end of a day. He finds that he has a total of 74 bills having combined monetary value of \$326. Find the number of bills of each denomination that he has.
  2. An investor buys a total of 360 shares of two stocks. The price of one stock is \$35 per share, while the price of the other stock is \$45 per share. The investor spends a total of \$15000. How many shares of each stock did the investor buy?
  3. The two top-grossing North American concert tours in 2007 were The Police and Van Halen. Based on the average ticket prices for these tours, it cost a total of \$1217 to buy six tickets for The Police and five tickets to a Van Halen concert. Three tickets for The Police and four tickets for Van Halen cost a total of \$781. How much did an average ticket cost for each tour?
  4. The state fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 8 vans and 8 buses with 240 students. High School B rented and filled 4 vans and 1 bus with 54 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus
  5. A catering company is setting up tables for a big event that will host 764 people. When they set up the tables they need 2 forks for each child and 5 forks for each adult. If the company ordered a total of 2992 forks, how many adults and how many children will be attending the event?
  6. Harold had a summer lemonade stand where he sold small cups of lemonade for \$1.25 and large cups for \$2.50. If Harold sold a total of 155 cups of lemonade and collected a total of \$265, how many cups of each type did he sell?
  7. Lakota bought 6 new compact disks and 2 used compact disks for \$127.92. At the same prices, Mackenzie bought 3 new compact disks and 8 used compact disks for \$133.89. Find the cost of buying a single used compact disk.
  8. Galina spent \$3.60 for stamps to mail packages. Some were 30¢ stamps and the rest were 20¢ stamps. The number of 20¢ stamps was 2 less than the number of 30¢ stamps. How many stamps of each kind did Galina buy?