

## Applications for Systems of Equations

1. Lisa sold tickets for a local play. Children's tickets cost \$4 each and adult tickets cost \$6 each. If 383 tickets were sold for a total of \$2034, how many of each type of ticket were sold?

2. There were 330 people at a play. The admission price was \$3 for adults and \$1 for children. The admission receipts were \$650. How many adults and how many children attended?

4. A standardized test has 125 questions worth a total of 1300 points. The test has two types of questions: true/false and multiple choice. Each true/false question is worth 8 points, and each multiple choice question is worth 14 points. How many of each type of question is on the test?

5. The Smiths generate one-and-a-half times as much trash as their neighbors, the Joneses. Together, the two households produce 15 bags of trash each month. How much trash does each household generate?

6. A woman made a deposit of \$196. If her deposit consisted of 60 bills, some of them one-dollar bills and the rest being five-dollar bills, how many one-dollar bills did she deposit?

7. Super J-mart will sell 5 large jars and 2 small jars of their jelly for \$19. They will also sell 2 large jars and 5 small jars for \$16. What is the price of each jar?

8. Kelly has 36 coins in her purse, only nickels and quarters. She has eight more quarters than nickels. If she has a total of \$6.20, how many nickels and quarters does she have?

10. Sarah went to Borders and bought 2 CDs and 4 DVDs for \$109.94. Adam bought 3 CDs and 2 DVDs for \$84.95. If all CDs are the same price, and all DVDs are the same price, how much is a single CD and how much is a single DVD?

11. The setup cost of a machine that mills brass plates is \$750. After setup, it costs \$0.25 to mill each plate. Management is considering the purchase of a larger machine that can produce the same plate at a cost of \$0.20 per plate. If the setup cost of the larger machine is \$1,200, how many plates would the company have to produce to make the purchase worthwhile?

**Answers:** 1) Children: 132, Adults: 251    2) Children: 170, Adults: 160      
4) T/F: 75; MC: 50    5) Smiths: 9 bags; Jones': 6 bags    6) Ones: 26 Fives: 34    7) Large: \$3 ; Small: \$2  
8) Nickels: 14 Quarters: 22     10) CDs: \$14.99; DVDs: \$19.99    11) More than 9000 plates.