

**Practice Set 5.4**  
Problem Solving Using Systems of Equations

Write a system of equations for each problem. Solve the system to solve the problem.

1. The sum of two numbers is 11. The first number is one less than twice the second. Find the two numbers. 1. \_\_\_\_\_
  
2. The difference between two numbers is 14. When twice the first number is added to the second number, the result is 10. Find the two numbers. 2. \_\_\_\_\_
  
3. The sum of two numbers is  $-16$ . One number is three times the other number. Find the two numbers. 3. \_\_\_\_\_
  
4. Three hundred tickets were sold for the annual pancake breakfast. Adult tickets cost \$5.00 and tickets for children under the age of twelve cost \$2.50. Total receipts for the breakfast were \$1,187.50. Find the number of adult tickets sold and the number of children's tickets sold. 4. \_\_\_\_\_
  
5. The perimeter of a rectangle is 78 centimeters. The length of the rectangle is 6 centimeters less than twice the width. Find the dimensions of the rectangle. 5. \_\_\_\_\_
  
6. The perimeter of a rectangle is 56 inches. The length of the rectangle is 4 inches less than three times the width. Find the dimensions of the rectangle. 6. \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

7. The inmates of a state prison are responsible for maintaining a large vegetable garden. The garden is rectangular in shape and has a perimeter of 500 feet. The width is two-thirds as long as the length. Find the dimensions of the garden. 7. \_\_\_\_\_
8. Grace has 25 coins in her purse, all nickels and quarters. When she counted, she found she had a total of \$3.85. How many nickels did she have? How many quarters? 8. \_\_\_\_\_
9. Heather bought 100 stamps at the post office. She bought some 30¢ stamps and some 39¢ stamps and spent a total of \$34.95. How many of each kind of stamp did she buy? 9. \_\_\_\_\_
10. Maggie and Addison went shopping after Christmas. Maggie bought 4 pairs of socks and 2 sweaters, and spend \$60. Addison spent \$75 on 1 pair of socks and 3 sweaters. Find the cost of one pair of socks. Find the cost of one sweater. 10. \_\_\_\_\_
11. Jeff works two part-time jobs to make ends meet while attending college. He makes \$6 an hour at the coffee shop and \$8.45 an hour cleaning offices at night. If he worked 24 hours last week and made \$180.75, how many hours did he work at each job? 11. \_\_\_\_\_
12. Amanda bought some fish for her new freshwater aquarium. She spend \$45.80 on neon Tetras costing \$2.00 each and giant Danios costing \$3.40 each. If she bought 4 more neon Tetras than giant Danios, how many of each type fish did she buy? 12. \_\_\_\_\_