

## Solving Systems of Equations by Substitution—Problem Solving

Write a system of equations for each word problem, then solve the system using substitution. Be sure to identify what your variables represent and label your answers with units.

11. Two small bowls and one large bowl can hold a total of 8 cups of cereal. If there is only one large bowl of cereal left and my mom makes me pour part of the large bowl out to fill one small bowl for my little brother, I only get 2 cups of cereal. How many cups does each size bowl hold?

Small Bowl holds 2 cups, Large bowl holds 4 cups

12. Matt has 28 coins. All of them are either dimes or nickels. The coins are worth a total of \$2.60. Find how many dimes and how many nickels he has.

Matt has 24 Dimes & 4 Nickels

13. At Margo's Restaurant, the cost of a piece of toast and a glass of orange juice is \$2.10. The cost for two pieces of toast and 3 glasses of orange juice is \$5.15. How much does a piece of toast cost, and how much does a glass of orange juice cost?

Slice of toast costs \$1.15 & glass of o.j. costs \$0.95

### More Practice/Review

Solve. Show your work!

1.  $4x + 10 = 46$

$x = 9$

2.  $9x + 8 = 19x - 2$

$x = 1$

3.  $10(2x + 7) = 130$

$x = 3$

4.  $2x + 5x + 3(x + 4) = 12x$

$x = 6$

Solve for the indicated variable. Show your work!

5.  $7x + 4y = 21$ , for  $x$

$x = 3 - \frac{4}{7}y$

6.  $24x - 8y = 32$ , for  $y$

$y = 3x - 4$