1 Use the Problem-Solving Procedure.
   1. **Identify what** you are being asked to find.
   2. Translate the problem into an equation.
      a) Choose a variable to represent one quantity and write down exactly what it represents.
      b) Represent any other quantity in terms of this variable.
      c) Use this information to write an equation that represents the application. Is means =.
   3. Solve the equation.
   4. **Check the answer** in the word problem to see if it seems reasonable.
   5. **Write a statement** of your result. Be sure to include any units.

2 Set Up and Solve Number Application Problems.
   These problems involve finding unknown numbers, but not percents.

   **Example 1** Solve each problem for the unknown number(s).
   a) Nine less than five times a number is 76. Find the number.

   b) The difference between two number is 16. Find the two numbers if the smaller number is 4 less than two-thirds of the larger number.

   c) The room numbers of two adjacent hotel rooms are two consecutive even numbers. If their sum is 2474, find the room numbers.

3 Set Up and Solve Application Problems Involving Money.
   1) Make sure the monetary units are the same. If the information is in both dollars and cents, convert cents to dollars.
   2) In your statement, be sure to include $ or dollars.

   **Example 2** Solve.
   a) Sarah ordered some DVD’s from an online company. The company charged $10.25 per DVD, plus $15 for shipping and handling. How many candles did Sarah order if her bill was $179?
b) Erin’s cell phone company charges $29.99 per month plus 7 cents for each minute of use over 450 minutes. One month her bill was $45.74. How many minutes did Erin use that month?

4 Set Up and Solve Applications Concerning Percent.
1) Percent is always percent of something, so if the cost, $x$, is increased by a certain percent, the new cost is $x + \%(x)$.
2) Always change percent to decimal when solving a problem.

Example 3 Solve.

a) Capitola city employees were recently given a 4.6% salary decrease. If a city employee’s salary was $42,000 before the decrease, what is the employee’s salary now?

b) The cost of a new rocking chair, including 6% sales tax, was $284.61. What was the price of the rocking chair before tax?

c) The new tax plan approved by congress will raise taxes on the wealthy by about 8%. If a wealthy taxpayer formerly paid $32,000 in taxes, what will the new tax bill be?