

1-1 Study Guide and Intervention***A Plan for Problem Solving*****Four-Step Problem-Solving Plan**

When solving problems, it is helpful to have an organized plan to solve the problem. The following four steps can be used to solve any math problem.

- 1. Understand** – Get a general understanding of the problem. What information is given?
- 2. Plan** – Select a strategy to solve the problem and estimate the answer.
- 3. Solve** – Carry out your plan to solve the problem.
- 4. Check** – Determine the reasonableness of your answer compared to your estimate.

Example 1 Use the four-step plan to solve the problem.

RECREATION A canoe rental store along the Illinois River in Oklahoma has 30 canoes that it rents on a daily basis during the summer season. If canoes rent for \$15 per day, how much money can the store collect for canoe rentals during the month of July?

Understand You know that they rent 30 canoes per day for \$15 each. You need to determine the total amount of money that can be collected during the month of July.

Plan First, find the total amount of money that can be collected each day by finding the product of 30 and 15. Next, multiply the previous result by 31, the number of days in July. You can estimate this result by 30. $30 \times 15 \times 30 = 13,500$

Solve Since $30 \times \$15 = \450 , the canoe rental store can collect \$450 in rental fees each day. This means the total amount of money that could be collected during the month of July is $\$450 \times 31$ or \$13,950.

Check Is your answer reasonable? The answer is close to the estimate of \$13,500.

Exercises

Use the four-step plan to solve each problem.

- 1. MONEY** Colin works for his dad during summer vacation. His dad pays him \$5.20 per hour and he works 20 hours per week. How much will Colin earn during his 8-week summer vacation? **\$832.00**
- 2. BOOKS** A student assistant in the school library is asked to shelve 33 books. If he puts away 9 books the first hour and then 6 books each hour after that, how long will it take him to shelve all 33 books? **5 hours**
- 3. SHOPPING** Alicia bought a \$48 sweater on sale for \$25 and a \$36 purse on sale for \$22. How much did Alicia save? **\$37**
- 4. MAIL** It cost Ramon \$3.73 to mail a package to his grandmother. The post office charged \$2.38 for the first pound and 45 cents for each additional pound. How much did the package weigh? **4 pounds**