

Lesson 1 Reteach

A Plan for Problem Solving

Four-Step 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
2. **Plan**—make a plan to solve the problem and estimate the solution
3. **Solve**—use your plan to solve the problem
4. **Check**—check the reasonableness of your solution

Example According to a recent study, 1 out of every 10 people is left-handed. If there are 172 people in the eighth grade, predict the number of students who are left-handed.

Understand You know that 1 out of 10 people is left-handed. You also know that there are 172 people in the eighth grade. You need to predict how many of the students are left-handed.

Plan Make a table to organize the information and look for a pattern.

Number of people	10	20	30	40	50
Number who are left-handed	1	2	3	4	5

Solve By extending the pattern, you can predict that 17 students will be left-handed.

Check For every 10 students in the class, 1 is left-handed. There are 17 groups of 10 in a class of 172 and $17 \times 1 = 17$. The answer is correct.

Exercises

Use the four-step plan to solve each problem.

1. James needs to buy one can of orange soda for every three cans of cola. If James buys 24 cans of cola, how many cans of orange soda should he buy?
2. Bob's Video Venue has a membership fee of \$5.00 and DVD rentals are \$1.50 each. Video Heaven has no membership fee and DVD rentals are \$2.00 each. How many DVDs must be rented in order for Bob's Video Venue to be more economical?
3. A cookie shop offers 6 varieties of cookies and bakes 5 dozen of each kind every day, from Monday through Friday. How many cookies are baked in four weeks?
4. Find the next term in 2, 6, 18, 54, 162, . . .
5. Jeremy needs to type a 500-word report for science class. He knows he can type about 19 words per minute. About how long will it take Jeremy to type his report?