

# A Plan for Problem Solving (pages 4–7)

You can use a four-step plan to solve problems.

<b>Explore</b>	Determine what information is given in the problem and what you need to find. Do you have all the information you need? Is there too much information?
<b>Plan</b>	Select a strategy for solving the problem. There may be several strategies that you could use. Estimate the answer.
<b>Solve</b>	Solve the problem by carrying out your plan. If your plan does not work, try another, and maybe even a third plan.
<b>Examine</b>	Examine the answer carefully. See if it fits the facts given in the problem. Compare it to your estimate. If your answer is not correct, make a new plan and start again.

## EXAMPLE

Sergio bought a 30-minute long distance phone card for \$4.50. On his home telephone, long distance costs 10 cents per minute. Which is less expensive?

<b>Explore</b>	You need to find out whether a long distance call using the calling card or Sergio's home phone is less expensive.
<b>Plan</b>	You need to find the per-minute rate of the calling card and then compare to the per-minute rate on the home phone. Divide the price of the calling card by the number of minutes, and then compare to the home phone rate. You estimate that the home phone is less expensive.
<b>Solve</b>	$450 \div 30 = 15$ cents per minute. $10 < 15$
<b>Examine</b>	The calling card rate is 15 cents per minute, so the home phone rate is less expensive.

## Try This Together

- The Washington family is going on a 775-mile vacation. Their car gets 31 miles per gallon of gas. If gas costs \$1 per gallon, how much will they spend on gas? *HINT: You need to find the number of gallons of gas the car will use.*

## PRACTICE

**Use the four-step plan to solve each problem.**

- Hobbies** Tristen is making a quilt with his mother. The quilt has a total of 40 squares. Tristen wants to have an equal number of squares with 8 different colors. How many squares of each color will he have?



- Standardized Test Practice** The school is buying new risers for the choir to stand on during concerts. There are 120 people in the choir and each riser will hold 20 people. How many risers will they need to buy?

**A** 5

**B** 6

**C** 12

**D** 10

Answers: 1. \$25 2. 5 3. B