1. Mr. Lu is planting trees around the perimeter of a rectangular park. The park measures 72 feet by 48 feet. The trees need to be spaced 12 feet apart. A tree is to be planted in each corner. How many trees are needed?

2. In an aviary, there are three times as many finches as mockingbirds. If there are 48 birds, how many mockingbirds are there ?

LEARNING GOAL:
Use a problem solving plan to solve problems.

Vocabulary
A **formula** is an equation that relates two or more quantities.

A Problem-Solving Plan
STEP 1 Read and Understand Read the problem carefully. Identify what you know and what you want to find out.

STEP 2 Make a Plan Decide on an approach to solving the problem.

STEP 3 Solve the Problem Carry out your plan. Try a new approach if the first one isn't successful.

STEP 4 Look Back Once you obtain an answer, check that it is reasonable.

EXAMPLE 1
Read a problem and make a plan

A group of people go to a play. Adult tickets cost $8 and tickets for children under twelve years of age cost $5. There are 4 children under twelve. The group spends $44 for all the tickets. How many adults attended the play?

Solution
STEP 1 Read and Understand

What do you know?

What do you want to find out?

STEP 2 Make a Plan

Use what you know to write a verbal model that represents what you want to find out. Then write an equation and solve it.

Homework: Pages 31-32; #3-12, 14-16

STEP 3 Solve the Problem Write a verbal model. Then write an equation. Let a be the number of adult tickets purchased.

Guess a number that seems reasonable considering the total cost of $44. Try 2.

STEP 4 Look Back Each adult ticket purchase adds $8 to the total ticket cost. Make a table.

Number of adults	0	1	2	3	4
Total Cost	0				

Exercises for Example 1

Identify what you know and what you need to find out. Do *not* solve the problem.

1. A salesman is reimbursed $50 a day for food and lodging. He also receives $.35 for each mile driven. He drives 124 miles and is reimbursed $193.40. How many days was the trip?

Homework: Pages 31-32; #3-12, 14-16

2. You are designing the layout for a newspaper about teen issues. The newspaper will be $22\frac{1}{2}$ inches wide and 30 inches high. You plan to have 5 columns with $\frac{1}{8}$ inch gaps between them and $\frac{3}{8}$ inch margins on the left and right sides. How wide will each column be?

3. You have saved \$165 to buy a video camera that costs \$300. You plan to save \$15 each week. How many weeks will it take to save for the video camera?

Homework: Pages 31-32; #3-12, 14-16