

## Lesson 1-1

### Example 1 Use the Four Step Problem-Solving Plan

**RENTAL CARS** The Speedy Car Rental Company advertises the cost of renting a compact car using the table below.

Number of Days	Cost
1	\$59
2	\$108
3	\$157

**How much would it cost to rent the car for 6 days?**

**Explore** The table shows the number of days the car is rented and the respective rental cost. We need to find out how much it will cost to rent the car for 6 days.

**Plan** Use the information in the table to solve the problem. Look for a pattern in the costs. Extend the pattern to find the rental cost for 6 days.

**Solve** First, find the pattern.

Number of Days	1	2	3
Cost	\$59	\$108	\$157

Each consecutive cost increases by \$49. Next, extend the pattern.

Number of Days	4	5	6
Cost	\$206	\$255	\$304

It would cost \$304 to rent the compact car for 6 days.

**Examine** It costs \$59 for the first day and \$49 for each additional day. To rent a compact car for 6 days, it would cost \$59 for the first day and  $5 \times \$49$  or \$245 for the additional days. Since  $\$59 + \$245 = \$304$ , the answer is correct.

**Example 2 Use Inductive Reasoning**

a. What is the next term in 32, 28, 24, 20, 16, ...?

32	28	24	20	16	?
-4	-4	-4	-4	-4	

Assuming the pattern continues, the next term is  $16 - 4$  or 12.

b. Draw the next figure in the pattern.



In the pattern, the shaded square moves clockwise. Assuming the pattern continues, the shaded square will be positioned at the bottom right of the figure.

**Example 3 Choose the Method of Computation**

**SNOWFALL** The total accumulated snowfall in Happyville, Minnesota during the winter of 1989-1990 was 93.8 inches. The total accumulated snowfall in Happyville during the winter of 1999-2000 was 77.3 inches. About how many less inches of snow fell in during the 1999-2000 winter than the 1989-1990 winter?

**Explore** You know the amount of snowfall during the 1989-1990 winter and the 1999-2000 winter. You need to find the decrease in amount of snowfall from the 1989-1990 winter to the 1999-2000 winter.

**Plan** The question uses the word *about*, so an exact answer is not needed. We can solve the problem using estimation. Estimate the amount of snowfall during each of the two winters. Then subtract.

**Solve**

93.8	→	94	Round to the nearest whole number.
77.3	→	77	
94 - 77 = 17			Subtract 77 from 94.

So, about 17 less inches of snow fell during the 1999-2000 winter than during the 1989-1990 winter.

**Examine** Since  $77 + 17 = 94$ , the answer makes sense.