

# Problem-Solving Investigation: Work Backward

## MAIN IDEA

- Solve problems by working backward.

## EXAMPLE Use the Work Backward Strategy

Jackie bought 3 identical shirts in different colors. Including the \$3.24 sales tax, she paid a total of \$57.24. What was the cost of each shirt before the tax was added?

**UNDERSTAND** You know that the 3 identical shirts cost , including  in sales tax.

You need to find the cost of each shirt before the sales tax.

**PLAN** Start with the total cost and subtract the sales tax.

**SOLVE**

\$57.24	→	Cost of the three shirts with tax.
- \$ 3.24	→	Sales tax
<div style="border: 1px solid black; height: 20px; width: 100px; margin-top: 5px;"></div>		

Since the 3 shirts cost  before sales tax and each shirt is the same, each shirt costs  ÷  or .

**CHECK** Start with the cost of each shirt before sales tax, \$18. Multiply \$18 by the number of shirts,  ×  or . Finally, add the \$3.24 in sales tax to the cost of the shirts,  +  or .

## Check Your Progress

**POPCORN** David is selling gourmet-flavored popcorn. The first week, he sold 3 cheddar cheese popcorn tins, 11 caramel popcorn tins, and 7 butter popcorn tins. If he has 12 popcorn tins left, how many tins did he have to start?

## HOMEWORK ASSIGNMENT

Page(s):

Exercises: