1. You can draw a bar diagram to help solve 2-step problems. A letter can be used to stand for the unknown quantity.

Complete the equation for the unknown quantity in each bar diagram.

 185	
124	t

32

Write an equation using subtraction. Write an equation using addition.

$$p = +$$

Jared has \$236. He spends \$153 paying bills. Jared will earn \$76 next week. How much money will Jared have next week?

Step 1: Find and answer the hidden question. Hidden question: How much money does Jared have after paying bills?

Complete the bar diagram. Then write and solve an equation.

a =	-	
a =		

Money left after paying bills

Jared has after he pays bills.

Step 2: Use the answer to the hidden question to answer the original question. Original question: How much money will Jared have next week?

Complete the bar diagram. Then write and solve an equation.



$\varsigma =$	+

Jared will have next week.

## On the Back!

Draw bar diagrams and write equations to solve. Aaron has 996 baseball cards. He sells 333 of them. Then, he buys 165 baseball cards. How many baseball cards does Aaron have now?

11-3

# 

1. Some problems need more than one operation to solve. Operations are addition, subtraction, multiplication, and division.

Mark has \$135 to buy books. He buys 7 books that each cost \$6. How much money does Mark have left?

First find and answer the hidden question:

How much did Mark spend on books?

Let p equal the amount Mark spent on books.

Then subtract the amount Mark spent on books from the amount Mark started with.

Let r equal the amount Mark has left.

Multiply first.  $7 \times \$6 = p$ 

$$7 \times \$6 = p$$

Then subtract. 
$$$135 - \underline{\phantom{0}} = r \underline{\phantom{0}} = r$$

2. Amanda has \$268 in her savings account. She adds \$60 to it each week for 8 weeks. How much money does she have after 8 weeks?

First, find and answer the hidden question: How much money did Amanda add to her account? Then solve.

Let s equal the amount of money Amanda adds to her account.

Let t equal the total amount Amanda has after 8 weeks.

 $8 \times \$60 = s$ 

\$268 + = t

=t

After 8 weeks, Amanda has

#### On the Back!

Write equations to solve. Use letters to represent unknown quantities.

Sally bought a dress for \$82. She also bought 2 pairs of shoes for \$40 each. How much money did Sally spend?

1. A product is the answer to a multiplication problem. A quotient is the answer to a division problem.

Write a multiplication equation for the bar diagram.

 $\times b =$  The product is .

Write a division equation for the bar diagram.

 $\div b =$  The quotient is .

2. Complete the bar diagrams and write equations to solve. Use letters to represent unknown quantities.

Jill is in charge of scheduling fields for the youth soccer leagues. There are 4 leagues with 6 teams in each league. An equal number of teams will play on each of 3 fields. How many teams will play on each field?

Step 1: Find and answer the hidden question.

Hidden guestion: How many are there in all?

 $a = 4 \times 6$  a =

There are leagues. There are teams in each league.

There are teams in all.

2 4	- Teams in all
 - 1	

Step 2: Use the answer to the hidden question to answer the original question.

Original question: How many teams will play on each field?

There are teams in all.

There are fields.

teams will play on each field.



# On the Back!

3. Draw bar diagrams and write equations to solve. Use letters to represent unknown quantities.

A pack of 8 sports drinks costs \$5. How much would it cost to buy 72 sports drinks?

11-4

Vocabulary —

 When you critique reasoning, you explain why someone's thinking is correct or incorrect. Estimation can help you critique reasoning.

Estimate 54 + 42 by rounding.

54 is about . 42 is about . 50 + 40 =

Is the estimate less than or greater than the actual sum?

Estimate 27 + 35 by rounding.

27 is about \_\_\_\_\_. 35 is about \_\_\_\_\_. 30 + 40 = \_\_\_\_\_

Is the estimate less than or greater than the actual sum?

Jessica has \$75. She works 6 hours at \$8 an hour at her job. Jessica wants to buy a bicycle for \$129. Can Jessica buy the bicycle?

Abby solved the problem. Her work is shown below.

 $$8 \times 6 = $48$ , which is about \$50.

Jessica has \$75, which is about \$80.

\$50 + \$80 = \$130, so Jessica can buy the bicycle.

Critique Abby's reasoning.

Abby rounds \$48 to \$50. This estimate is rounded \_\_\_\_\_.

Abby rounds \$75 to \$80. This estimate is rounded \_\_\_\_\_.

The estimate will be \_\_\_\_\_ the actual amount needed.

Find the actual answer.

\$8 × 6 = \_\_\_\_ = \_\_\_

Abby's conclusion is \_\_\_\_\_\_ because the actual

amount Jessica will have is less than \_\_\_\_\_\_.

## On the Back!

 The park had 425 visitors on Friday. It had 289 visitors on Saturday and 126 visitors on Sunday.

Eva says there were more visitors on Friday than on Saturday and Sunday combined because 289 + 126 is about 300 + 100 = 400, and 400 < 425. Critique Eva's reasoning. Tell if she is correct or incorrect. Explain your thinking.