Name _____

Help | Practice Buddy | Tools | Games

Homework & Practice 11-1

Solve 2-Step Word Problems: Addition and Subtraction

Another Look!

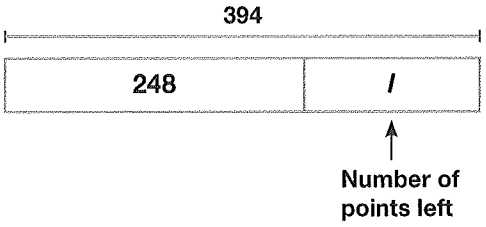
Harry scores 394 points on Level 1 of a video game. On Level 2, he loses 248 points. He then scores an extra 138 points on Level 3. How many points does Harry have now?

Use diagrams and equations to solve.

Step 1

Find the hidden question.

Hidden question: How many points did Harry have left after he lost 248 points?



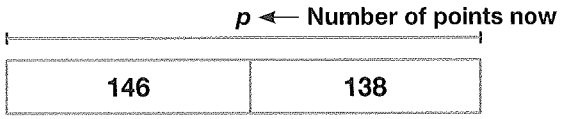
$l = 394 - 248$, $l = 146$

Harry had 146 points.

Step 2

Use the answer to the hidden question to answer the original question.

Original question: How many points does Harry have now?



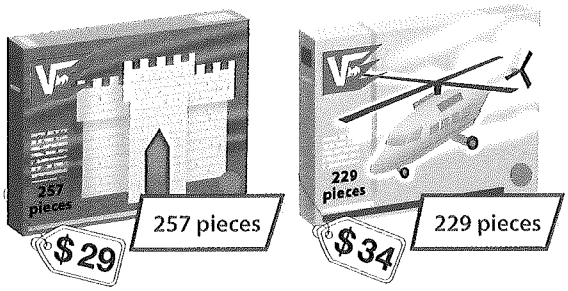
$p = 146 + 138$, $p = 284$

Harry has 284 points now.

In **1**, draw diagrams and write equations to solve.

1. **© MP.4 Model with Math** Jamie has 875 building pieces in all. He gives his castle set to a friend. Jamie then buys the helicopter set. How many building pieces does Jamie have now?

2. **© MP.1 Make Sense and Persevere** How can you estimate to check if your answer is reasonable? Explain.



3. **MP.2 Reasoning** What is another way to find how many points Harry had in the problem at the top of page 577?

4. **Number Sense** Which has the greater sum, 468 + 153 or 253 + 209? Tell how you know with estimates.

5. **MP.4 Model with Math** In a survey of 800 students, 548 said they liked pizza for lunch, 173 said they like hamburgers, and 79 said they like sloppy joes. Draw bar diagrams and write equations to find how many more students liked pizza than liked hamburgers and sloppy joes combined. Use letters to represent unknown quantities. Check your work using estimation.

6. **Higher Order Thinking** Maria and John played a computer game. Who scored more points and won the game? Explain.

DATA

Computer Game Points

Player	Round 1 Points	Round 2 Points
Maria	256	345
John	325	273

Common Core Assessment

7. Stewart School has 178 computers. Grade 3 has 58 computers and Grade 4 has 57 computers. What equations can be used to find how many computers the rest of the school has? Complete the equations.

☐ ☐ ☐ = x x = ☐

☐ ☐ ☐ = y y = ☐

8. The school bookstore had 379 pencils. This week the bookstore sold 187 pencils. The manager then brought in 450 more pencils. How many pencils does the store have now? Write the answer in the box.

☐ pencils

Name _____

Help | Practice Buddy | Tools | Games

Homework & Practice 11-2

Solve 2-Step Word Problems: Multiplication and Division

Another Look!

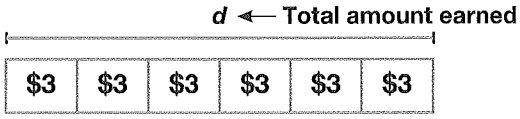
Each of the 6 members of the Recycling Club earned $3 returning plastic bottles. They shared the money equally between 2 charities. How much money did they give to each charity?

First find and answer the hidden question.

Step 1

Find the hidden question and use a diagram and equation to answer it.

Hidden question: What is the total amount of money the club members earned?

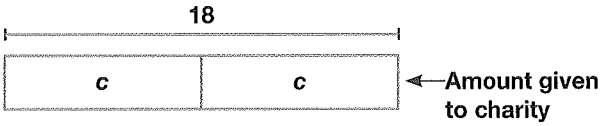


$d = 6 \times \$3$
$d = \$18$
The club members earned $18.

Step 2

Use the answer to the hidden question to answer the original question.

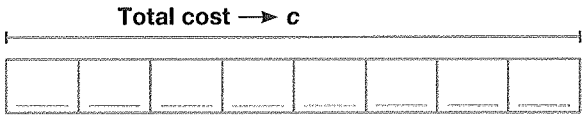
Original question: How much money did they give to each charity?



$c = 18 \div 2$
$c = \$9$
The club gave $9 to each charity.

In **1** and **2**, complete or draw diagrams and write equations to solve. Use letters to stand for unknown quantities.

1. **© MP.4 Model with Math** A box of 6 trophies costs $5. How much would it cost to buy 48 trophies?

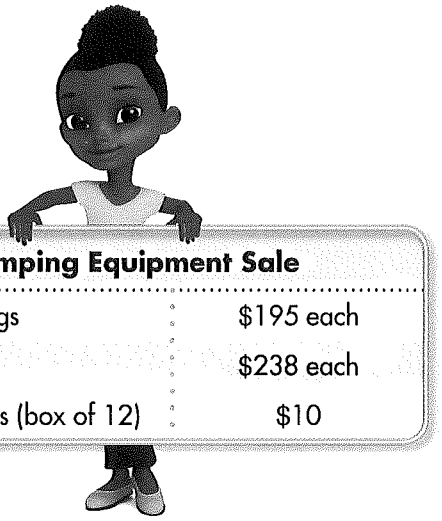


2. **© MP.4 Model with Math** A third-grade gym class has 54 students. The gym teacher divides them into 9 groups. She then divides each group into 2 teams. How many students are on each team?

3. **MP.4 Model with Math** Marco wants to buy 2 books that cost $20 each. He can save $5 a week. Draw diagrams and write equations to find how many weeks it will take him to save enough money to buy the books. Use letters to represent unknown quantities.

4. What multiplication equation could be written for the diagram for Step 2 in the example on page 583?

In **5** and **6**, use the table at the right.



DATA

Camping Equipment Sale	
Sleeping bags	$195 each
Tents	$238 each
Water bottles (box of 12)	$10

5. **Number Sense** Use mental math to find the total cost of one tent and one sleeping bag. Explain how you found the answer.

6. **Higher Order Thinking** Angela buys 4 boxes of water bottles on Monday. She buys 1 more box of water bottles on Tuesday than she did on Monday. How much money did Angela spend on both days? Show how you found your answer.

Common Core Assessment

7. Lindsey bought 5 packages containing 4 bracelets in each. She plans to decorate the bracelets and then sell them for $3 each. How much money will she get if she sells all the bracelets?

   Ⓐ $60 Ⓒ $15

   Ⓑ $50 Ⓓ $12

8. Pierre runs the same distance around a track each day, 4 days a week. He runs a total of 12 miles each week. If it takes 8 laps of the track to equal a mile, how many laps does Pierre run each day?

   Which equation could you use to help solve this problem?

   Ⓐ $y = 8 \div 4$ Ⓒ $y = 3 \times 8$

   Ⓑ $y = 12 \div 2$ Ⓓ $y = 4 \times 8$

Name _____

Help | Practice Buddy | Tools | Games

Homework & Practice 11-3

Solve 2-Step Word Problems: All Operations

Another Look!

Some problems need more than one operation to solve. You need to know which operation to do first.

Joseph had $154. He then saved $20 each week for 6 weeks. How much money does Joseph have now?

n = amount of money Joseph has now

$\$154 + 6 \times \$20 = n$

What You Think

You know that parentheses tell you which operation to do first. This equation does not have parentheses, so you can follow these rules.

- Start reading the equation from the left side and do any **multiplication** or **division** as you move to the right.
- Then, start back on the left side and do any **addition** or **subtraction**.

What You Do

First **multiply**.

$\$154 + 6 \times \$20 = n$

$\$154 + \$120 = n$

Then **add**.

$\$154 + \$120 = n$

$n = \$274$

1. **MP.4 Model with Math** Rahmi bought 1 pair of jeans and 2 T-shirts. How much did Rahmi spend? Write equations to solve. Use a letter to represent the unknown quantity.

s = total spent

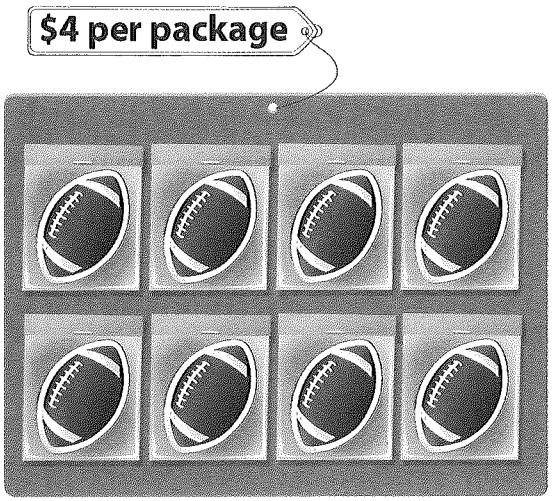
_____ + _____ × _____ = s

_____ + _____ = s

_____ + _____ = _____

s = _____

2. **MP.4 Model with Math** Football party favors come in packages like the one shown. How much would it cost to buy 56 party favors? Write equations to solve. Use a letter to represent the unknown quantity.



3. There are 12 seals, 4 whales, and 8 dolphins at the aquarium. Complete the picture graph to show the data.

4. One trainer fed the seals and whales, and another trainer fed the dolphins. How many more animals did the first trainer feed?

Mammals at the Aquarium

Dolphins	
Seals	
Whales	

Each = 2 animals

5. **Higher Order Thinking** Serena has a train that is 32 inches long. She has an engine, a caboose, and a boxcar. The rest are passenger cars. How many passenger cars does Serena have?

DATA

Serena's Train Cars

Type	Length in Inches
Engine	7
Boxcar	3
Passenger Car	9
Caboose	4

Common Core Assessment

6. Use the table from Exercise 5. If Serena's train has an engine and 3 passenger cars, then how long is her train? Write equations to solve. Use letters to represent any unknown quantities.

Name _____

Help Practice Buddy Tools Games

Homework & Practice 11-4
Critique Reasoning

Another Look!

Frank needs $169 to buy a bike. He already has $46. He earns $20 for mowing a lawn.

Dan says Frank needs to mow 6 lawns to get enough money. His work is shown at the right.

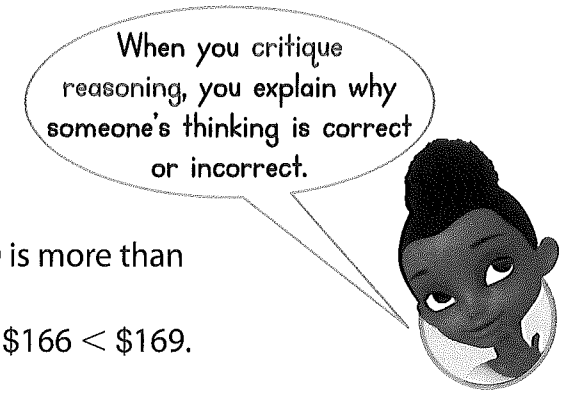
Dan's work

$6 \times \$20 = \$120$
$\$120 + \$46$ is about $\$120 + \$50 = \$170$
$\$170 > \$169$.
Frank has enough money.

Tell how you can critique Dan's reasoning.

- I can decide if his strategy makes sense.
- I can identify flaws in his thinking.

Critique Dan's reasoning.



The reasoning does not make sense.
Dan rounded $46 to $50, so his estimate of $170 is more than Frank will have.
Compare the actual sum of $\$120 + \$46$ to $169: $\$166 < \$169$.

Frank will not have enough money.

MP.3 Critique Reasoning

A store made $650 on Monday. It made $233 on Tuesday morning and $378 on Tuesday afternoon.

Leah says the store made more money on Tuesday. Her work is shown at the right.

Leah's work

$\$233 + \$378$ is about
$\$300 + \$400 = \$700$.

$\$700 > \$650$
The store made more money on Tuesday.

1. What is Leah's argument? How does she support it?

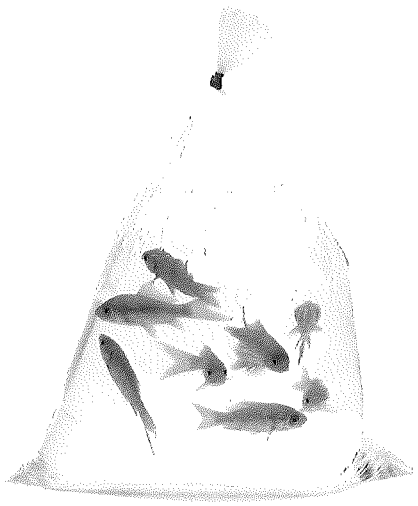
2. Tell how you can critique Leah's reasoning.

3. Critique Leah's reasoning.

Common Core Performance Assessment

Stocking a Fish Pond

About 200 people visit Mr. Ortiz's park each day. A fish pond in the park contains 636 fish. It cannot hold more than 700 fish. Mr. Ortiz has 7 bags of goldfish like the one at the right. Can Mr. Ortiz put all of his goldfish into the pond?



Jai solved the problem as shown.

700 − 636 is about 700 − 640.
700 − 640 = 60

There are 8 goldfish in each bag.
7 × 8 = 56
Mr. Ortiz has 56 goldfish.
56 < 60

Mr. Ortiz can put all of his goldfish into the pond.

4. **MP.1 Make Sense and Persevere** Have you seen a problem like this before? If so, how can this help you solve it?

5. **MP.3 Critique Reasoning** Does Jai's method make sense? Explain.

6. **MP.6 Be Precise** Are Jai's calculations correct? Explain.

7. **MP.2 Reasoning** Explain how Jai found the number of goldfish in each bag.