Student Guide

Subtraction Facts Strategies (SG pp. 42–45) Questions 1–13

It is not necessary for students to remember the names of the strategies but to remember how to use them.

1.* Answers will vary. Students may count up: From 9 to 10 is 1, from 10 to 16 is 6; 6 + 1 = 7. Thinking addition: 9 + 7 = 16 so 16 − 9 = 7. Using tens: 16 − 10 = 6 so 16 − 9 would be one more, or 7.

2.* Answers will vary. Counting up: From 7 to 10 is 3, from 10 to 16 is 6; 3 + 6 = 9. Thinking addition: 7 + 9 = 16 so 16 − 7 = 9. Using tens: 16 − 6 = 10 so 16 − 7 would be one less, or 9.

3.* Answers will vary. Thinking addition: 10 + 8 = 18 so 18 − 10 = 8. Counting up: 10 + 8 = 18. The answer is the second digit in 18 (the number in the ones place).

4. 14 − 9 = 5; 14 − 5 = 9

5. Answers will vary. Roberto can add the 4 and 5 and get 9. 15 − 6 = 9

6. Answers will vary.

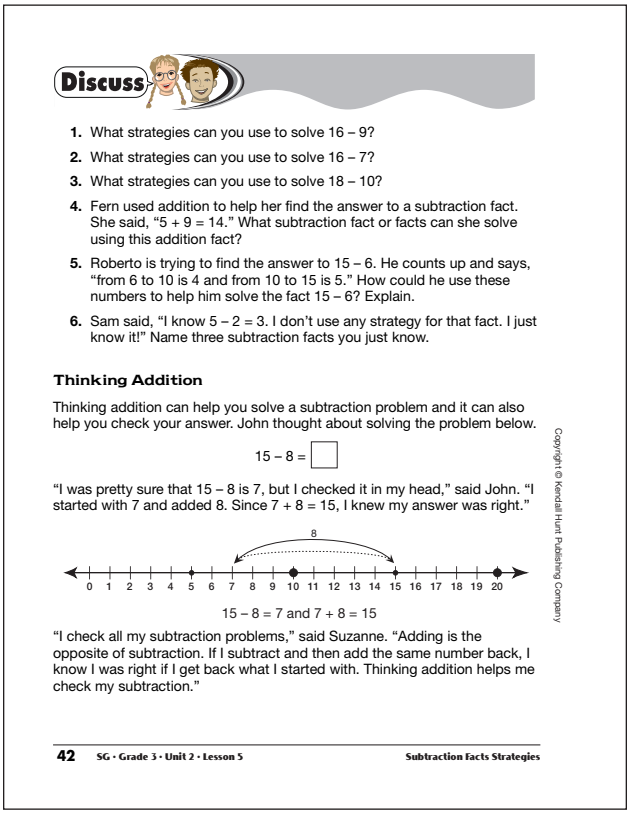
7. 7; 7 + 8 = 15

8. 8; 8 + 6 = 14

9. 2; 2 + 9 = 11

10. 8; 8 + 5 = 13

11. 8: 8 + 8 = 16



Discuss

1. What strategies can you use to solve 16 – 9?
2. What strategies can you use to solve 16 – 7?
3. What strategies can you use to solve 18 – 10?
4. Fern used addition to help her find the answer to a subtraction fact. She said, "5 + 9 = 14." What subtraction fact or facts can she solve using this addition fact?
5. Roberto is trying to find the answer to 15 – 6. He counts up and says, "from 6 to 10 is 4 and from 10 to 15 is 5." How could he use these numbers to help him solve the fact 15 – 6? Explain.
6. Sam said, "I know 5 – 2 = 3. I don't use any strategy for that fact. I just know it!" Name three subtraction facts you just know.

Thinking Addition

Thinking addition can help you solve a subtraction problem and it can also help you check your answer. John thought about solving the problem below.

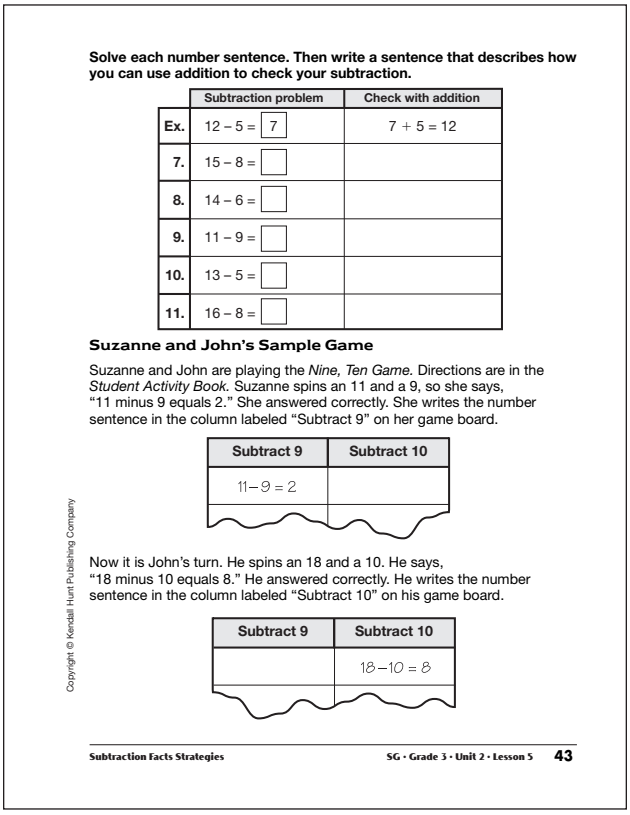
15 – 8 = ☐

"I was pretty sure that 15 – 8 is 7, but I checked it in my head," said John. "I started with 7 and added 8. Since 7 + 8 = 15, I knew my answer was right."

15 – 8 = 7 and 7 + 8 = 15

"I check all my subtraction problems," said Suzanne. "Adding is the opposite of subtraction. If I subtract and then add the same number back, I know I was right if I get back what I started with. Thinking addition helps me check my subtraction."

***Student Guide* - Page 42**



Solve each number sentence. Then write a sentence that describes how you can use addition to check your subtraction.

	Subtraction problem	Check with addition
Ex.	12 – 5 = 7	7 + 5 = 12
7.	15 – 8 = ☐	
8.	14 – 6 = ☐	
9.	11 – 9 = ☐	
10.	13 – 5 = ☐	
11.	16 – 8 = ☐	

Suzanne and John's Sample Game

Suzanne and John are playing the *Nine, Ten Game*. Directions are in the *Student Activity Book*. Suzanne spins an 11 and a 9, so she says, "11 minus 9 equals 2." She answered correctly. She writes the number sentence in the column labeled "Subtract 9" on her game board.

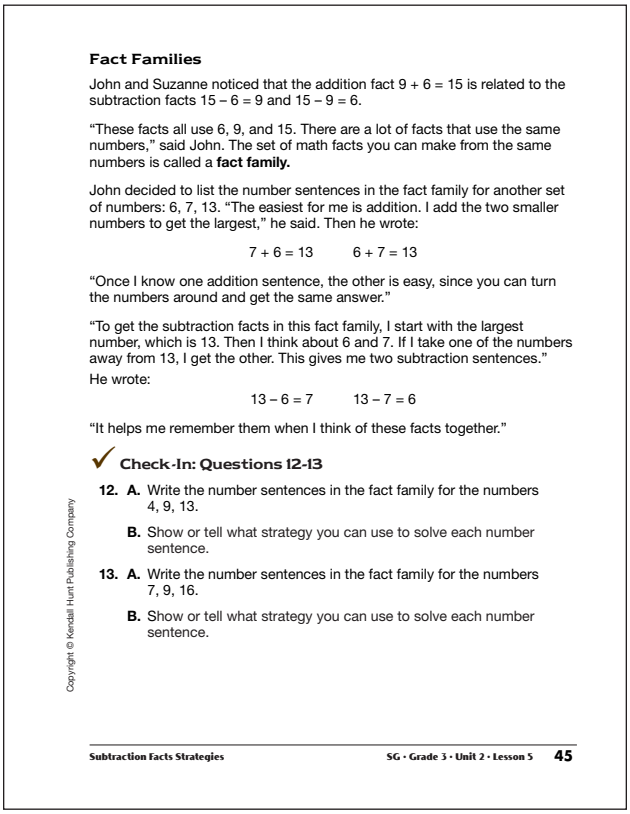
Subtract 9	Subtract 10
11 – 9 = 2	

Now it is John's turn. He spins an 18 and a 10. He says, "18 minus 10 equals 8." He answered correctly. He writes the number sentence in the column labeled "Subtract 10" on his game board.

Subtract 9	Subtract 10
	18 – 10 = 8

***Student Guide* - Page 43**

***Answers and/or discussion are included in the lesson.**



Fact Families

John and Suzanne noticed that the addition fact 9 + 6 = 15 is related to the subtraction facts 15 – 6 = 9 and 15 – 9 = 6.

"These facts all use 6, 9, and 15. There are a lot of facts that use the same numbers," said John. The set of math facts you can make from the same numbers is called a **fact family.**

John decided to list the number sentences in the fact family for another set of numbers: 6, 7, 13. "The easiest for me is addition. I add the two smaller numbers to get the largest," he said. Then he wrote:

7 + 6 = 13 6 + 7 = 13

"Once I know one addition sentence, the other is easy, since you can turn the numbers around and get the same answer."

"To get the subtraction facts in this fact family, I start with the largest number, which is 13. Then I think about 6 and 7. If I take one of the numbers away from 13, I get the other. This gives me two subtraction sentences." He wrote:

13 – 6 = 7 13 – 7 = 6

"It helps me remember them when I think of these facts together."

✓ **Check-In: Questions 12-13**

12. A. Write the number sentences in the fact family for the numbers 4, 9, 13.

B. Show or tell what strategy you can use to solve each number sentence.

13. A. Write the number sentences in the fact family for the numbers 7, 9, 16.

B. Show or tell what strategy you can use to solve each number sentence.

***Student Guide* - Page 45**

12. A. $4 + 9 = 13$ $9 + 4 = 13$

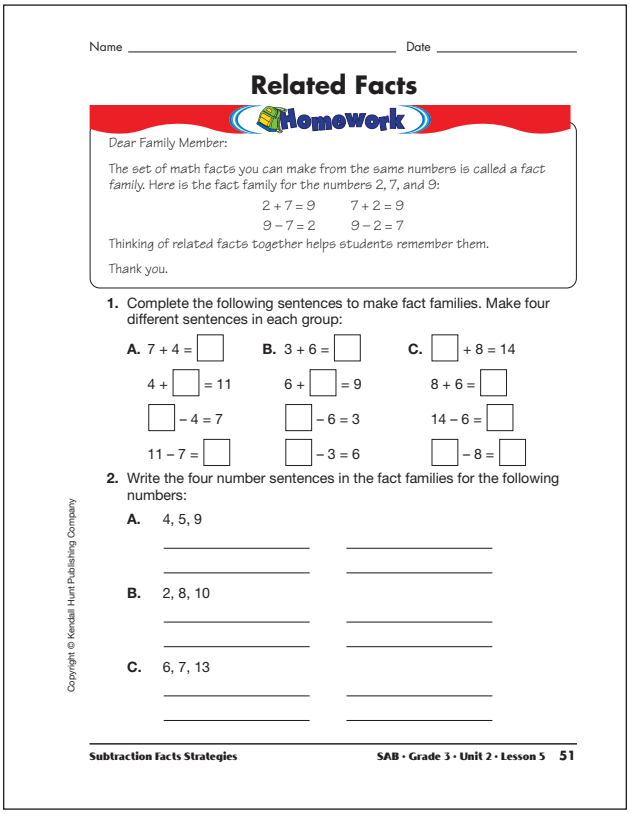
$13 - 9 = 4$ $13 - 4 = 9$

B. Possible answers: To solve 4 + 9 and 9 + 4, students might use tens by counting up 1 from 9 to 10, and then adding on 3 more to make 13. To solve 13 – 9 and 13 – 4, students might use thinking addition by asking "9 + what equals 13" and "4 + what equals 13?"

13. A. $7 + 9 = 16$ $9 + 7 = 16$

$16 - 9 = 7$ $16 - 7 = 9$

B. Possible answers: To solve 7 + 9 and 9 + 7, students might use tens by taking 1 from the 7 and giving it to the 9 to make 10. It is easier to think 10 + 6 than 9 + 7. To solve 16 − 9 and 16 − 7, students might use thinking addition by asking "9 + what equals 16" and "7 + what equals 16?"



Name _____ Date _____

Related Facts

Homework

Dear Family Member:

The set of math facts you can make from the same numbers is called a fact family. Here is the fact family for the numbers 2, 7, and 9:

2 + 7 = 9 7 + 2 = 9

9 – 7 = 2 9 – 2 = 7

Thinking of related facts together helps students remember them.

Thank you.

1. Complete the following sentences to make fact families. Make four different sentences in each group:

A. 7 + 4 = ☐ 4 + ☐ = 11 ☐ – 4 = 7 11 – 7 = ☐

B. 3 + 6 = ☐ 6 + ☐ = 9 ☐ – 6 = 3 ☐ – 3 = 6

C. ☐ + 8 = 14 8 + 6 = ☐ 14 – 6 = ☐ ☐ – 8 = ☐

2. Write the four number sentences in the fact families for the following numbers:

A. 4, 5, 9

B. 2, 8, 10

C. 6, 7, 13

***Student Activity Book* - Page 51**

Student Activity Book

Related Facts (SAB p. 51)
Questions 1–2

1.A. $7 + 4 = 11$ $4 + 7 = 11$ $11 - 4 = 7$ $11 - 7 = 4$

B. $3 + 6 = 9$ $6 + 3 = 9$ $9 - 6 = 3$ $9 - 3 = 6$

C. $6 + 8 = 14$ $8 + 6 = 14$ $14 - 6 = 8$ $14 - 8 = 6$

2.A. $4 + 5 = 9$ $5 + 4 = 9$ $9 - 4 = 5$ $9 - 5 = 4$

B. $2 + 8 = 10$ $8 + 2 = 10$ $10 - 2 = 8$ $10 - 8 = 2$

C. $6 + 7 = 13$ $7 + 6 = 13$ $13 - 6 = 7$ $13 - 7 = 6$