## More Fact Strategies

In Unit 3 your child will explore additional strategies for solving basic facts, focusing on strategies for solving subtraction facts. Children solve subtraction number stories and practice facts using games and routines.

In *Everyday Mathematics* children learn several strategies for solving subtraction facts. By becoming familiar with a variety of strategies, children have the opportunity to choose a strategy that works best to solve a particular fact. The goal is not for every child to master every strategy; the goal is for children to find the strategies they best understand and can most successfully apply. By encouraging discovery and practice, working with multiple strategies helps children develop fluency with subtraction facts, which will be important for computation with multidigit numbers later in the year.

Math Tools

Your child will use **Fact Triangles,** the *Everyday Mathematics* version of flash cards, to practice and review addition and subtraction facts. Each Fact Triangle shows related addition and subtraction facts made from the same three numbers, which helps your child understand the relationships among the facts. Home Link 3-3 provides a more detailed description of Fact Triangles and includes a set of Fact Triangles that your child can use to practice addition and subtraction facts at home.

The dot designates the largest number.
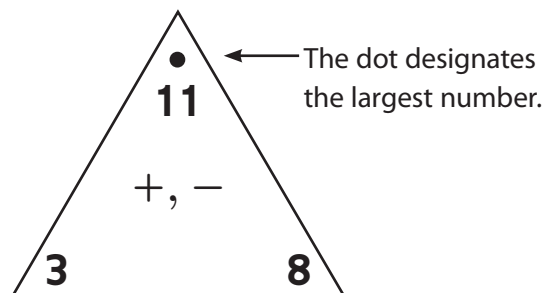
A Fact Triangle showing the fact family for 3, 8, and 11

Vocabulary   Important terms in Unit 3:

related facts Addition and subtraction facts that use the same three numbers. For example, $2 + 3 = 5$ is related to $5 - 2 = 3$, and $9 + 8 = 17$ is related to $8 + 9 = 17$. All the facts in a **fact family** are related facts.

addition/subtraction fact family A collection of related addition and subtraction facts involving the same numbers. Most addition and subtraction fact families include two addition and two subtraction facts. For example, the addition/subtraction fact family for the numbers 2, 4, and 6 consists of the following:

$$2 + 4 = 6 \qquad 4 + 2 = 6$$
$$6 - 4 = 2 \qquad 6 - 2 = 4$$

Fact families involving doubles facts consist of only two facts. For example, the addition/subtraction fact family for the numbers 7, 7, and 14 consists of the following:

$$7 + 7 = 14 \qquad 14 - 7 = 7$$

$- 0$ facts Subtraction facts in which the number 0 is subtracted from another number, such as $7 - 0 = 7$ and $10 - 0 = 10$.
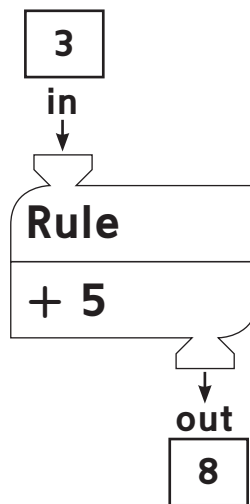
− 1 facts Subtraction facts in which the number 1 is subtracted from another number, such as $9 - 1 = 8$ and $6 - 1 = 5$.

"What's My Rule?" problem A problem in which number pairs are related to each other according to a rule or rules. A rule can be represented by a **function machine.**

in	out
3	8
5	10
8	13

"What's My Rule?" table

function machine In *Everyday Mathematics,* an imaginary device that receives input numbers and produces output numbers according to a set rule.

```
        ┌───┐
        │ 3 │
        └───┘
         in
          ↓
     ╲         ╱
      Rule
     ┌─────────┐
     │  + 5    │
     └─────────┘
          ↓
         out
        ┌───┐
        │ 8 │
        └───┘
```

Do-Anytime Activities

To work with your child on the concepts taught in this and previous units, try these interesting and rewarding activities:

1. Talk with your child about why it is important to learn basic facts.

2. Create addition and subtraction stories about everyday subjects.

3. Have your child explain a favorite fact strategy to you.

4. Name pairs of numbers and ask your child to determine the rule that relates the numbers. If you name the pairs 1 and 4, 3 and 6, and 10 and 13, your child should determine that the rule is $+ 3$.

5. Name an addition or subtraction fact and ask your child to name other facts in the same fact family. If you name $5 + 4 = 9$, your child should say $4 + 5 = 9, 9 - 5 = 4$, or $9 - 4 = 5$.

6. Practice addition and subtraction by rolling two dice and then adding or subtracting the two numbers shown by the dots. Take turns and have your child check your answers.

7. Set aside about 5 minutes each day for regular practice with Fact Triangles.

8. Name a number and ask your child to tell you how to make that number into a 10. If you say 8, your child should say "add 2 to make 10." If you say 17, your child should say "subtract 7 to make 10."

Building Skills through Games

In Unit 3 your child will practice subtraction facts by playing the following games.

Salute!

Children play in groups of 3. The dealer gives one card to each of two players. Without looking at their cards, the players place them on their foreheads facing out. The dealer finds the sum of the numbers on the cards and says it aloud. Each player uses the sum and the number on the opposing player's forehead to find the number on his or her own card.
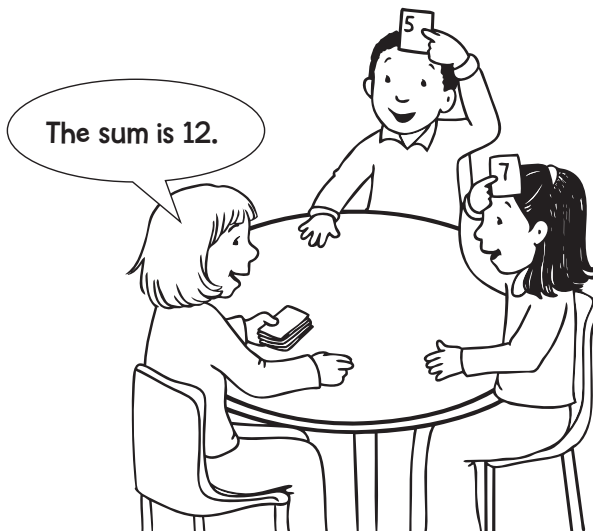
Subtraction Top-It

Each player draws two cards and subtracts the smaller number from the larger number. The player with the largest difference takes all the cards.

The sum is 12.

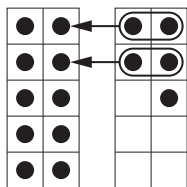# As You Help Your Child with Homework

As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The following answers will guide you through the Unit 3 Home Links.

Home Link 3-1
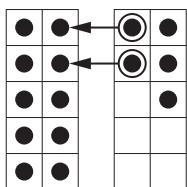
1. $8 + 2 = 10$
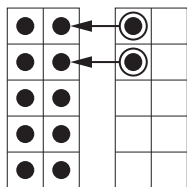
2. $6 + 5 = 11$

3. $8 + 5 = 13$

4. 8   **5.** 14   **6.** 9   **7.** 16

Home Link 3-2

1. $6 + 9 = 15$; $9 + 6 = 15$; $15 - 9 = 6$; $15 - 6 = 9$

2. $7 + 8 = 15$; $8 + 7 = 15$; $15 - 8 = 7$; $15 - 7 = 8$

3. $9 + 5 = 14$; $5 + 9 = 14$; $14 - 5 = 9$; $14 - 9 = 5$

4. 10   **5.** 12   6. 10   **7.** 11

Home Link 3-4

Round 1: 5   **Round 2:** 6   **Round 3:** 5

Home Link 3-5

1. 3   **2.** 2   **3.** 3   4. 2

5. 7   **6.** 9   **7.** 12   **8.** 11

9. counting up

10. counting back
Sample answer: Because 2 is a small number, it's easier to count back 2 counts and get 11.

11. $6 + 7 = 13$ **12.** $8 + 4 = 12$

Home Link 3-6

1. 7   **2.** 11   **3.** 8   **4.** 0   **5.** 12

6. 9   **7.** 10   **8.** 12   **9.** 18   **10.** 17
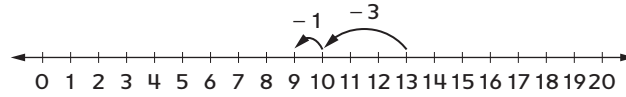
Home Link 3-7

1. 15; 17; 14   **3.** 6; 3; 9; 0   **2.** -8

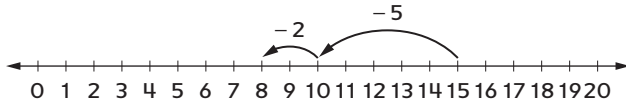**4.** $+ 5$; 5; 18; Answers vary.

Home Link 3-8

1. 7; Sample answer: I know $6 + 6 = 12$, and 13 is 1 more than 12. So I added 1 to one of the 6s. The answer is 7.

2. 9; Sample answer: I know that $8 + 8 = 16$ and 17 is 1 more than 16. So I added 1 to one of the 8s. The answer is 9.

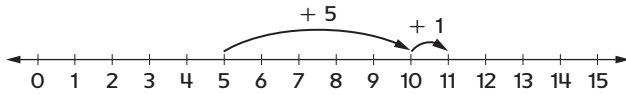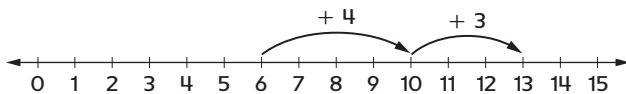**3.** 10   **4.** 11

Home Link 3-9

1. 9

2. 8

3. $5 + 3 = 8$ **4.** $15 = 6 + 9$

Home Link 3-10

1. 6

2. 7

3. 12   **4.** 10   **5.** 14

Home Link 3-11

1. 33¢   **2.** 34¢   **3.** 52¢

4. Sample answers: Ⓠ Ⓠ Ⓝ Ⓟ Ⓟ;
Ⓓ Ⓓ Ⓓ Ⓓ Ⓓ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ Ⓟ