

# Money Exchanges

## Family Note

In today's lesson we counted by 100s, 10s, and 1s to calculate the values of bill combinations. We also played *The Exchange Game* with money to practice making exchanges between \$1, \$10, and \$100 bills.

**Please return this Home Link to school tomorrow.**

Answer the questions.

- ① How many \$10 bills are the same as ten \$1 bills? \_\_\_\_\_
- ② How many \$1 bills are the same as one \$100 bill? \_\_\_\_\_
- ③ How many \$10 bills are the same as one \$100 bill? \_\_\_\_\_

Do your own.

- ④ How many \$1 bills are the same as \_\_\_\_\_ \$10 bills? \_\_\_\_\_

For each problem, find how much money there is in all.

Example:  = \$23

⑤  = \$ \_\_\_\_\_

⑥  = \$ \_\_\_\_\_

⑦  = \$ \_\_\_\_\_

# Writing Addition Number Stories

## Home Link 2-2

NAME \_\_\_\_\_

DATE \_\_\_\_\_

### Family Note

Before beginning this Home Link, review the vocabulary from the Unit 2 Family Letter with your child: *number story*, *label*, *unit box*, and *number model*. Encourage your child to make up and solve addition number stories and write addition number models for the stories. Stress that the answer to a question makes more sense if it has a label.

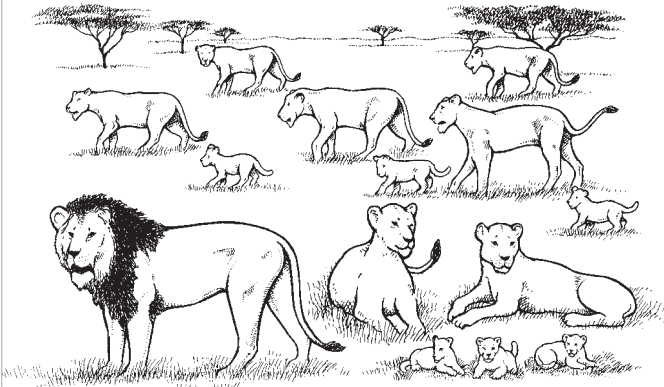
**Please return this Home Link to school tomorrow.**

MRB  
24-29

- ① Tell someone at home what you know about number stories, labels, unit boxes, and number models. Write an addition number story for the picture. Write the answer and an addition number model.

Unit  
lions

Story: \_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Number model:

### Practice

②  $2 + 2 =$  \_\_\_\_\_

③  $4 + 4 =$  \_\_\_\_\_

④ 
$$\begin{array}{r} 5 \\ + 5 \\ \hline \end{array}$$

⑤ 
$$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$$

# Doubles Facts and Combinations of 10

## Home Link 2-3



NAME \_\_\_\_\_

DATE \_\_\_\_\_

### Family Note

In second grade children learn and practice many strategies to help them develop fluency with basic addition facts. These strategies are based on facts that children studied in first grade: doubles facts (facts in which a number is added to itself) and combinations of 10 (number pairs that add to 10). Today we sorted facts based on whether they were doubles, combinations of 10, or both.

**Please return this Home Link to school tomorrow.**

① Complete the addition facts.

a.  $2 + 2 = \underline{\quad}$

b.  $\underline{\quad} = 5 + 5$

c.  $\underline{\quad} = 0 + 0$

d.  $1 + 1 = \underline{\quad}$

e. 
$$\begin{array}{r} 7 \\ + 7 \\ \hline \end{array}$$

f. 
$$\begin{array}{r} 3 \\ + \quad \\ \hline 6 \end{array}$$

g. 
$$\begin{array}{r} 8 \\ + 8 \\ \hline \end{array}$$

MRB  
40-41

Unit

birds

② Write four different addition facts with 10 as the sum.

Example:  $10 = \underline{4} + \underline{6}$

a.  $10 = \underline{\quad} + \underline{\quad}$

b.  $10 = \underline{\quad} + \underline{\quad}$

c.  $\underline{\quad} + \underline{\quad} = 10$

d.  $\underline{\quad} + \underline{\quad} = 10$

# The Making-10 Strategy



NAME \_\_\_\_\_

DATE \_\_\_\_\_

## Family Note

Children learned a new strategy called “the making-10 strategy” to help them develop fluency with the basic addition facts. Success with this strategy depends on children knowing the number pairs that add to 10 or the basic addition facts that have a sum of 10.

**Please return this Home Link to school tomorrow.**

- ① Write all the addition facts that have a sum of 10.

*Hint:* There are 11 different facts.



Use combinations of 10 to help figure out the sums.

Example:  $6 + 5 = \underline{11}$

Helper combination of 10:  $\underline{6} + \underline{4} = \underline{10}$

②  $8 + 3 = \underline{\quad}$

Helper combination of 10:  $\underline{\quad} + \underline{\quad} = \underline{\quad}$

③  $4 + 7 = \underline{\quad}$

Helper combination of 10:  $\underline{\quad} + \underline{\quad} = \underline{\quad}$

④  $9 + 3 = \underline{\quad}$

Helper combination of 10:  $\underline{\quad} + \underline{\quad} = \underline{\quad}$

Tell someone at home how knowing combinations of 10 can help you solve other facts.



NAME \_\_\_\_\_

DATE \_\_\_\_\_

# Helper Facts

## Family Note

Today we learned about helper facts. Helper facts are facts that we already know and that we can use to help us find answers to facts we may not know. Because we learned the doubles facts (such as  $2 + 2 = 4$  and  $3 + 3 = 6$ ) in first grade, we can use them now as helper facts. For example, knowing  $4 + 4 = 8$  can help us figure out the answer to  $4 + 5$ . We see that  $4 + 5$  is 1 more than  $4 + 4$ , so the answer is 9. We can also use  $4 + 4 = 8$  to figure out the answer to  $4 + 3$ . We see that  $4 + 3$  is 1 less than  $4 + 4$ , so the answer is 7.

**Please return this Home Link to school tomorrow.**

Helper facts can help you figure out answers to other facts. Doubles facts can be helper facts.

Example:

$$3 + 2 = ? \quad 3 + 4 = ?$$

**Helper fact:**  $3 + 3 = 6$

$$3 + 2 = \underline{5} \quad 3 + 4 = \underline{7}$$



①  $5 + 4 = ?$        $5 + 6 = ?$

**Helper fact:**  $5 + 5 = \underline{\quad}$

$$5 + 4 = \underline{\quad} \quad 5 + 6 = \underline{\quad}$$

②  $? = 7 + 6$        $? = 7 + 8$

**Helper fact:**  $\underline{\quad} = 7 + 7$

$$\underline{\quad} = 7 + 6 \quad \underline{\quad} = 7 + 8$$

Unit

birds

Solve. Write a helper fact that can help you figure out the answer.

③  $4 + 3 = ?$

**Helper fact:**  $\underline{\quad} + \underline{\quad} = \underline{\quad}$

$$4 + 3 = \underline{\quad}$$

Tell someone at home what you know about helper facts.

# The Turn-Around Rule for Addition



NAME \_\_\_\_\_

DATE \_\_\_\_\_


## Family Note

Today we learned about the turn-around rule for addition, which says that you can add two numbers in either order and get the same result. *For example:*  $4 + 3 = 7$  and  $3 + 4 = 7$ . Knowing this rule can help children learn basic addition facts.


**Please return this Home Link to school tomorrow.**

Use the turn-around rule to write two different addition facts for each domino.



①  \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

②  \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

③ 


 + 


  
 + 

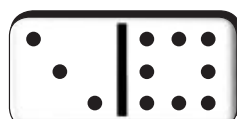

 + 


 + 


 + 


④ 


 + 


  
 + 


 + 


 + 


 + 


Tell someone at home what you know about the turn-around rule.

## Facts Practice

Solve.

⑤ 
$$\begin{array}{r} 8 \\ + 2 \\ \hline \end{array}$$

⑥ 
$$\begin{array}{r} 2 \\ + 8 \\ \hline \end{array}$$

⑦ 
$$\begin{array}{r} 7 \\ + 3 \\ \hline \end{array}$$

⑧ 
$$\begin{array}{r} 3 \\ + 7 \\ \hline \end{array}$$

Unit

children

# The Turn-Around Rule

## Home Link 2-7

NAME \_\_\_\_\_

DATE \_\_\_\_\_

### Family Note

Today we continued exploring the turn-around rule. In this lesson, we created subtraction number stories and examined whether the turn-around rule works for subtraction. We decided the turn-around rule does NOT work for subtraction because changing the order of the numbers produces different results. Creating number stories, writing number models for number stories, and using the turn-around rule appropriately will all be revisited throughout the year. The problems on this page provide practice with the turn-around rule for addition.

**Please return this Home Link to school tomorrow.**

- ① Write two number models you can use to solve this number story.

*Bill picked 6 peaches from a tree. Roberta picked 8.  
How many peaches do they have in all?*

Number model: \_\_\_\_\_

Number model: \_\_\_\_\_

- ② Complete each number sentence and then write the turn-around number sentence.

**Number sentence**

**Turn-around number sentence**

$12 + 3 = \underline{\quad}$

\_\_\_\_\_

$8 + \underline{\quad} = 11$

\_\_\_\_\_

### Practice

- ③ Solve the facts.

a.  $3 + \underline{\quad} = 6$

b.  $\underline{\quad} + 5 = 10$

c.  $14 = \underline{\quad} + 7$

d.  $12 = 6 + \underline{\quad}$

# Counting Up

## Family Note

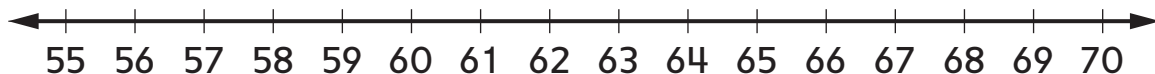
*Everyday Mathematics* encourages children to use a variety of strategies to solve problems. This allows children to develop number sense rather than simply memorizing steps or learning a shortcut. In today's lesson children used various strategies to add, including counting up on a number line and on a number grid.

**Please return this Home Link to school tomorrow.**

Find the sum in two different ways.

$$56 + 10 = ?$$

- ① Use the number line and show your hops. Record your answer.



Answer:  $56 + 10 =$  \_\_\_\_\_

- ② Use a number grid and draw arrows to show your counts. Record your answer.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

Answer:  $56 + 10 =$  \_\_\_\_\_



# Even Numbers and Equal Addends

## Home Link 2-9

NAME

DATE

### Family Note

Today we identified numbers as even or odd. We learned that when we count by 2s, we can look for a pattern in the digits in the ones place to help us identify even and odd numbers. We wrote number models to express even numbers as the sums of two equal addends and odd numbers as the sums of two equal addends plus or minus 1. We also learned a new game called *Evens and Odds*.

***Please return this Home Link to school tomorrow.***

Draw a circle around the even numbers.

Draw a line below the odd numbers.



6      9      18      8      3      14      11      4      17      10

15      1      7      19      16      13      2      20      5      12

Pick one of your circled numbers. Tell someone at home how you know it is even.

Pick one of your underlined numbers. Tell someone at home how you know it is odd.

Match.

7              4 + 4

8              8 + 8 + 1

11             6 + 6 - 1

14             3 + 3 + 1

17             7 + 7

10             5 + 5

# Name-Collection Boxes

## Family Note

Beginning in *First Grade Everyday Mathematics*, children use name-collection boxes to help them collect equivalent names for the same number. These boxes help children appreciate the idea that numbers can be expressed in many different ways.

A name-collection box is an open box with a tag in the corner. The tag identifies the number whose names are collected in the box. In second grade typical names include sums, differences, tally marks, number words, and arrays. At higher grades, names may include products, quotients, and the results of several mathematical operations.

Encourage your child to name a number in different ways—for example, use tally marks, write addition and subtraction problems, or draw pictures of objects. Some name-collection activities are shown below.

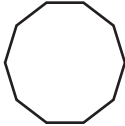

10

 ← Tag for box

Name-collection box

10

### ##

ten

$12 - 2$

$6 + 4$

Items in the name-collection box above represent the number 10. Some names contain numbers, and some do not.

9

	X X X
$19 - 10$	X X X
	X X X
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"><math>15 - 7</math></span>	1 less
$3 + 3 + 3$	than 10
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"><math>8 + 0</math></span>	
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"><math>5 + 4 + 1</math></span>	###

Sometimes children must circle names that do not belong in the box.

	X X X
$6 + 6$	X X X
$12 - 0$	X X X
twelve	1 less
$15 - 1 - 2$	than 13
$18 - 6$	
$12 - 0$	### ##

Sometimes children must fill in the tag for the numbers shown in the box. The tag here should read 12.

**Please return the second page of this Home Link to school tomorrow.**

# Name-Collection Boxes (continued)

Home Link 2-10

NAME

DATE

- ① Give the Family Note to someone at home. Show that person the name-collection box below. Explain what a name-collection box is used for.

<b>8</b>			
$2 + 6$	$4 + 4$	$x x x x$	
eight	$12 - 4$	$x x x x$	
ocho	$10 - 2$	$8 - 0$	
$8 + 0$	$3 + 5$	<del>///</del> ///	

- ② Write ten names in the 10 box.

<b>10</b>	
-----------	--

- ③ Make up your own name-collection box. Write at least ten names in the box.

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# Playing Name That Number

## Home Link 2-11



NAME \_\_\_\_\_

DATE \_\_\_\_\_

### Family Note

In today's lesson children discussed how to name a number in different ways. We played a game called *Name That Number* by using addition and subtraction to name a target number.

**Please return this Home Link to school tomorrow.**

Write two number sentences to show each target number.



Example: 

2	6	4	5	4		8
---	---	---	---	---	--	---

$$6 + 2 = 8$$

$$4 + 4 = 8$$

① 

2	6	10	3	6		12
---	---	----	---	---	--	----

\_\_\_\_\_

\_\_\_\_\_

② 

4	1	9	6	1		5
---	---	---	---	---	--	---

\_\_\_\_\_

\_\_\_\_\_

③ 

9	2	3	5	4		6
---	---	---	---	---	--	---

\_\_\_\_\_

\_\_\_\_\_

### Practice

Unit
leaves

Solve.

④  $10 = 7 + \underline{\hspace{2cm}}$

⑤  $10 = \underline{\hspace{2cm}} + 9$

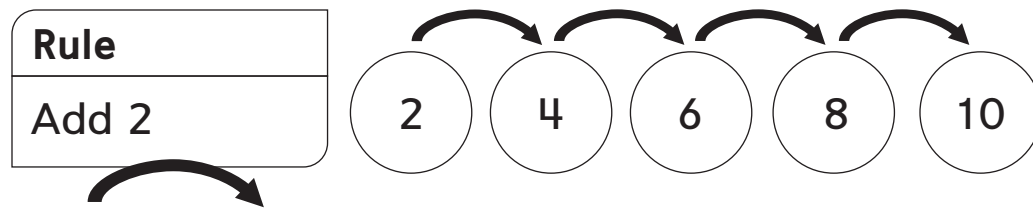
⑥  $10 = 2 + \underline{\hspace{2cm}}$

⑦  $10 = 0 + \underline{\hspace{2cm}}$

# Frames and Arrows

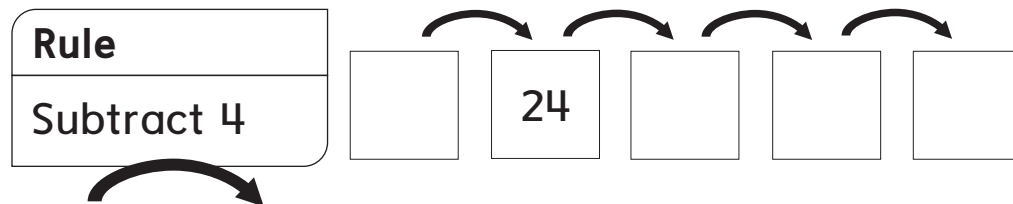
## Family Note

Today your child used Frames-and-Arrows diagrams. These diagrams show sequences of numbers in which one number follows another according to a rule. Frames-and-Arrows diagrams are made up of shapes called *frames* and arrows connecting the frames. Each frame contains one of the numbers in the sequence. Each arrow stands for the rule, which tells how to find the number that goes in the next frame. Here is an example of a Frames-and-Arrows diagram. The arrow rule is "Add 2."



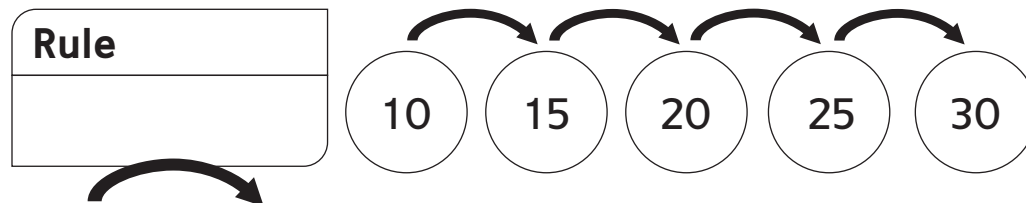
In a Frames-and-Arrows problem, some of the information is left out. To solve the problem, you have to find the missing information. Here are two examples of Frames-and-Arrows problems:

**Example 1:** Fill in the empty frames according to the rule.



*Solution:* Write 28, 20, 16, and 12 in the empty frames.

**Example 2:** Write the arrow rule in the empty box.



*Solution:* The arrow rule is Add 5 or + 5.

Ask your child to tell you about Frames-and-Arrows diagrams. Take turns with your child making up and solving Frames-and-Arrows problems like the examples given above.

**Please return the second page of this Home Link to school tomorrow.**

# Frames and Arrows

(continued)

Tell someone at home what you know about Frames-and-Arrows problems. Fill in the empty frames and rule boxes.

①

Rule
+ 2

32

②

Rule
- 5

45

③

Rule
+ 10

58

④

Rule

8 11 14 17 20

⑤ Do your own.

Rule

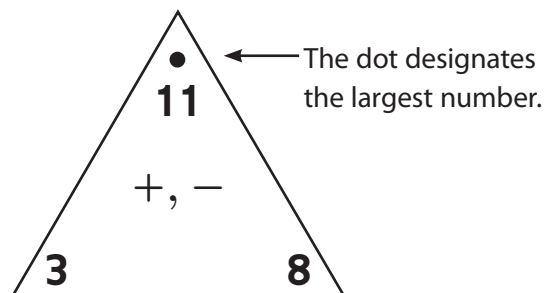
### More Fact Strategies

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.



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:

$$2 + 4 = 6 \quad 4 + 2 = 6$$

$$6 - 4 = 2 \quad 6 - 2 = 4$$

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:

$$7 + 7 = 14 \quad 14 - 7 = 7$$

– **0 facts** Subtraction facts in which the number 0 is subtracted from another number, such as  $7 - 0 = 7$  and  $10 - 0 = 10$ .

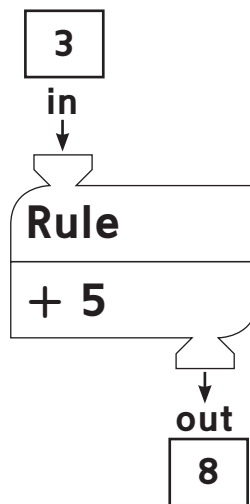
— **1 facts** Subtraction facts in which the number 1 is subtracted from another number, such as  $9 - 1 = 8$  and  $6 - 1 = 5$ .

**“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.



## 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.”

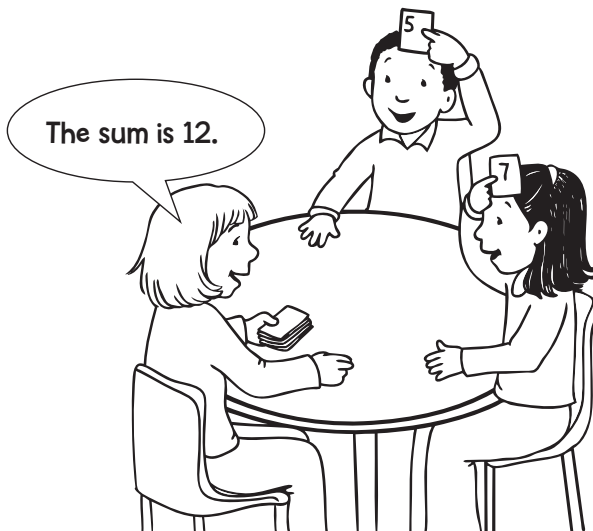


## Building Skills through Games

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

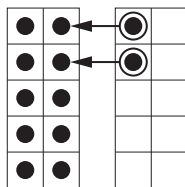
Each player draws two cards and subtracts the smaller number from the larger number. The player with the largest difference takes all the cards.

## As You Help Your Child with Homework

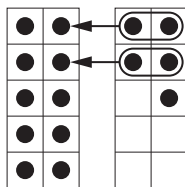
As your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The following answers will guide you through the Unit 3 Home Links.

### Home Link 3-1

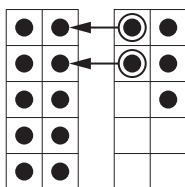
1.  $8 + 2 = 10$



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 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**

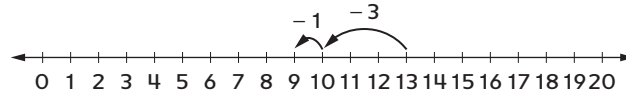
1. 15; 17; 14    2. -8    3. 6; 3; 9; 0
4. + 5; 18; 5; Answers vary.

**Home Link 3-8**

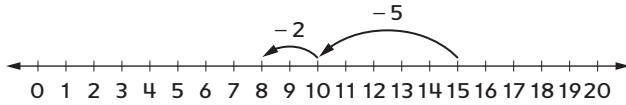
1. 7; Sample answer: I know  $6 + 6 = 12$ , and 13 is 1 more than 12. So I added 1 to one of the 6s. The answer is 7.
2. 9; Sample answer: I know that  $8 + 8 = 16$  and 17 is 1 more than 16. So I added 1 to one of the 8s. The answer is 9.
3. 10    4. 11

**Home Link 3-9**

1. 9



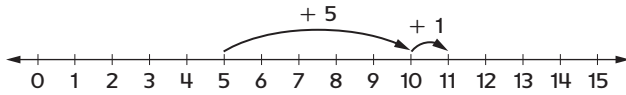
2. 8



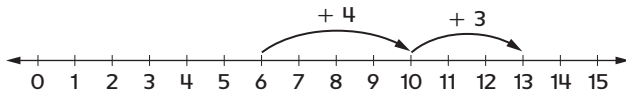
3.  $5 + 3 = 8$     4.  $15 = 6 + 9$

**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: (Q)(Q)(N)(P)(P);  
(D)(D)(D)(D)(D)(P)(P)(P)(P)(P)(P)