

**HOME LINK**  
**6•1**

# Adding Three Numbers

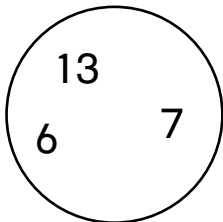

**Family Note**

Sometimes the order in which you add numbers can make it easier to find the sum. For example, when adding 17, 19, and 23, some people may first calculate  $17 + 23$ , which equals 40, and then add 19 ( $40 + 19 = 59$ ). For Problems 1–4, help your child look for easy combinations. Before working on Problems 5–10, you might go over the example with your child.

*Please return this Home Link to school tomorrow.*

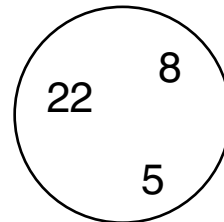
For each problem:

- ◆ Think about an easy way to add the numbers.
- ◆ Write a number model to show the order in which you are adding the numbers.
- ◆ Find each sum. Tell someone at home why you added the numbers in that order.

**1.**


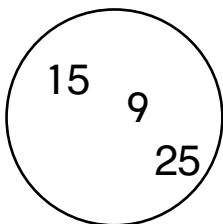
Number model:

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

**2.**


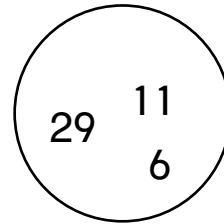
Number model:

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

**3.**


Number model:

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

**4.**


Number model:

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

**HOME LINK**  
**6•1**
**Adding Three Numbers** *continued*


Add. Use the partial-sums method.

**Example:**

			33
			42
		+ 11	80
Add the tens.	→ (30 + 40 + 10)	→	80
Add the ones.	→ (3 + 2 + 1)	→	6
Add the partial sums.	→ (80 + 6)	→	86

**Practice**

**5.**

$$\begin{array}{r} 23 \\ 32 \\ + 14 \\ \hline \\ \hline \end{array}$$

**6.**

$$\begin{array}{r} 14 \\ 29 \\ + 27 \\ \hline \\ \hline \end{array}$$

**7.**

$$\begin{array}{r} 8 \\ 19 \\ + 35 \\ \hline \\ \hline \end{array}$$

**8.**

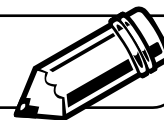
$$\begin{array}{r} 46 \\ 25 \\ + 12 \\ \hline \\ \hline \end{array}$$

**9.**

$$\begin{array}{r} 40 \\ 45 \\ + 63 \\ \hline \\ \hline \end{array}$$

**10.**

$$\begin{array}{r} 9 \\ 85 \\ + 96 \\ \hline \\ \hline \end{array}$$

**LESSON**  
**6•1****Addition with Several Addends**

For each sum, write a number sentence using four or more addends. Each number sentence must include a double and at least one pair of addends that equal ten.

**43****62****79****112**

# Comparison Number Stories



## Family Note

Today your child learned about a device that is useful when solving number stories. We call it a comparison diagram. Diagrams like these can help your child organize the information in a problem. When the information is organized, it is easier to decide which operation (+, −, ×, or ÷) to use to solve the problem.

Comparison diagrams are used to represent problems in which two quantities are given and the question is how much more or less one quantity is than the other (the difference).

**Example 1:** There are 49 fourth graders and 38 third graders. How many more fourth graders are there than third graders?

Note that the number of fourth graders is being compared with the number of third graders.

- *Answer:* There are 11 more fourth graders than third graders.
- *Possible number models:* Children who think of the problem in terms of subtraction will write  $49 - 38 = 11$ . Other children may think of the problem in terms of addition: “Which number added to 38 will give me 49?” They will write the number model as  $38 + 11 = 49$ .

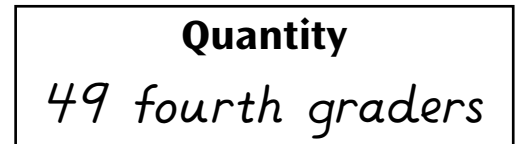
**Example 2:** There are 53 second graders. There are 10 more second graders than first graders. How many first graders are there?

Note that sometimes the difference is known and that one of the two quantities is unknown.

- *Answer:* There are 43 first graders.
- *Possible number models:*  
 $53 - 10 = 43$  or  $10 + 43 = 53$

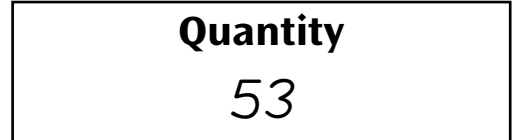
For Problems 1 and 2, ask your child to explain the number model that he or she wrote. Also ask your child to explain the steps needed to solve Problems 4–6.

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



**Difference**

Your child may write words in the diagram as a reminder of what the numbers mean.



**Difference**





In each number story:

- ◆ Write the numbers you know in the comparison diagram.
- ◆ Write ? for the number you want to find.
- ◆ Solve the problem. Then write a number model.

- 1.** Ross has \$29. Omeida has \$10.

Ross has \$\_\_\_\_\_ more than Omeida.

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

Quantity
----------

Quantity
----------

\_\_\_\_\_ Difference

- 2.** Omar swam 35 laps in the pool.

Anthony swam 20 laps.

Anthony swam \_\_\_\_\_ fewer laps than Omar.

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

Quantity
----------

Quantity
----------

\_\_\_\_\_ Difference

- 3.** Claudia's birthday is June 10.

Tisha's birthday is 12 days later.

Tisha's birthday is June \_\_\_\_\_.

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

Quantity
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Quantity
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\_\_\_\_\_ Difference

<b>Practice</b>
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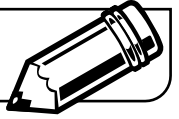
<b>Unit</b>
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Add. Use the partial-sums method.

**4.**    39  
  + 62

**5.**    48  
  + 7

**6.**    33  
  + 54

**LESSON**  
**6•2****Comparing Number Stories**

Solve each number story. Be sure to write a number model. Then answer the questions at the bottom of the page.

- 1.** There were 23 children in the classroom. 17 went to the computer lab. How many were left in the classroom?

Number Model: \_\_\_\_\_

- 2.** There were 6 children in the classroom. 17 came back from the computer lab. How many children are in the classroom now?

Number Model: \_\_\_\_\_

How are the problems alike?

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How might solving Problem 1 help you solve Problem 2?  
Explain your thinking.

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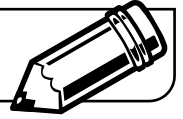
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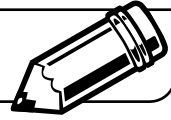
**LESSON**  
**6•3****Dietary Guidelines for Second Graders**

<b>Grains</b> 	<p>Eat 6 servings a day. Choose whole grain cereals, breads, crackers, or pasta.</p>
<b>Fruits</b> 	<p>Eat 4 servings a day.</p>
<b>Vegetables</b> 	<p>Eat 3–4 servings a day.</p>
<b>Low-fat Dairy</b> 	<p>Eat 2 servings a day. Choose low-fat or fat-free milk, cheese, and/or yogurt.</p>
<b>Meat and Beans</b> 	<p>Eat 1–2 servings a day. Choose lean meats. Eat more fish.</p>
<b>Fats and Oils</b> 	<p>Use sparingly.</p>
<b>Sweets</b> 	<p>If you are eating lots of healthy foods, then you may have sweets a few times a week.</p>

**LESSON**  
**6•3****The 4 Basic Food Groups (Samples)**

<b>fruit/ vegetables</b>	<b>bread/cereal/ rice/pasta</b>	<b>dairy products</b>	<b>meat/poultry/ fish/beans/ eggs/nuts</b>
watermelon	pancakes	ice cream	hamburgers
bananas	fried rice	Swiss cheese	omelets
grapes	French toast	yogurt	almonds
pears	cornflakes	chocolate milk	peanut butter
apples	muffins	cream cheese	chicken
broccoli	crackers	milk shakes	fish
corn	spaghetti	frozen yogurt	pork chops
potatoes	bagels		black beans
carrots	English muffins		refried beans
squash	waffles		scrambled eggs
raisins			turkey
strawberries			bacon

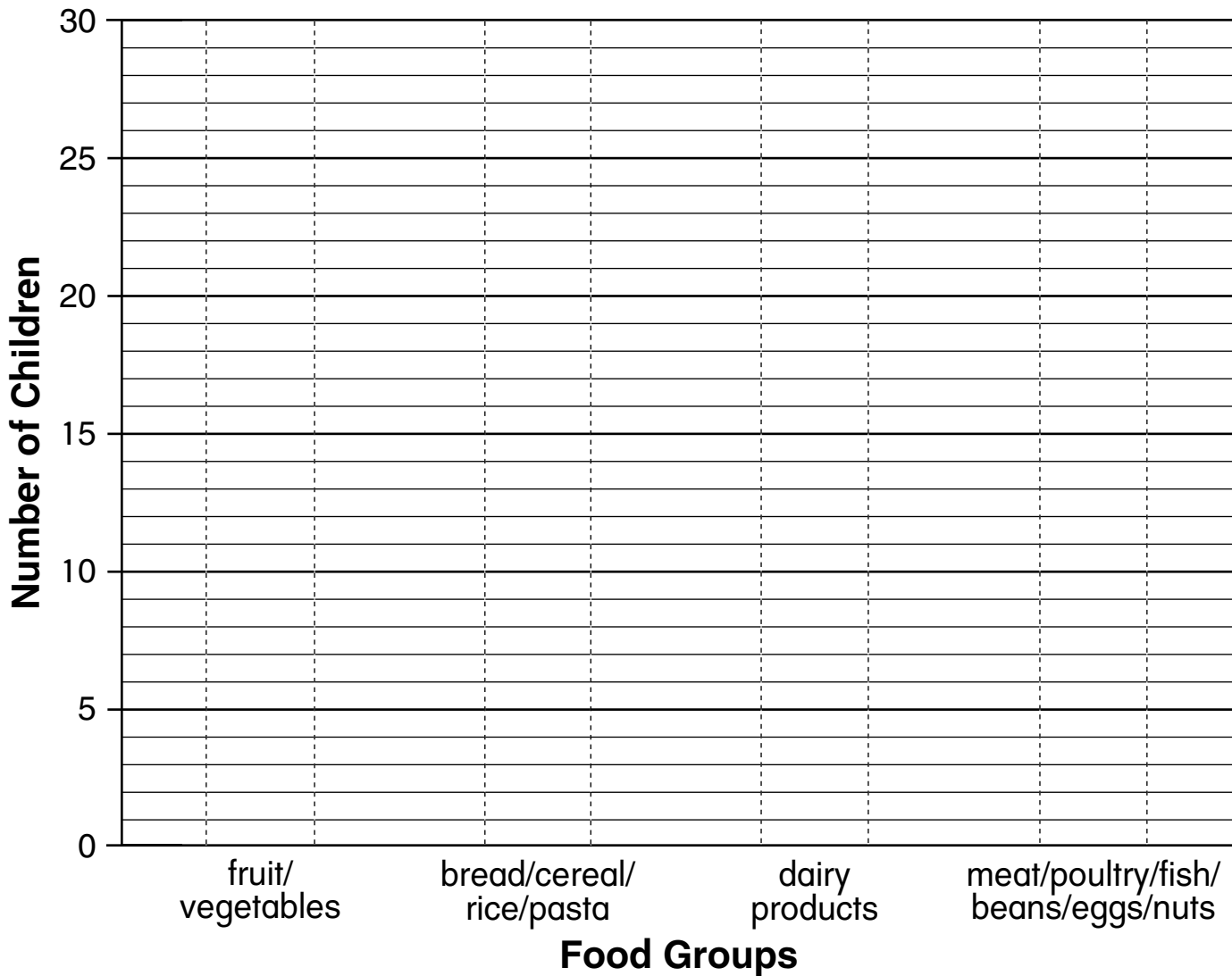


**LESSON**  
**6•3****What Is Your Favorite Food?**

1. Make tally marks to show the number of children who chose a favorite food in each group.

fruit/ vegetables	bread/cereal/ rice/pasta	dairy products	meat/poultry/ fish/beans/ eggs/nuts

2. Make a graph that shows how many children chose a favorite food in each group.

**Favorite Foods of Children**

**HOME LINK**  
**6•3**

## Graphing Data


**Family Note**

The class has been collecting and graphing data about favorite foods. Ask your child about the graph he or she made in class. In the table below, help your child count the tally marks below the name of each fruit. To decide how high up to color each bar, your child could lay a straightedge across the columns.

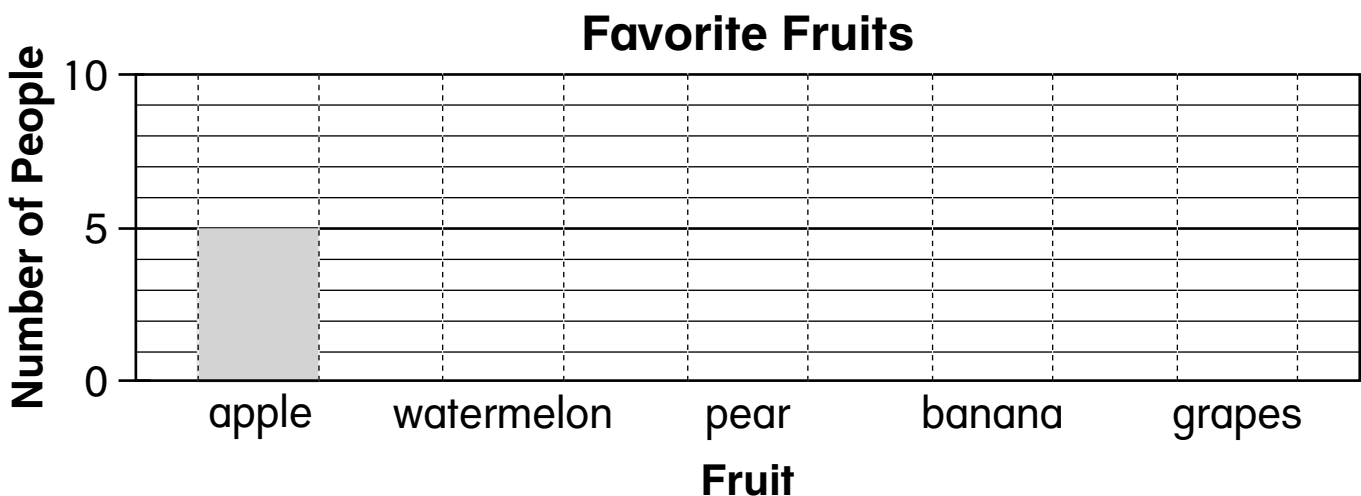
*Please return this Home Link to school tomorrow.*



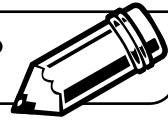
In a survey, people were asked to name their favorite fruit. The table below shows the results.

apple	watermelon	pear	banana	grapes

1. Make a bar graph that shows how many people chose each fruit. The first bar has been colored for you.



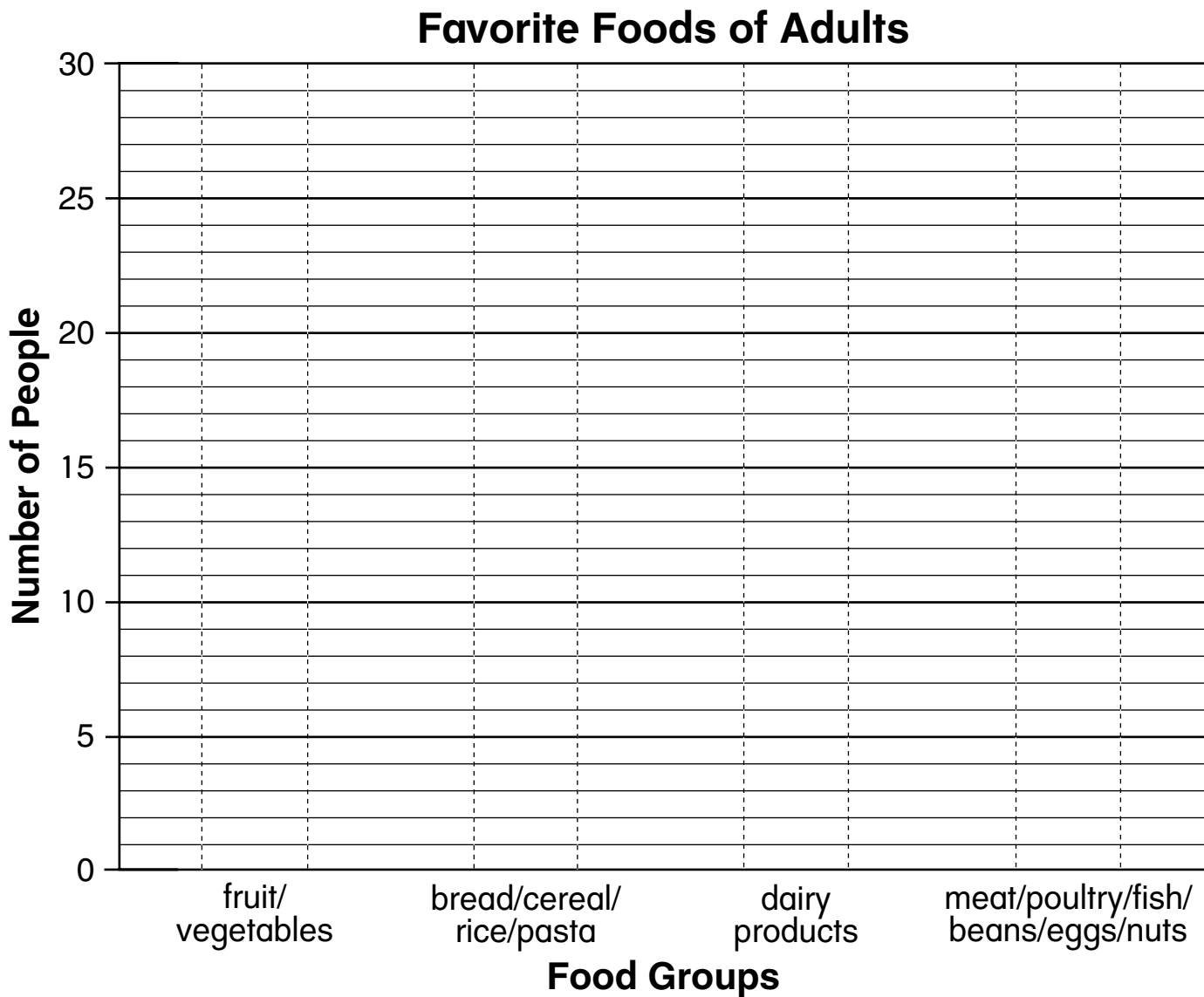
2. Which fruit is the most popular? \_\_\_\_\_  
 Which fruit is the least popular? \_\_\_\_\_  
 What is your favorite kind of fruit? \_\_\_\_\_

**LESSON**  
**6•3****Adults: What's Your Favorite Food?**

1. Make tally marks to show the number of adults who chose a favorite food in each group.

fruit/ vegetables	bread/cereal/ rice/pasta	dairy products	meat/poultry/ fish/beans/ eggs/nuts

2. Make a graph that shows how many adults chose a favorite food in each group.



**HOME LINK**  
**6•4**

# Number Stories and Diagrams

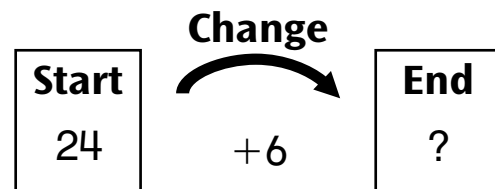
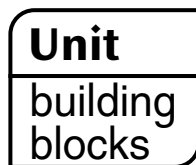

**Family Note**

In today's lesson, your child used diagrams to solve number stories. Listen to your child's stories. Ask your child to explain how each story relates to both the diagram and the number model. (See Home Link 5.10: *Unit 6 Family Letter* for information about number stories and diagrams.)

*Please return this Home Link to school tomorrow.*



Write number stories to match each diagram. Then finish the number model. Tell your stories to someone at home.

**1.**



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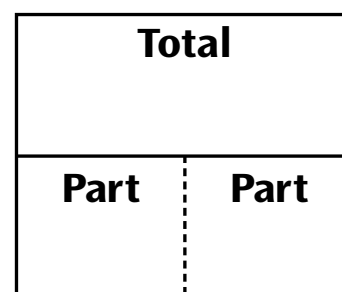
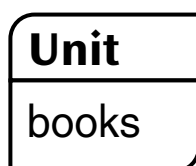


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Finish the number model:  $24 + 6 = \underline{\quad}$

**2.**



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Finish the number model:  $15 + 13 = \underline{\quad}$

**HOME LINK**  
**6•4**

# Number Stories and Diagrams *cont.*



3.

<b>Unit</b>
bananas

<b>Quantity</b>
-----------------

<b>Quantity</b>
-----------------

\_\_\_\_\_

**Difference**

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Finish the number model:  $28 - 8 = \underline{\quad}$

4.

<b>Unit</b>
baseball cards

<b>Total</b>	
<b>Part</b>	<b>Part</b>

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Write a number model for your story.

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

**HOME LINK**  
**6•5**

# Subtracting with Base-10 Blocks


**Family Note**

In this lesson, your child found the answers to subtraction problems by using longs and cubes to represent tens and ones, respectively.

This will help your child understand the concept of subtraction before he or she learns to subtract using a step-by-step procedure, or algorithm, with paper and pencil. When you see the problems on this Home Link, you may be eager to teach your child to subtract the way you were taught. Please wait—the introduction of a formal algorithm for subtraction will be taught later in second grade.

*Please return this Home Link to school tomorrow.*

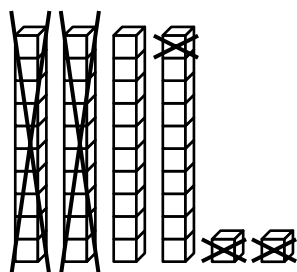


long



cube

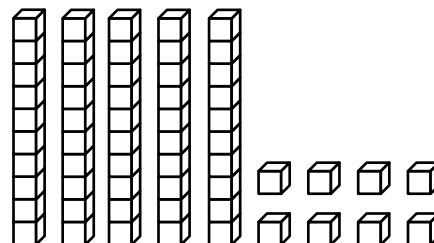
Show subtraction by crossing out cubes.

**Example:**


How many cubes are shown as separate cubes and as part of the longs? 42

Cross out (subtract) 23 cubes. How many cubes are left? 19

Number model:  
 $\underline{42} - \underline{23} = \underline{19}$

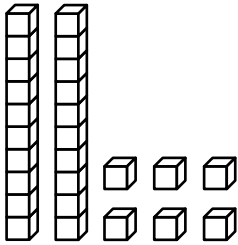
**1.**


How many cubes are shown in all? \_\_\_\_\_

Cross out (subtract) 17 cubes. How many cubes are left? \_\_\_\_\_

Number model:

\_\_\_\_\_ - \_\_\_\_\_ = \_\_\_\_\_

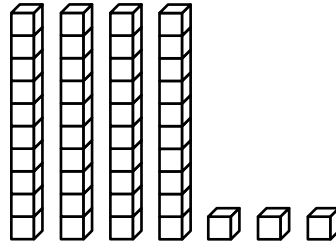
**Subtracting with Blocks** *continued***2.**

How many cubes are shown in all? \_\_\_\_\_

Cross out (subtract) 18 cubes. How many cubes are left? \_\_\_\_\_

Number model:

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

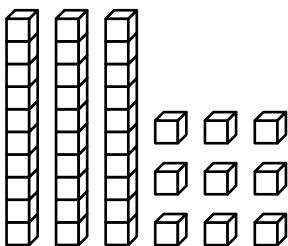
**3.**

How many cubes are shown in all? \_\_\_\_\_

Cross out (subtract) 25 cubes. How many cubes are left? \_\_\_\_\_

Number model:

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

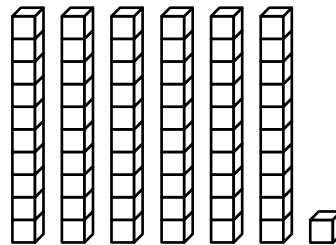
**4.**

How many cubes are shown in all? \_\_\_\_\_

Cross out (subtract) 32 cubes. How many cubes are left? \_\_\_\_\_

Number model:

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

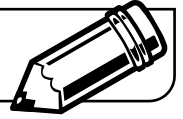
**5.**

How many cubes are shown in all? \_\_\_\_\_

Cross out (subtract) 47 cubes. How many cubes are left? \_\_\_\_\_

Number model:

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

**LESSON**  
**6•5****A Subtraction Strategy**

Meredith uses an interesting strategy for solving subtraction problems when you have to trade. Try to figure out how it works.

$$42 - 27$$

On my first step, I get 12.

On my second step I get 15.

15 is my final answer.

$$34 - 19$$

On my first step, I get 14.

On my second step I get 15.

15 is my final answer.

$$71 - 36$$

First Step: \_\_\_\_\_

Second Step: \_\_\_\_\_

Final Answer: \_\_\_\_\_

**Try This**

$$93 - 48$$

First Step: \_\_\_\_\_

Second Step: \_\_\_\_\_

Final Step: \_\_\_\_\_



**LESSON**  
**6•6****Geoboard Arrays**

- Materials**
- geoboard dot paper for each person
  - geoboard for each person
  - rubber band for each person
  - scissors for the group
  - glue or paste for the group (optional)
  - large sheet of paper for the group (optional)

**Work by yourself to complete Steps 1–5.**

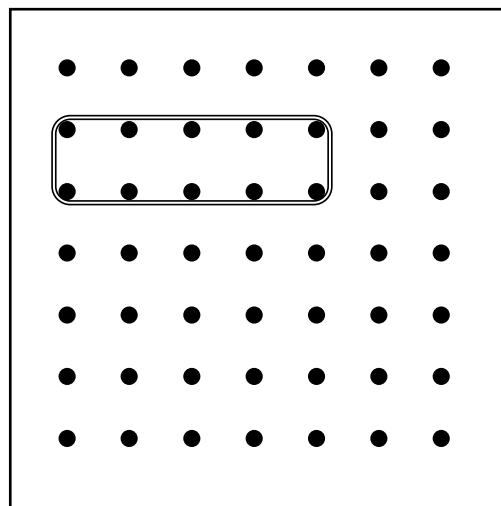
- 1.** Use one rubber band to make a rectangle on your geoboard. The pegs inside and the pegs that touch the rubber band make an array.

- 2.** Draw your array on the geoboard dot paper.

- 3.** Write about your array at the bottom of the geoboard dot paper. Tell how many rows are in your rectangle, how many dots are in each row, and how many dots in all are in your rectangle.

- 4.** Make 3 more arrays—all different. Follow steps two and three.

- 5.** Cut apart the dot-paper records of your 4 arrays.



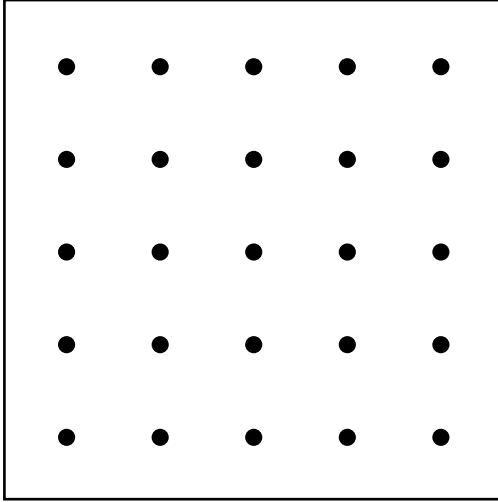
There are 2 rows of 5 pegs.  
10 pegs are in the array.

**Work with your group to complete Step 6.**

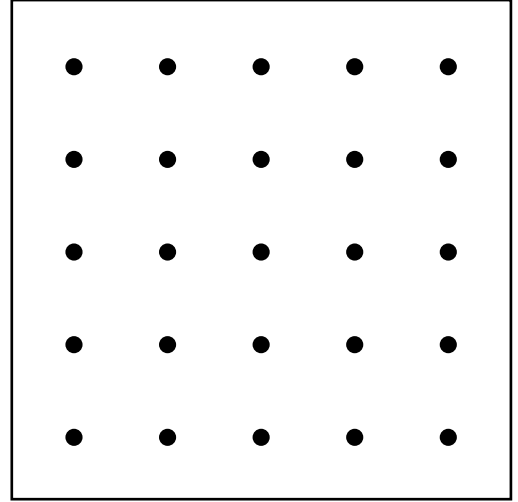
- 6.** Sort your group's arrays into piles that have the same number of dots. You might want to use the arrays in each pile to make a display about that number.

**LESSON**  
**6•6**
**Geoboard Arrays (5 × 5)**

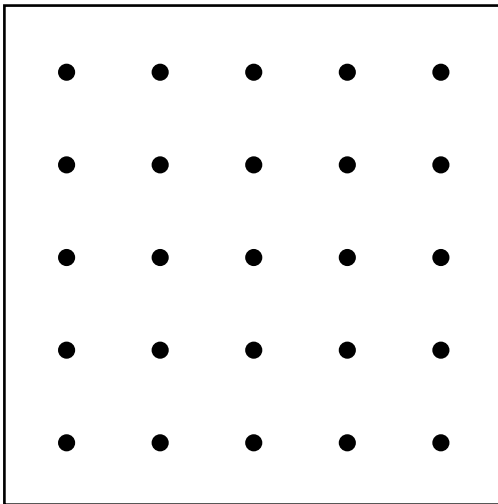

1.



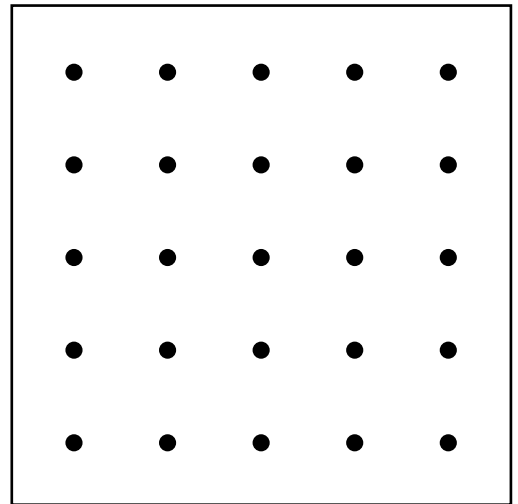
2.



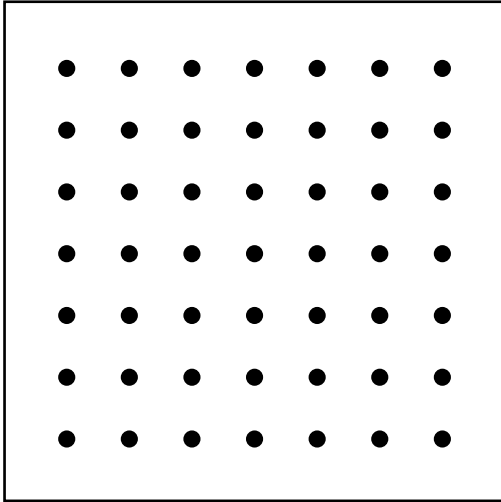
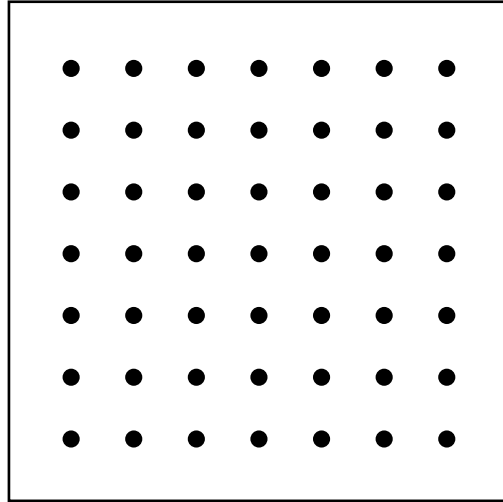
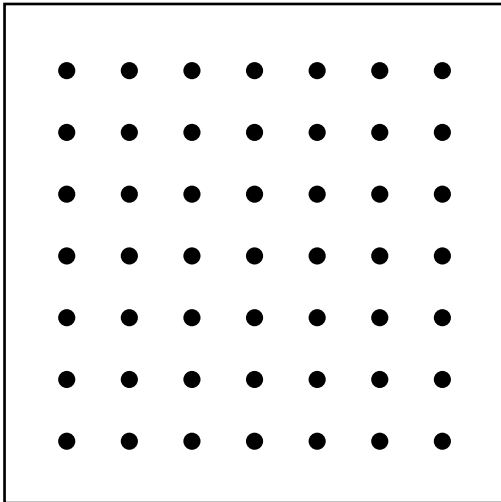
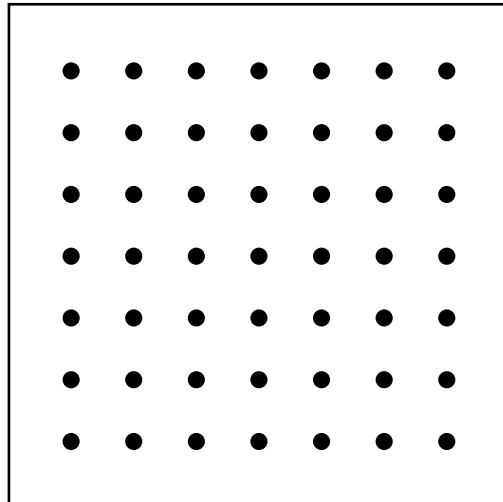
3.



4.



	How many rows?	How many dots in each row?	How many dots in all?
1.			
2.			
3.			
4.			

**LESSON**  
**6•6****Geoboard Arrays (7 × 7)****1.****2.****3.****4.**

	How many rows?	How many dots in each row?	How many dots in all?
<b>1.</b>			
<b>2.</b>			
<b>3.</b>			
<b>4.</b>			

**LESSON**  
**6•6****Making a Dollar**

Work together in a small group.

- Materials**
- 20 nickels
  - 10 dimes
  - 4 quarters
  - paper and pencil

**Directions**

- 1.** Use the coins to find as many different ways as you can to make \$1.00.
- 2.** Before you begin, **THINK** about how to do this. *Hint:* First, make a dollar using 3 quarters and some other coins.
- 3.** Plan how you will record the different ways to make \$1.00.
- 4.** On a sheet of paper, record the different ways you find to make \$1.00. Use  $\textcircled{N}$ ,  $\textcircled{D}$ , and  $\textcircled{Q}$  to show the coins.

**Follow-Up**

- ◆ How many ways did you find to make \$1.00? Check with other groups to see if they thought of any ways that your group didn't find.
- ◆ Did you have a plan to find all the combinations? Compare your plan with the plan used by another group.

**LESSON**  
**6•6****How Many Children Get  $n$  Things?**

- Materials**
- Math Journal 1*, p. 146 (per person)
  - one container with about 50 pennies or other counters (per group)
  - 1 six-sided die (per group)

Use counters to make up and solve problems like this one:

*Your group has been given 32 crayons.*

*Each person is to get 8 crayons.*

*How many of you will get 8 crayons?*

*Are there any crayons left over?*

Now make up your own problems. Follow these steps:

- 1.** Each person takes a handful of counters. Put all the counters together in a pile.

How many counters are in the pile? Count them and record the number on the journal page.

- 2.** Make equal-size groups of counters. One person rolls the die. The number that lands faceup tells how many counters to put in each group.

Record this number on the journal page.

- 3.** Make as many groups as you can with the counters in the pile.
- 4.** Record on the journal page how many groups you made. If any counters are left over, record that number, too.
- 5.** Put the counters back in the container. Repeat Steps 1–4.

**HOME LINK**  
**6•6**

## How Many?



**Family Note** Your child has been working with arrays—rectangular arrangements of objects having the same number of objects in each row—to develop readiness for multiplication. Because this is a readiness activity, children have not yet written number models for multiplication, such as  $4 \times 5 = 20$ . Your child will do this in later lessons in this unit.

*Please return this Home Link to school tomorrow.*

- 1.** Show someone at home this array.
- |   |   |   |   |   |
|---|---|---|---|---|
| X | X | X | X | X |
| X | X | X | X | X |
| X | X | X | X | X |
| X | X | X | X | X |

How many rows? \_\_\_\_\_

How many **Xs** in each row? \_\_\_\_\_

How many **Xs** in all? \_\_\_\_\_

- 2.** Draw an array of 16 **Xs**.

How many rows? \_\_\_\_\_

How many **Xs** in each row? \_\_\_\_\_

- 3.** Draw an array of 24 **Xs**.

How many rows? \_\_\_\_\_

How many **Xs** in each row? \_\_\_\_\_

- 4.** Draw a different array of 24 **Xs**.

How many rows? \_\_\_\_\_

How many **Xs** in each row? \_\_\_\_\_

**LESSON**  
**6•6****Solving Dollar Riddles**

1. To make a dollar, use all four types of coins and create a coin combination where there are two times as many of one type of coin as another.

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2. To make a dollar, use all four types of coins. Use half as many of one type of coin.

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3. To make a dollar, use only nickels and dimes and create a coin combination where one type of coin is used twice as much as the other type. \_\_\_\_\_

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4. Using only three types of coins, make a dollar with the least number of coins you could use. \_\_\_\_\_

---

---

Using only three types of coins, make a dollar with the greatest number of coins you could use. \_\_\_\_\_

---

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**Try This**

Use pennies, nickels, dimes, and quarters. Make a combination that is worth one dollar where you have one of some kind of coin, double of another, double that of another, and some number of the last coin.

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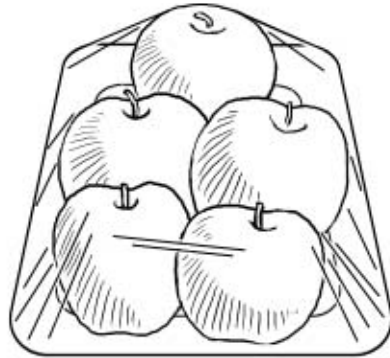
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# How Many?

**Family Note**

In today's lesson, your child learned that multiplication is an operation used to find the total number of things in several equal groups. As you help your child solve the following problems, emphasize that each group has the same number of things. Your child can use objects, draw pictures, count, or use any other helpful devices to find the answers.

*Please return this Home Link to school tomorrow.*

**Example:**

How many apples in 4 packages?

$$\begin{array}{cccc} \text{||||} & \text{||||} & \text{||||} & \text{||||} \\ 5 + 5 + 5 + 5 = 20 \end{array}$$

There are 20 apples in 4 packages.

- 1.

How many sides on each triangle? \_\_\_\_\_ sides

How many sides in all? \_\_\_\_\_ sides

- 2.

How many wheels on each bike? \_\_\_\_\_ wheels

How many wheels in all? \_\_\_\_\_ wheels

- 3.

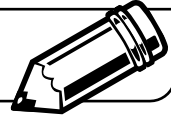
How many fingers for each person?

\_\_\_\_\_ fingers

How many fingers in all?

\_\_\_\_\_ fingers



**LESSON**  
**6•7****Finding Totals for Equal Groups**

You may use your calculator to help you solve the problems.

**1.** How many people are in my group? \_\_\_\_\_

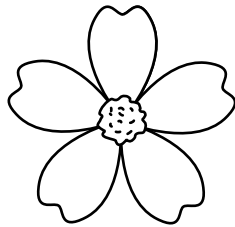
How many hands do the people in my group have all together? \_\_\_\_\_

How many fingers do the people in my group have all together? \_\_\_\_\_

**2.** How many tables are in the classroom? \_\_\_\_\_

How many legs do the tables have? \_\_\_\_\_

**3.** One flower has 5 petals.



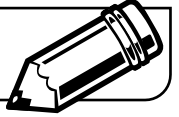
How many petals do 6 flowers have? \_\_\_\_\_

**4.** Make up your own problem like the ones above. Draw a picture to help someone solve your problem.

---

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**LESSON**  
**6•7****Equal-Groups Riddles****What Number Am I?**

- 1.** If you put me into 7 equal groups with 3 in each group and 5 are left over, what number am I?

\_\_\_\_\_

Draw a picture of what you did.

- 2.** I am a number between 20 and 30. When you put me into 6 equal groups, there is an even number in each group and 1 is left over.

What number am I? \_\_\_\_\_

Draw a picture of what you did.

- 3.** Try writing your own equal-groups riddle.

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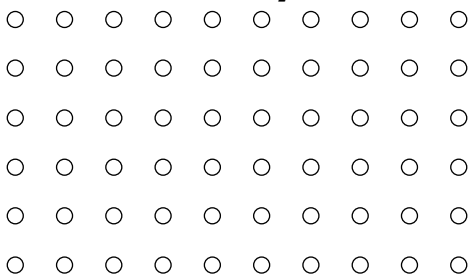
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**LESSON**  
**6•8**

# Array Number Stories



## Array

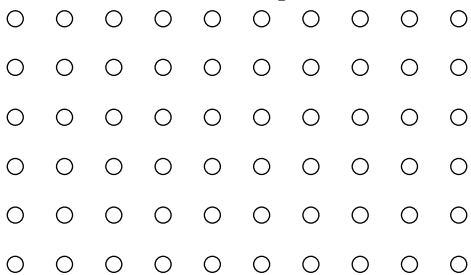


## Multiplication Diagram

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

Number model: \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

## Array

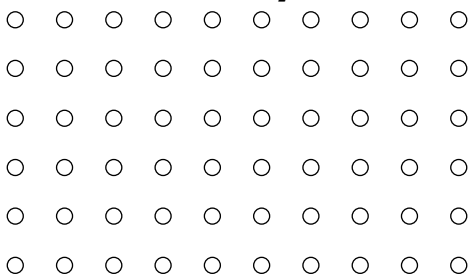


## Multiplication Diagram

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

Number model: \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

## Array

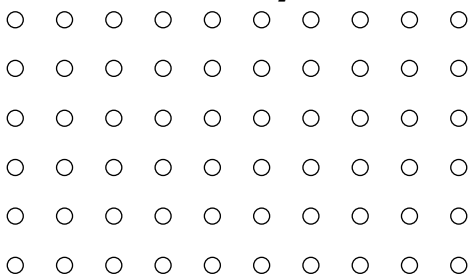


## Multiplication Diagram

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

Number model: \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

## Array



## Multiplication Diagram

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

Number model: \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

# Arrays

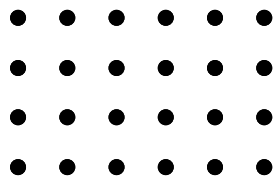

**Family Note**

In this lesson, your child solved multiplication problems about arrays, which are rectangular arrangements of objects in rows and columns. Encourage your child to use counters, such as pennies or buttons, while working on the following exercises.

*Please return this Home Link to school tomorrow.*

Tell someone at home what you know about arrays.

- 1.** Look at the array and fill in the blank.



4 rows of dots

6 dots in each row

\_\_\_\_\_ dots in all.

- 2.** Draw an array of dots. Your array should have

5 rows of dots

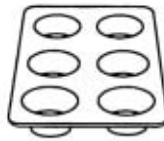
7 dots in each row

That's \_\_\_\_\_ dots in all.

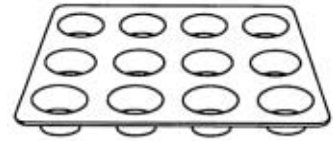
- 3.** Draw an array of 12 dots.



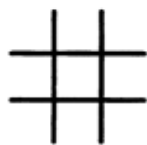
**Telephone:**  
a 4-by-3 array



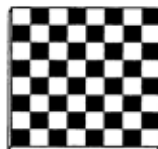
**Muffins:**  
a 3-by-2 array



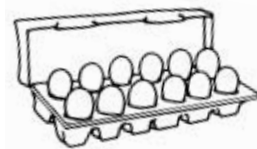
**Muffins:**  
a 3-by-4 array



**Tic-tac-toe Grid:**  
a 3-by-3 array



**Checkerboard:**  
an 8-by-8 array



**Eggs:**  
a 2-by-6 array

**HOME LINK**  
**6•9**

# Arrays


**Family Note**

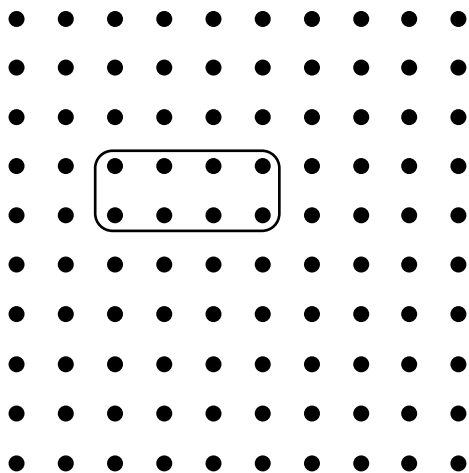
In this lesson, your child continued to work with arrays to develop multiplication concepts. Your child described each array by naming the number of rows, the number of items in each row, and the total number of items in the array. Your child wrote number models to describe arrays. In the example, an array with 2 rows of 4 dots can be described using the number model  $2 \times 4 = 8$ .

*Please return this Home Link to school tomorrow.*

Show an array for the numbers that are given. Find the total number of dots in the array. Complete the number model.

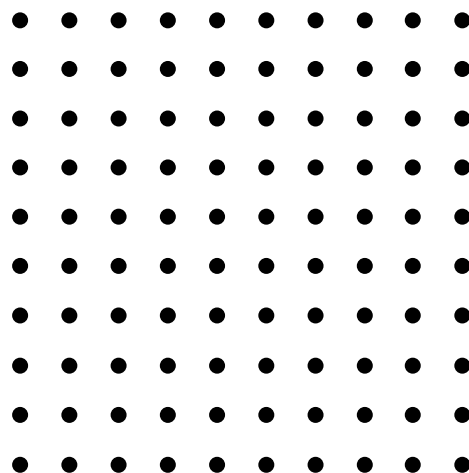
**Example:**

Numbers: 2, 4


 Total: 8

Number model:

$$\underline{2} \times \underline{4} = \underline{8}$$

**1.** Numbers: 7, 3


Total: \_\_\_\_\_

Number model:

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

HOME LINK  
6•9

## Arrays *continued*

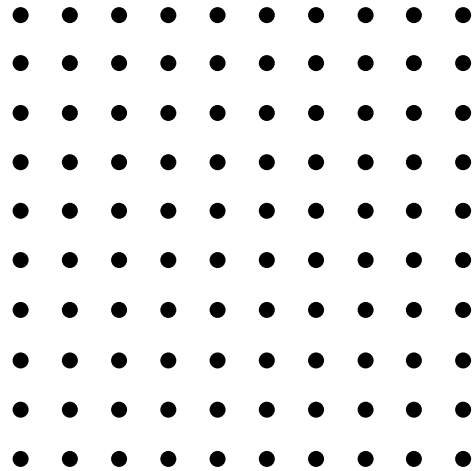


2. Numbers: 6, 10

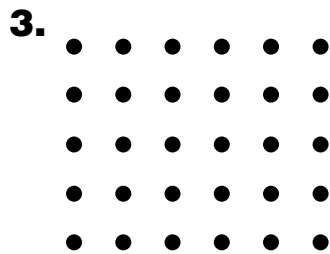
Total: \_\_\_\_\_

Number model:

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$



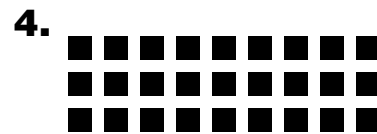
Answer the questions about each array.



How many rows? \_\_\_\_\_

How many dots in each row? \_\_\_\_\_

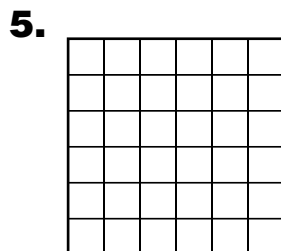
How many dots in the array? \_\_\_\_\_



How many rows? \_\_\_\_\_

How many squares per row? \_\_\_\_\_

How many squares in the array? \_\_\_\_\_



How many rows? \_\_\_\_\_

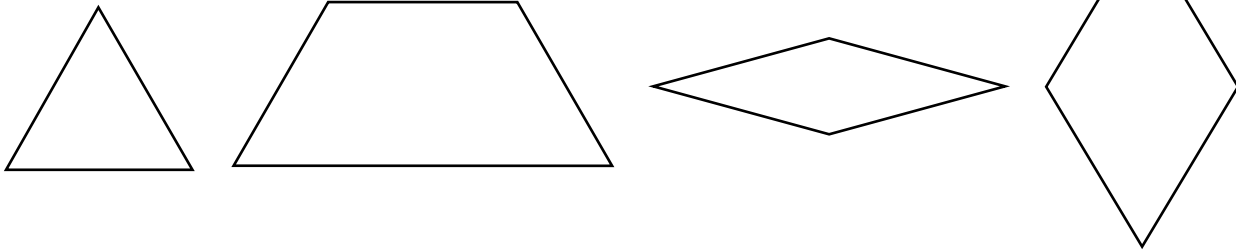
How many squares in each row? \_\_\_\_\_

How many squares in the array? \_\_\_\_\_

**LESSON**  
**6•9****Building Arrays**

- Materials**  pattern blocks  Pattern-Block Template  
 1 six-sided die or number cube  
 *Math Masters*, p. 187

1. Choose one of these blocks.



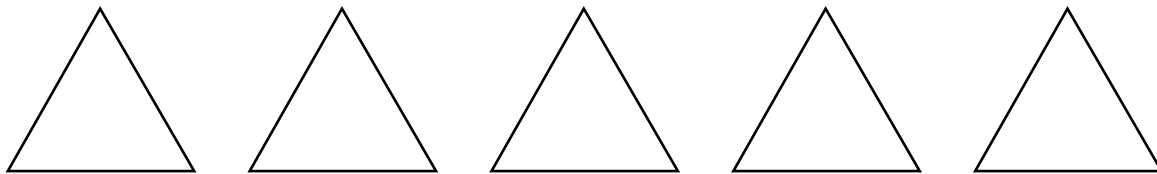
2. Roll the die 2 times.

The first number you roll tells how many rows to make in your array.

The second number you roll tells how many blocks to put in each row of your array.

**Example:**

If you roll a 1 first and then a 5, you might make this:

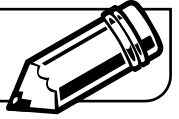


3. Record the arrays you make on *Math Masters*, page 187.

Use the Pattern-Block Template. At the top of the page, draw the first array you made.

Fill in the table for Number 1 at the bottom of the page.

4. Make 4 more arrays. Follow the same steps. If you have room, draw the arrays you make. After you run out of room, fill in the table only.

**LESSON**  
**6•9****Building Arrays** *continued*

Use your Pattern-Block Template. Show one or more of your arrays.

Record the arrays you made.

	How many rows?	How many shapes in each row?	How many shapes in all?
<b>1.</b>			
<b>2.</b>			
<b>3.</b>			
<b>4.</b>			
<b>5.</b>			



# Division

**Family Note**

In this lesson, your child worked on the concept of division by putting objects into equal groups and sharing objects equally among several people. Objects that are left over are called the *remainder*. If 9 books are shared equally among 4 people, each person gets 2 books, and the 1 book that is left over is the remainder.

Watch as your child divides things equally among family members. Try to use groups of objects that can be divided with no remainder as well as groups that have remainders.

*Please return this Home Link to school tomorrow.*



1. Have someone at home give you a group or handful of small items, such as raisins, buttons, or popcorn. Show how you can divide the items equally among your family members. Are any items left over?

Make a record of what you did. Be ready to tell about it in class.

I shared \_\_\_\_\_ (how many?) items equally among \_\_\_\_\_ people.

Each person got \_\_\_\_\_. There were \_\_\_\_\_ left over.

2. Do this again with some other kind of item.

I shared \_\_\_\_\_ items equally among \_\_\_\_\_ people.

Each person got \_\_\_\_\_. There were \_\_\_\_\_ left over.

3. 19 cents shared equally

by 2 people

\_\_\_\_\_¢ per person

\_\_\_\_\_¢ remaining

by 3 people

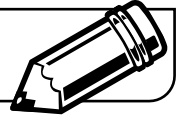
\_\_\_\_\_¢ per person

\_\_\_\_\_¢ remaining

by 4 people

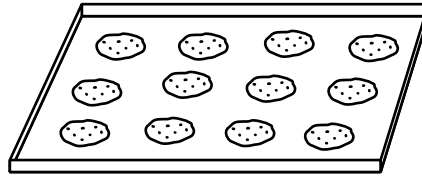
\_\_\_\_\_¢ per person

\_\_\_\_\_¢ remaining

**LESSON**  
**6•10****Sharing Cookies Equally**

Use counters to help you solve the problems.

1. Ruth's grandma had just baked a fresh tray of 12 cookies.



When Ruth came into the kitchen, her grandma gave her 3 warm cookies.

Write a number model to show how many cookies were still on the tray. \_\_\_\_\_

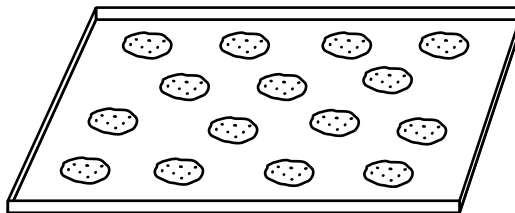
When Ruth's sister came into the kitchen, Grandma gave her 3 cookies.

Write a number model to show how many cookies were still on the tray. \_\_\_\_\_

How many more people can Grandma give cookies to if she gives each person three cookies?

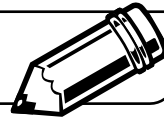
Show your work.

2. The next time grandma baked cookies, she used a larger tray. She made 15 cookies.



How many people can have cookies this time if everyone gets 3?

Show your work.

**LESSON**  
**6•10****Multiplication Diagrams**

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>

<b>rows</b>	<b>_____ per row</b>	<b>_____ in all</b>



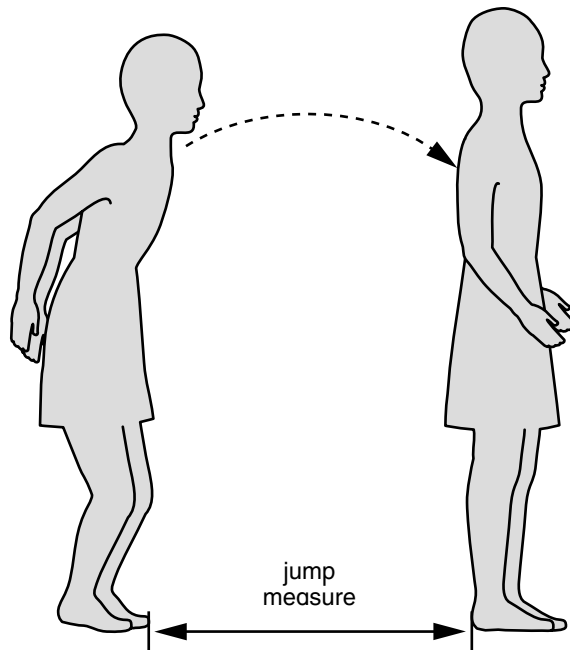
## Patterns and Rules

In Unit 7, children will concentrate on number patterns, computational skills, and the application of mathematics through the use of data. They will continue to use the 100-grid to support their numeration skills. Children will also explore the patterns of doubling and halving numbers, which will help prepare them for multiplication and division.

Computational work will be extended to several 2-digit numbers and to the subtraction of 1- and 2-digit numbers from multiples of 10.

Children will learn to find complements of tens; that is, they will answer such questions as “What must I add to 4 to get to 10? What must I add to 47 to get to 50?” or “How many tens are needed to get from 320 to 400?”

Children will also collect and work with real-life data about animals, adults, and themselves. For example, they will collect data by measuring the lengths of their standing long jumps and then find the median jump length for the class.



**Please keep this Family Letter for reference as your child works through Unit 7.**

## Vocabulary

Important terms in Unit 7:

**median (middle number)** The number in the middle of a list of data ordered from least to greatest or vice versa. For example, 35 is the middle number in the following ordered list.

30, 32, 32, 35, 36, 38, 40

**frequency** The number of times an event or value occurs in a set of data. For example, in the set of data above, 32 has a frequency of 2.

## Do-Anytime Activities

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

1. If you have a calculator at home, practice making (and breaking) tens.

*For example:*

Making tens: Enter 33. What needs to be done to display 50?  $33 + \underline{\quad\quad} = 50$

Breaking tens: Enter 60. What needs to be done to display 52?  $60 - \underline{\quad\quad} = 52$

Or, for more challenging practice, try the following:

Enter 27. What needs to be done to display 40?

Enter 90. What needs to be done to display 66?

Try other similar numbers.

2. Make a game out of doubling, tripling, and quadrupling small numbers. For example, using the number 2, first double it. What number do you get? Continue the doubling process five more times. Start again with the number 2 and triple it; then quadruple it. Discuss the differences among the final numbers.
3. Collect a simple set of data from family and friends. For example, how high can different people's fingertips reach while the people are standing flat on the floor? Order the data to find the median.

## Building Skills through Games

In Unit 7, your child will practice skills related to addition and subtraction as well as chance and probability by playing the following games:

### **Array Bingo**

Players roll the dice and find an *Array Bingo* card with the same number of dots. Players then turn that card over. The first player to have a row, column, or diagonal of facedown cards calls out “Bingo!” and wins the game.

### **Soccer Spin**

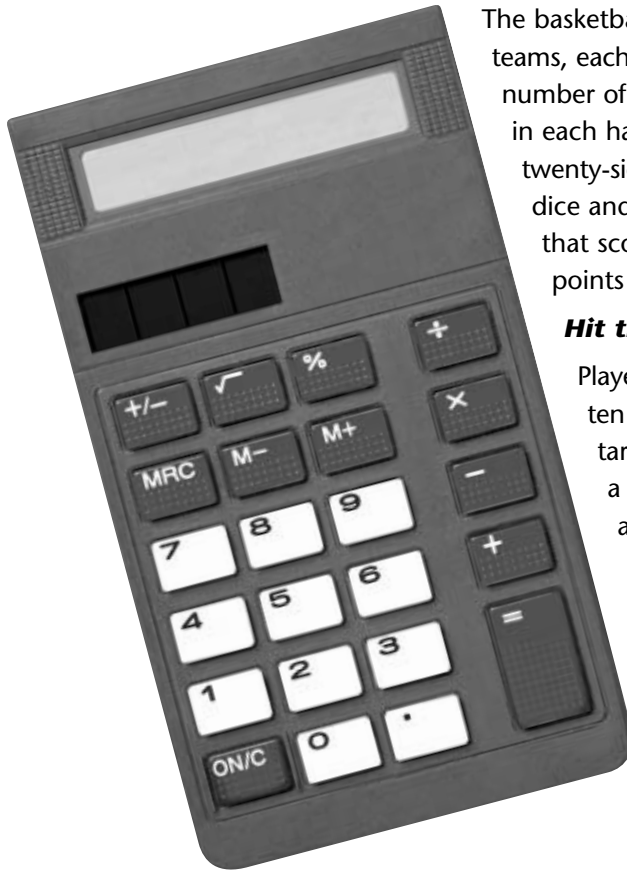
Players choose a spinner to use during the game. They choose a team to cheer for, Checks or Stripes. They then predict which team will win based on their spinner. They spin the spinner to check their prediction.

### **Basketball Addition**

The basketball game is played by two teams, each consisting of 3–5 players. The number of points scored by each player in each half is determined by rolling a twenty-sided polyhedral die or 3 regular dice and using their sum. The team that scores the greater number of points wins the game.

### **Hit the Target**

Players choose a 2-digit multiple of ten (10, 20, 30, and so on) as a target number. One player enters a starting number on a calculator and tries to change the starting number to the target number by adding a number to it on the calculator. Children practice finding differences between 2-digit numbers and higher multiples of tens.



## As You Help Your Child with Homework

As your child brings home assignments, you might want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through this unit's Home Links.

### Home Link 7•1

- 202, 204, 206, 208, 210, 212, 214, 216, 218
- 500, 505, 510, 515, 520, 525, 530, 535, 540, 545
- 550, 560, 570, 580, 590, 600, 610, 620, 630, 640

### Home Link 7•2

- 6; 7; 5; 9; 2                      2. 6; 7; 5; 9; 8
- 32 + 38; 65 + 5; 10 + 60; 43 + 27; 19 + 51;  
51 + 19; 27 + 43

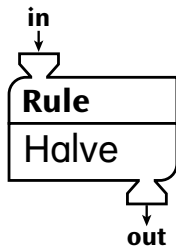
### Home Link 7•3

- Team A: 35; Team B: 25; A
- Team A: 30; Team B: 35; B
- Team A: 29; Team B: 40; B
- Team A: 45; Team B: 59; B

### Home Link 7•4

1.

in	out
12	6
50	25
40	20
30	15
16	8
18	9



- 1, 2, 4, 8, 16, 32, 64
- 3, 6, 12, 24, 48, 96, 192
- 127 pennies, or \$1.27
- 9              6. 32              7. 38

### Home Link 7•5

- 8 pounds              2. 20 pounds              3. 5 pounds
- 11,000 pounds              5. 199              6. 49
- 107                      8. 90

### Home Link 7•6

- 42              6. 103              7. 25              8. 29

### Home Link 7•7

- $\frac{3}{\text{points}}$   $\frac{7}{\text{points}}$   $\frac{9}{\text{points}}$   $\frac{12}{\text{points}}$   $\frac{15}{\text{points}}$   $\frac{20}{\text{points}}$   $\frac{21}{\text{points}}$
- 56 in. 66 in.  $\frac{68}{\text{in.}}$  70 in. 73 in.
- 142 cm 168 cm  $\frac{173}{\text{cm}}$  178 cm 185 cm

### Home Link 7•8

- 2              2. 0              3. 46              4. 52
- 9              6. 48              7. 49

