

Making a Bar Graph

Home Link 6-1

NAME

DATE

Family Note

Your child is exploring different ways to display data. One way to display data is in a bar graph. For the activity below, your child may have to ask a neighbor or call a relative to gather the needed pockets data.

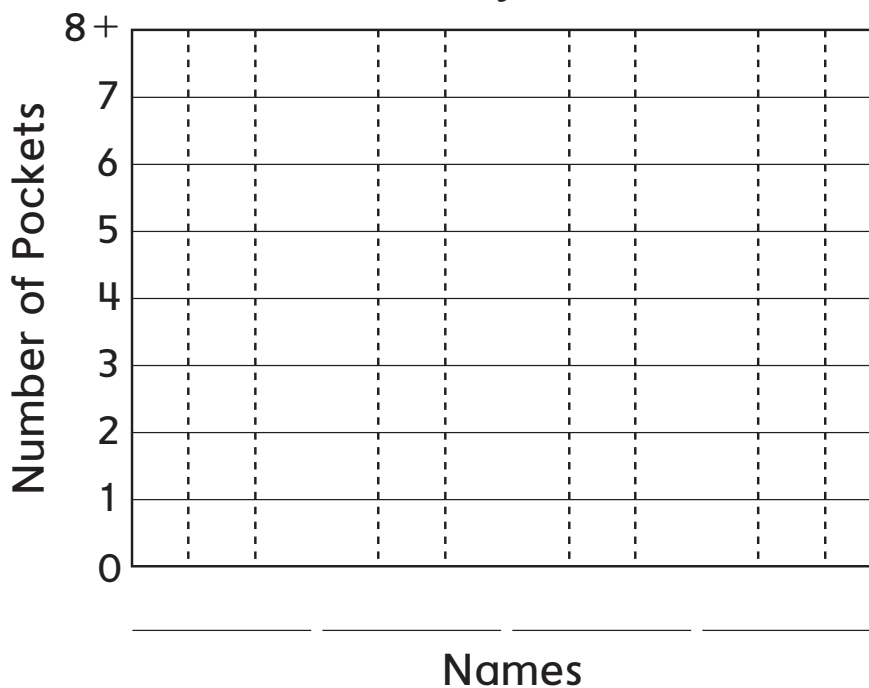
Please return this Home Link to school tomorrow.



- ① Pick four people. Count the number of pockets on the clothes that each person is wearing. Record your data in the table.
- ② Draw a bar graph for your data. First write each person's name on a line under the graph. Then color the bar above each name to show the number of pockets that each person has.

Name	Number of Pockets

How Many Pockets?



Comparison Number Stories

Family Note

Today your child learned to use comparison diagrams. These diagrams help your child organize the information in a number story. When the information is organized, it is easier to decide whether to add or subtract to solve a problem.

Children use comparison diagrams to represent problems in which two quantities are compared. Sometimes children find the difference between the two quantities (as in Example 1 below). In other problems the difference is known, and children find one of the quantities (as in Example 2 below).

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

Quantity
49 fourth graders

Quantity
38 third graders

?

Difference

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

- *Possible number models:* Children who think of the problem in terms of subtraction will write $49 - 38 = ?$. 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 $38 + ? = 49$.
- *Answer:* There are 11 more fourth graders than third graders.

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

Quantity
53

Quantity
?

10

Difference

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

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

For Problems 1–2 on the next page, ask your child to explain the number models he or she wrote.

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

Comparison Number Stories (continued)



For each number story, follow these steps:

- Write the numbers you know in the comparison diagram. Use ? for the number you need to find.
- Write a number model. Use ? for the number you don't know.
- Solve the problem and answer the question.

① Rosa has \$29. Omeida has \$10.
Who has more money? _____

How much more?

Number model:

Rosa has \$_____ more than Omeida.

Quantity

Quantity

_____ Difference

② Omar ran 15 miles. Omar ran
8 more miles than Anthony.
How many miles did Anthony run?

Number model:

Anthony ran _____ miles.

Quantity

Quantity

_____ Difference

Addition and Subtraction Number Stories

Family Note

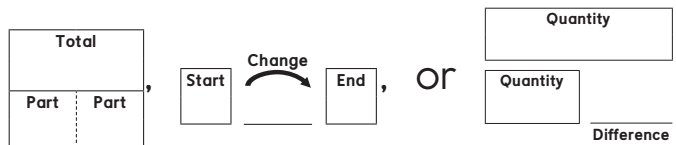
In today's lesson your child used diagrams to help solve addition and subtraction number stories. Diagrams help children organize the information from number stories, identify the missing information, and decide whether to add or subtract to solve the problem. Organizing information in a diagram also helps children write a number model using ? to represent what they don't know. Encourage your child to choose a diagram that best matches the way he or she sees the problem. There's no right or wrong diagram for a problem. What matters is that it matches the child's thinking.

Please return this Home Link to school tomorrow.

Do the following for each number story:



- Write a number model. Use ? to show what you need to find. To help, you may draw a



- Solve the problem and write the answer.
- ① It snowed 16 inches in Chicago on Friday night. It snowed 7 inches on Saturday night. How much snow did Chicago receive in all?

Number model: _____

Answer: _____ inches

- ② Evelyn has 30 blocks. She used 24 blocks to build a tower. How many blocks are not used for the tower?

Number model: _____

Answer: _____ blocks

Solving Problems



NAME _____

DATE _____

Family Note

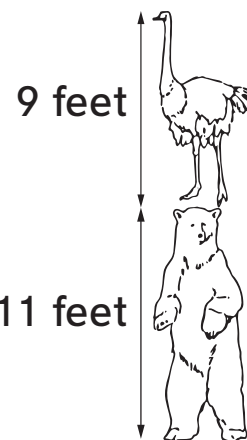
In class today your child solved addition and subtraction number stories involving the heights and lengths of various animals. Some children used mental strategies to solve the stories. Others used tools such as base-10 blocks or open number lines. Others drew pictures or situation diagrams to help organize the information from the stories. Please do not teach your child a formal method, such as the addition method shown at the right. At this stage it is important for children to work with more concrete representations. Children will be introduced to a formal method for addition in Lessons 6-7 and 6-8.

$$\begin{array}{r} 52 \\ + 35 \\ \hline 87 \end{array}$$

Please return this Home Link to school tomorrow.

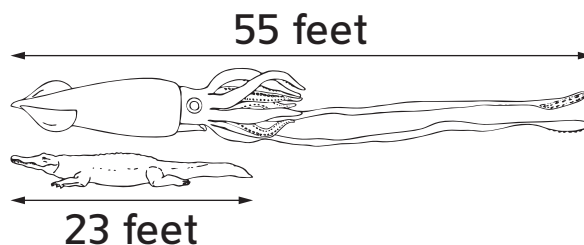
Solve the problems below. You may use base-10 shorthand, open number lines, or any other tool except a calculator to help. You may also draw pictures or diagrams.

- ① How tall are the ostrich and polar bear together?



Together they are _____ feet tall.

- ② How much longer is the giant squid than the crocodile?



The giant squid is _____ feet longer than the crocodile.

Talk to someone about how you solved each problem.

Two-Step Number Stories

Family Note

In today's lesson your child solved two-step number stories, which can be broken into two parts and then solved in two steps. *For example:* Jonathan had 6 tickets for rides at the fair. His mother gave him 9 more. Then he gave 5 tickets to his friend. How many tickets does he have now?

To break this story into two parts, ask: What do you know from the story? (Jonathan had 6 tickets.) What happened first? (He received 9 more tickets.) What happened next? (He gave away 5 tickets.) What do you need to find out? (The number of tickets Jonathan has now.)

The first step is to figure out how many tickets Jonathan had after receiving some from his mother. The second step is to figure out how many tickets he had after giving some to his friend. Children are encouraged to solve two-step number stories using a variety of tools: drawings, open number lines, number grids, manipulatives, and diagrams.

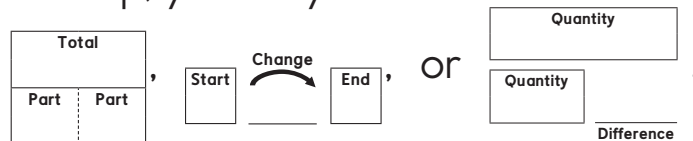
They also learned to record either one or two number models for each number story—one for each part of the story or one number model to represent the whole story. *For example:* Use one number model, such as $6 + 9 - 5 = ?$, for both parts. Or, use two number models, such as $6 + 9 = ?$ and $15 - 5 = ?$, one for the first part and one for the second part. Answer: Jonathan now has 10 tickets.

Ask your child to explain the steps he or she takes to solve the problem below. Discuss how his or her number model(s) relates to the number story.

Please return this Home Link to school tomorrow.

- Write a number model or number models. Use ? to show the number you need to find.

To help, you may draw a



- Solve the problem and write the answer.
- ① At the beach, 11 children were playing in the sand. Then 6 more children joined them. Then 8 decided to go swimming. How many children were still playing in the sand?

Number model(s): _____

Answer: _____ children



Unit
children

Addition Strategies

Home Link 6-6

NAME _____

DATE _____

Family Note

Everyday Mathematics encourages children to use a variety of strategies to solve computation problems. Doing so helps children develop a sense for numbers and operations, rather than simply memorizing a series of steps.

We suggest that you give your child an opportunity to explore and choose addition strategies that he or she feels comfortable using. At some point you may want to share the method that you know from your own school experience. However, please allow your child some time to use his or her own methods before doing so.

Below are three examples of methods that your child might use to solve 2-digit addition problems.

Counting Up

$47 + 33 = ?$ ← "My problem"
 $47, 57, 67, 77$ ← "Start at 47. Count up 30 by 10s."
 $78, 79, 80$ ← "Count 3 more."
 80 ← "The answer is 80."

Combining 10s and 1s

$29 + 37 = ?$ ← "My problem"
 $20 + 30 = 50$ ← "Add the 10s."
 $9 + 7 = 16$ ← "Add the 1s."
 $50 + 16 = 66$ ← "Put the 10s and 1s together. The answer is 66."

Making Friendly Numbers

$52 + 29 = ?$ ← "My problem"
 30 ← "30 is close to 29. Just add 1 more to get 30."
 $52 + 30 = 82$ ← "52 plus 30 is 82."
 $82 - 1 = 81$ ← "Take away 1 because I added 1 to get 30. The answer is 81."

Encourage your child to use a ballpark estimate as a way to check whether an answer to a computation problem makes sense. *For example:* In $29 + 37$, 29 is close to 30 and 37 is close to 40. Because $30 + 40 = 70$, a ballpark estimate is 70. The final answer of 66 is close to 70, so 66 is a reasonable answer. Your child can make a ballpark estimate before or after solving the problem.

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

Addition Strategies

(continued)



NAME

DATE

For each problem:

- Make a ballpark estimate.
- Solve the problem using any strategy you choose. Use words or pictures to show your thinking.
- Check to make sure your answer makes sense.

Unit

① $34 + 59 = ?$

Ballpark estimate:

Strategy:

② $17 + 68 = ?$

Ballpark estimate:

Strategy:

$34 + 59 =$ _____

$17 + 68 =$ _____

Choose one of the problems above. Explain your estimate to someone at home. Then explain how you checked to make sure your answer made sense.

Practice

Complete each number sentence to show the expanded form.

③ _____ = $200 + 40 + 6$ ④ $278 =$ _____ + _____ + _____

⑤ $300 + 50 =$ _____ ⑥ $420 =$ _____ + _____

Adding with Base-10 Blocks



NAME _____

DATE _____

Family Note

Today children used base-10 blocks to help them add numbers. Three types of base-10 blocks were used: A cube represents 1. A long (a rod that is 10 cubes long) represents 10. A flat (a square that is 10 cubes long and 10 cubes wide) represents 100.

To solve $24 + 32$ with base-10 blocks, children first represent each number with blocks or base-10 shorthand:

$$\begin{array}{r} 24 \quad || \quad \dots \\ + 32 \quad ||| \quad \dots \\ \hline \end{array}$$

Then children combine the blocks according to type (longs with longs; cubes with cubes) and count each type of block: 5 longs show 5 tens, or 50; 6 cubes show 6 ones, or 6. The 50 and the 6 are called *partial sums* because they are parts of the final sum. Finally, children add the partial sums to find the total: $50 + 6 = 56$.

Children also use base-10 blocks to add 3-digit numbers by adding the 100s, 10s, and 1s separately and then combining the partial sums to find the total.

Please return this Home Link to school tomorrow.

Use base-10 shorthand to show each number. Then write the partial sums and find the total sum.

Unit



①
$$\begin{array}{r} 34 \\ + 41 \\ \hline \end{array}$$

②
$$\begin{array}{r} 27 \\ + 25 \\ \hline \end{array}$$

_____ + _____ = _____ _____ + _____ = _____

Explain to someone at home how you use base-10 blocks to add.

Practice

Complete each number sentence to show the expanded form of a number.

③ _____ = $500 + 30 + 2$ ④ $340 =$ _____ + _____

⑤ $400 + 5 =$ _____ ⑥ $609 =$ _____ + _____

More Partial Sums

Home Link 6-8

NAME _____

DATE _____



Family Note

In the previous lesson your child used base-10 blocks to help find partial sums. Today your child used expanded form. Expanded form shows numbers broken apart into a sum of place-value pieces, such as hundreds, tens, and ones. For example, the expanded form for 324 is $300 + 20 + 4$.

To solve $324 + 255$, your child can first write or think about each number in expanded form, then use the expanded form to help find the partial sums:

Think:
 $300 + 200 =$
 $20 + 50 =$
 $4 + 5 =$

$$\begin{array}{r} 324 \\ + 255 \\ \hline 500 \\ 70 \\ 9 \\ \hline 579 \end{array}$$

Think:
 $300 + 20 + 4$
 $200 + 50 + 5$

Encourage your child to use place-value language when working with this method. For example, when adding the 100s in this example, guide your child to say " $300 + 200 = 500$," not " $3 + 2 = 5$." Writing the expanded form can help children remember to use the correct language.

This method of finding partial sums and then combining the partial sums to find the total is called partial-sums addition. Partial-sums addition was introduced only recently, so allow plenty of time for practice before expecting your child to use it easily.

Please return this Home Link to school tomorrow.

Fill in the unit box. For each problem:



- Make a ballpark estimate. Solve the problem using partial-sums addition. Show your work.
- Use your ballpark estimate to check if your answer makes sense.

Unit

① Ballpark estimate: ② Ballpark estimate: ③ Ballpark estimate:

$$\begin{array}{r} 53 \\ + 36 \\ \hline \end{array}$$

$$\begin{array}{r} 27 \\ + 81 \\ \hline \end{array}$$

$$\begin{array}{r} 126 \\ + 237 \\ \hline \end{array}$$

Subtraction Number Stories

Home Link 6-9

NAME _____

DATE _____

Family Note

In today's lesson, your child solved subtraction number stories using different tools and strategies based on place-value concepts and explained his or her thinking in drawings and words. Being able to solve problems in multiple ways and explain their strategies helps children become flexible problem solvers.

As your child solves these problems, ask him or her to explain the strategy.

Please return this Home Link to school tomorrow.

- ① Sam is on a baseball team. This year he set a goal of scoring 36 runs for his team. So far Sam has scored 26 runs. How many more runs does Sam need to score in order to meet his goal?



_____ runs

- ② Sam helped his mother unload the dishwasher. As he was putting the silverware away, Sam counted 21 spoons and 13 forks. How many more spoons than forks did Sam unload?

_____ spoons

Practice

③ a.
$$\begin{array}{r} 17 \\ 3 \\ + 8 \\ \hline \end{array}$$
 b.
$$\begin{array}{r} 13 \\ 5 \\ + 7 \\ \hline \end{array}$$
 c.
$$\begin{array}{r} 11 \\ 2 \\ 9 \\ + 3 \\ \hline \end{array}$$
 d.
$$\begin{array}{r} 8 \\ 6 \\ 12 \\ + 3 \\ \hline \end{array}$$

Unit

How Many?

Family Note

Your child has been working with arrays to develop readiness for multiplication. Arrays are rectangular arrangements of objects that have the same number of objects in each row. For example, a 3-by-5 array is shown at the right.

X X X X X
X X X X X
X X X X X

Your child found the total number of objects in each array and learned to write addition number models to represent arrays. One example of an addition number model for this array is $5 + 5 + 5 = 15$. There are 15 Xs in all.

When your child writes an addition number model to show the number of objects in a 5-by-4 array, he or she is building understanding of the meaning of four 5s, or 4×5 .

Please return this Home Link to school tomorrow.

- ① Draw an array with 2 rows of Xs with 8 Xs in each row.



Write an addition number model for the array.

- ② Draw an array with 4 rows of Xs with 6 Xs in each row.

Write an addition number model for the array.

- ③ Draw an array with 3 rows of Xs with 7 Xs in each row.

Write an addition number model for the array.

Whole Number Operations and Measurement and Data

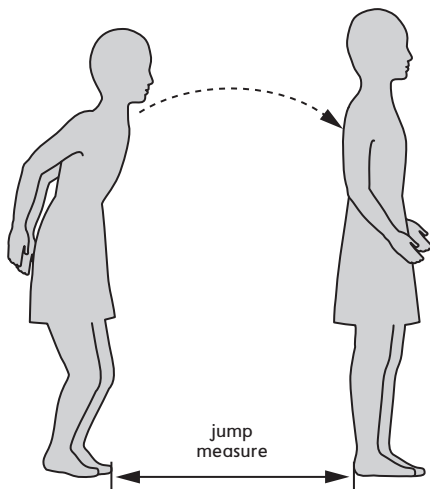
In Unit 7 children revisit combinations of 10 and answer questions like: “What must I add to 4 to get to 10?” They extend this idea to larger numbers and answer questions like: “What must I add to 47 to get to 50?” and “What must I add to 28 to get to 40?”



I need to add a number to 28 to get to 40. What number, added to 8, will give me 10? It's 2, so $28 + 2 = 30$. What number, added to 30, will give me 40? It's 10, because $30 + 10 = 40$. Finally, $2 + 10 = 12$, so I have to add 12 to get to 40.

Children also discuss strategies for solving addition problems that have more than two addends, such as $14 + 2 + 6 + 12$.

In later lessons in this unit, children use two length units—meters and yards—to measure longer lengths and distances, and they develop personal references for these units to use when estimating lengths. Children also collect real-life data and display it in tables and graphs. For example, children collect data by measuring the lengths of their standing jumps. Then they display their data on a line plot.



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

Vocabulary

Important terms in Unit 7:

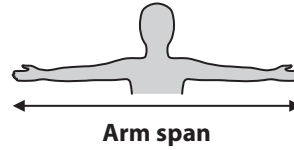
multiple of 10 A product of 10 and a counting number. The multiples of 10 are 10, 20, 30, 40, and so on.

personal reference A convenient approximation for a standard unit of measurement. *For example:* For many people the distance from the tip of the thumb to the first joint is approximately 1 inch.

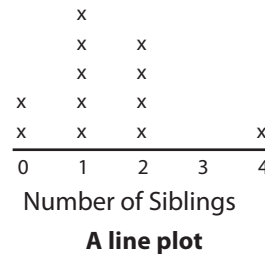
yard A U.S. customary unit of length equal to 3 feet, or 36 inches.

meter The basic metric unit of length from which other metric units of length are derived. One meter is equal to 100 centimeters, or 1,000 millimeters.

arm span The distance from fingertip to fingertip of outstretched arms.



line plot A sketch of data in which check marks, Xs, or other symbols above a labeled line show the frequency of each value.



Do-Anytime Activities

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

1. If you have a calculator at home, practice making multiples of 10 from given numbers or breaking apart multiples of 10. *For example:*
 - Enter 33. What needs to be done to display 50? (Add 17.)
 - Enter 70. What needs to be done to display 62? (Subtract 8.)
 - Enter 57. What needs to be done to display 90 (Add 33.)
 - Enter 78. What needs to be done to display 50 (Subtract 28.)
2. Ask your child to estimate lengths or distances in your home in yards or in meters. To estimate, ask your child to imagine how many yardsticks or metersticks might fit along a length or a distance. Then measure with a yardstick or a meterstick to check the estimates.
3. Collect a simple set of data from family and friends. For example, measure how high they can reach with their fingertips while standing flat on the floor. Display the data in a tally chart, on a line plot, or both.

Building Skills through Games

In Unit 7 your child will practice mathematical skills by playing the following games:

Hit the Target

Players choose a 2-digit multiple of 10 (such as 10, 20, or 30) as a target number. One player chooses a starting number less than or larger than the target number, which the second player enters into a calculator. The second player tries to change it to the target number by adding or subtracting numbers on the calculator.



Basketball Addition

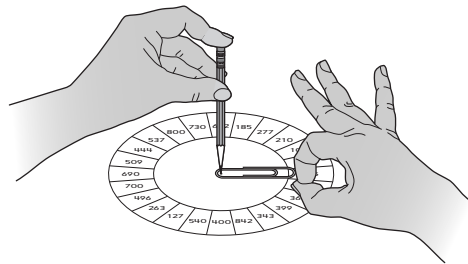
This game is played by two teams of three to five players each. Players score points by rolling a 20-sided die and recording the number (or rolling three 6-sided dice and recording the sum). The team score is determined by adding the scores of all the players on each team. The team that scores more points than the other wins the game.

Beat the Calculator

One player is the Caller, who names two 1-digit numbers. Another player is the Brain, who adds the two numbers mentally. A third player is the Calculator, who adds the numbers with a calculator. The Brain tries to find the sum faster than the Calculator.

Addition/Subtraction Spin

Players spin a spinner to determine a 3-digit number. Then they roll a die to see if they should add 10 or 100 to the 3-digit number or subtract 10 or 100 from it. Players do the computation mentally.



As You Help Your Child with Homework

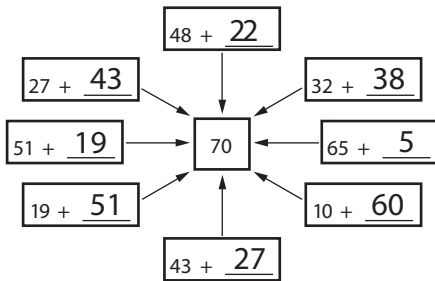
When your child brings home assignments, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through the Unit 7 Home Links.

Home Link 7-1

1. 6; 7; 5; 9; 2

2. 6; 7; 5; 9; 8

3.



Home Link 7-2

1. Sample model: $13 + 7 + 6 = 26$

2. Sample model: $8 + 22 + 5 = 35$

3. Sample model: $25 + 15 + 9 = 49$

4. Sample model: $29 + 11 + 6 + 4 = 50$

5. 69 6. 70 7. 62

8. 83 9. 169 10. 204

Home Link 7-3

1. 35; 25; Team A 2. 30; 35; Team B

3. 29; 40; Team B 4. 45; 59; Team B

Home Link 7-4

1–3. Answers vary.

4. 94 5. 67 6. 34 7. 54

Home Link 7-5

1. Answers vary. 2. Answers vary.

3. More centimeters; Sample answer: Centimeters are shorter, so it takes more of them to measure the same height.

4. 2 5. 50 6. 93 7. 41

Home Link 7-6

1–4. Answers vary.

5. 60 6. 75 7. 43 8. 8

Home Link 7-7

1. 57, 60, 62, 64, 64, 68, 71, 72

2. 57 inches 3. 72 inches 4. 15 inches

5. 98 6. 29

Home Link 7-8

1. 2 players

2. 0 players

3. 57 inches tall

4. 63 inches tall

5. 9 players

6. 59 inches

7. 39 8. 67 9. 19 10. 61

Home Link 7-9

Favorite Vegetables Picture Graph

			☺
	☺		☺
☺	☺		☺
☺	☺	☺	☺
☺	☺	☺	☺
☺	☺	☺	☺

Carrots Peas Corn Other

Name of Vegetable

KEY: Each ☺ = 1 child

1. 26 2. 67 3. 2 4. 42