Missing Addends

Family Note

In this lesson your child used mental strategies to find differences between 2-digit numbers and larger multiples of 10. For example, your child found what number added to 44 equals 50. (The answer is 6.) In Problems 1–2 your child will find the difference between a number and the next-larger multiple of 10. In Problem 3 your child will find different combinations of numbers that add to 70. If your child has difficulty with this problem, suggest first adding 1s to the first number in each combination to find the next-larger multiple of 10. For example, add 2 to 48 to make 50. Then add 20 (or two 10s) to 50 to make 70. Finally, add 2 + 20 to find the answer, 22. So 48 + 22 = 70.

Please return this Home Link to school tomorrow.

---

(1) $4 + \underline{\qquad} = 10$

$10 = 3 + \underline{\qquad}$

$\underline{\qquad} + 5 = 10$

$10 = \underline{\qquad} + 1$

$8 + \underline{\qquad} = 10$
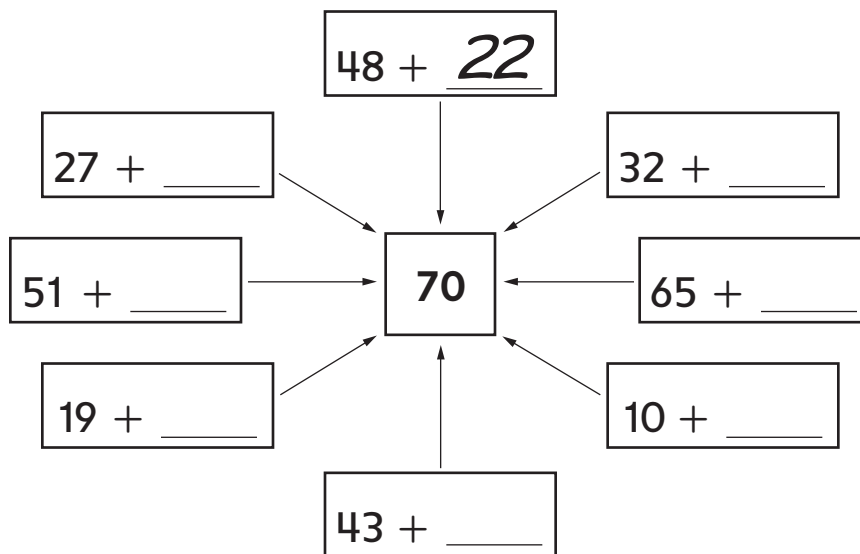
(2) $54 + \underline{\qquad} = 60$

$90 = 83 + \underline{\qquad}$

$75 + \underline{\qquad} = 80$

$40 = 31 + \underline{\qquad}$

$\underline{\qquad} + 42 = 50$

---

(3) Make 70s. Show someone at home how you did it.

$48 + \underline{22}$

$27 + \underline{\qquad}$

$32 + \underline{\qquad}$

$51 + \underline{\qquad}$

70

$65 + \underline{\qquad}$

$19 + \underline{\qquad}$

$10 + \underline{\qquad}$

$43 + \underline{\qquad}$

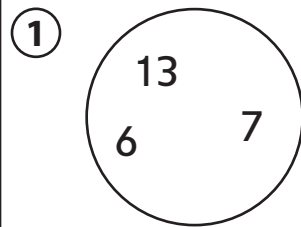# Adding Three or More Numbers

Family Note

Today your child added more than 2 addends. Changing the order of the addends 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.
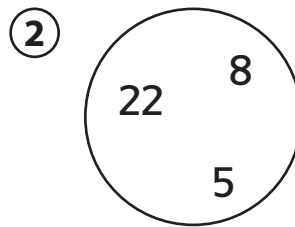
For each problem:

- 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.
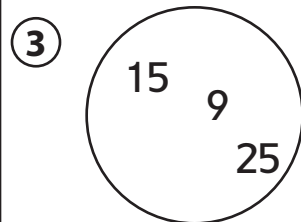
(1)

13

6   7

Number model:

___ + ___ + ___ = ___

(2)

22   8

5

Number model:

___ + ___ + ___ = ___

(3)

15
9
25

Number model:

___ + ___ + ___ = ___

(4)

4
29   11
6
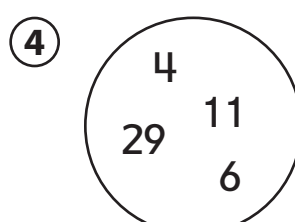
Number model:

__ + __ + __ + __ = __

Adding Three or More Numbers (continued)

Add. Use the partial-sums method.

Example:

$$
\begin{array}{r}
33 \\
42 \\
+\ 11 \\
\end{array}
$$

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

Practice

5
$$
\begin{array}{r}
23 \\
32 \\
+\ 14 \\
\hline
\end{array}
$$

6
$$
\begin{array}{r}
14 \\
29 \\
+\ 27 \\
\hline
\end{array}
$$

7
$$
\begin{array}{r}
8 \\
19 \\
+\ 35 \\
\hline
\end{array}
$$

8
$$
\begin{array}{r}
46 \\
25 \\
+\ 12 \\
\hline
\end{array}
$$

9
$$
\begin{array}{r}
21 \\
40 \\
45 \\
+\ 63 \\
\hline
\end{array}
$$

10
$$
\begin{array}{r}
14 \\
9 \\
85 \\
+\ 96 \\
\hline
\end{array}
$$

Who Scored More Points?

Do the following for each problem:

- Add the points for each team.

- Decide which team scored more points.
  The team with more points wins the game.

- Circle your answer.

Unit
points

① Game 1

Team A:

15 + 14 + 6 = _____

Team B:

5 + 13 + 7 = _____

Who won? A or B

② Game 2

Team A:

12 + 6 + 4 + 8 = _____

Team B:

5 + 10 + 19 + 1 = _____

Who won? A or B

③ Game 3

Team A:

17 + 4 + 5 + 3 = _____

Team B:

2 + 11 + 9 + 18 = _____

Who won? A or B

④ Game 4

Team A:

7 + 4 + 16 + 13 + 5 = _____

Team B:

22 + 9 + 8 + 3 + 17 = _____

Who won? A or B

Using Measurement

Family Note

In class today your child measured distances with a yardstick. Talk with your child about measurements you use at your job, around the house, in sports, or in other activities. If you don't have measuring tools to show your child, you might find pictures of measuring tools online or in a catalog, magazine, or book. Discuss with your child how these tools are used.

Please return this Home Link to school tomorrow.

(1) Talk with people at home about how they use measurements at home, at their jobs, or in other activities.

(2) Ask people at home to show you the tools they use for measuring. Write the names of some of these tools. Be ready to talk about your list in class.

_____   _____

_____   _____

_____   _____

(3) Look for measurements in pictures, in newspapers, or magazines. For example, an ad might tell the height of a bookcase or how much a container holds. Ask an adult if you may bring the pictures to school for our Measures All Around Museum. Circle the measurements.

Practice

Solve.

Unit

(4) $93 + 1 =$ _____

(5) _____ $= 6 + 61$

(6) _____ $= 26 + 8$

(7) $5 + 49 =$ _____

Measuring Height

Family Note

In this lesson your child was introduced to a metric unit of length called the meter. One meter is equal to 100 centimeters. We compared metersticks to yardsticks and noticed that 1 meter is a little longer than 1 yard. Then we used tools such as rulers, yardsticks, metersticks, and tape measures to measure lengths. Your child may wonder why there are two standard units—yards and meters—that are nearly the same size. You may want to explore this issue by searching online for information about the metric and U.S. customary systems of measurement.

If you don't have tools to measure length with metric units at home, you and your child can cut pieces of string or strips of paper to match the heights of a table and an adult. Your child can bring the string or strips to school to measure.

Please return this Home Link to school tomorrow.

① Work with someone at home to measure the height of a table.

The table is about _____ centimeters high.

The table is about _____ meters high.

② Measure the height of an adult.

The adult is about _____ centimeters tall.

The adult is about _____ meters tall.

③ Are there more centimeters or more meters in your measurements? _____ Explain.

_____

_____

Practice

④ $18 + \underline{\hspace{1cm}} = 20$

⑤ $\underline{\hspace{1cm}} + 3 = 53$

⑥ $\underline{\hspace{1cm}} = 86 + 7$

⑦ $8 + 33 = \underline{\hspace{1cm}}$

Unit

Comparing Arm Spans

Family Note

In today's lesson your child measured his or her standing jump and arm span in both centimeters and inches. Help your child compare his or her arm span to someone else's arm span at home. Also help your child find objects around the house that are about the same length as his or her arm span.

Please return this Home Link to school tomorrow.

My arm span is about _____ inches long.

1. Tell someone at home about how long your arm span is in inches.

2. Compare your arm span to the arm span of someone at home. Can you find someone who has a longer arm span than you do? Is there someone at home who has a shorter arm span?

   _____ has a longer arm span than I have.

   _____ has a shorter arm span than I have.

3. List some objects that are about the same length as your arm span.

   _____   _____   _____

4. Explain how you know the objects you listed in Problem 3 are about the same length as your arm span.

   _____

   _____

Practice

Solve.

Unit

5. $57 + 3 =$ _____

6. $4 + 71 =$ _____

7. _____ $= 34 + 9$

8. $48 +$ _____ $= 56$

Interpreting Data

Family Note

In this lesson your child examined classroom data on the length of classmates' standing jumps. The class found the shortest jump length and the longest jump length and calculated the difference between the lengths. They also made a line plot based on the data.

Please return this Home Link to school tomorrow.

The track team collected these standing-jump data:

Jumper	Standing-Jump Length
Fran	68 inches
Arturo	72 inches
Louise	57 inches
Kelsey	71 inches
Keisha	60 inches
Ray	64 inches
Maria	64 inches
Ben	62 inches

① List the inches for each jump in order from shortest to longest.

_____, _____, _____, _____, _____, _____, _____, _____

② What is the shortest jump length? _____ inches

③ What is the longest jump length? _____ inches

④ What is the difference between the longest jump length and the shortest jump length? _____ inches

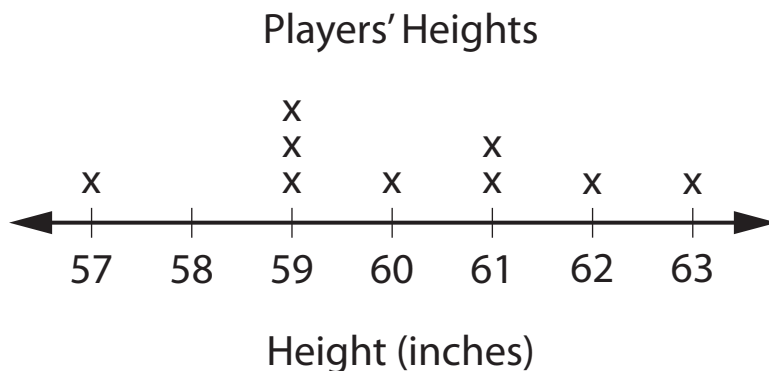## Practice

⑤ _____ = 1 + 97

⑥ 23 + 6 = _____

Interpreting Data

Family Note

Today your child represented class arm span data in a frequency table and on a line plot. Line plots like the one below help us organize and display data. Each X in this line plot represents one basketball player. Help your child use the data in the line plot to answer the questions.

Please return this Home Link to school tomorrow.

Ms. Ortiz is a basketball coach. She measured the height of each player on the team. Then she made this line plot.

Players' Heights

```
                    X
                    X                X
  X                 X      X      X       X      X
  |-----|-----|-----|-----|-----|-----|-----|-->
  57    58    59    60    61    62    63
```

Height (inches)

1. How many players are 61 inches tall? _____ players

2. How many players are 58 inches tall? _____ players

3. The shortest player is _____ inches tall.

4. The tallest player is _____ inches tall.

5. How many players did Ms. Ortiz measure? _____ players

6. Which height occurs most often? _____ inches

Practice

Unit

7. $33 + 6 =$ _____

8. _____ $= 65 + 2$

9. _____ $+ 3 = 22$

10. $9 + 52 =$ _____

Vegetable Picture Graph

Family Note

Today your child drew a picture graph, which uses pictures or symbols to show data. The key on a picture graph tells what each picture is for. Have your child use the data table to draw the graph.

Please return this Home Link to school tomorrow.

Favorite Vegetables	
Name of Vegetable	**Number of People**
Carrots	4
Peas	5
Corn	3
Other	6

Favorite Vegetables Picture Graph

_____ _____ _____ _____

Name of Vegetable

KEY: ☺ = 1 child

Practice

1 _____ = 21 + 5

2 63 + 4 = _____
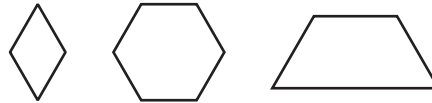
3 _____ + 88 = 90

4 7 + 35 = _____

Unit 8: Family Letter

Geometry and Arrays

In Unit 8 children explore 2-dimensional shapes, including triangles, quadrilaterals, pentagons, and hexagons. They describe and sort the shapes according to their attributes, such as number of sides, length of sides, number of angles, and whether they have right angles or parallel sides.

These shapes each have at least one right angle.   **These shapes have no right angles.**

Children also look for 2-dimensional shapes in 3-dimensional objects. For example, they look at a cube and notice that each face, or side, of the cube is a square.

After these shape activities, children also explore techniques for partitioning rectangles into rows and columns of same-size squares. These activities lay the foundation for area measurement in Grade 3.
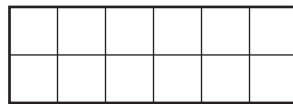
This rectangle is partitioned into 2 rows and 6 columns of squares.

In the last part of the unit, children solve number stories involving equal groups of objects. In some cases equal groups are small clusters of objects, such as petals on flowers. In other cases the equal groups are the rows or columns of rectangular arrays.
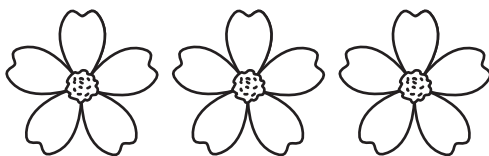
Equal groups of petals: 3 flowers with 5 petals on each flower is 15 petals in all.   **An array of chairs: 3 rows with 5 chairs in each row is 15 chairs in all.**

Children build equal groups and arrays with counters and explore strategies for finding how many counters there are in all. These activities lay the foundation for work with multiplication in Grade 3.

Please keep this Family Letter for reference as your child works through Unit 8.

Vocabulary   Important terms in Unit 8:

attribute (of a shape) A feature of a shape or a common feature of a set of shapes. Examples of shape attributes include the number of sides and the number of right angles.

angle Two rays or two line segments with a common endpoint. The rays or segments are called the *sides* of the angle. The sides of a polygon form angles at each corner, or vertex, of the polygon.

vertex →
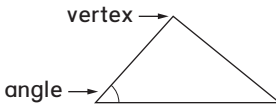
angle →

**right angle** A 90-degree angle. Also known as a square corner.
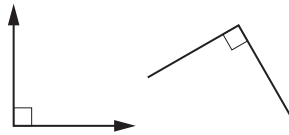
parallel lines Two lines in a plane are parallel if they never intersect or cross. Two parallel lines are always the same distance apart. Two line segments in a plane are parallel if they can be extended to form parallel lines. If two sides of a polygon are parallel line segments, that polygon has a pair of parallel sides.
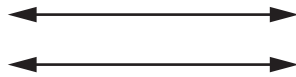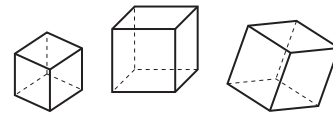
Parallel lines

polygon A 2-dimensional figure formed by three or more line segments (sides) that meet only at their endpoints to make a closed path. The sides may not cross one another.
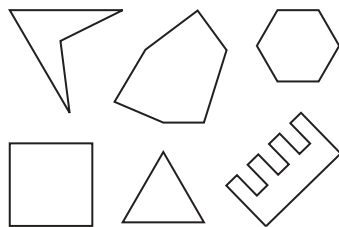
cube A 3-dimensional shape with exactly 6 square faces.

**face** In *Everyday Mathematics,* a flat surface on a 3-dimensional shape.

row A horizontal arrangement of objects or numbers in an array or a table.

column A vertical arrangement of objects or numbers in an array or a table.

partition To divide a shape into smaller shapes. In *Second Grade Everyday Mathematics,* children partition rectangles into rows and columns of same-size squares. See the example on the first page of this letter.

equal groups Sets with the same number of elements, such as cars with 5 passengers each or boxes containing 100 paper clips each.

array An arrangement of objects in a regular pattern. In *Second Grade Everyday Mathematics*, children work with rectangular arrays, which are arrangements of objects in rows and columns that form rectangles. All rows have the same number of objects, and all columns have the same number of objects. The rows and columns in a rectangular array are one way of representing equal groups.

column

row
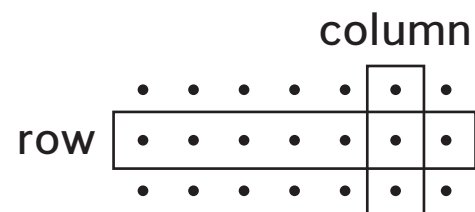
Do-Anytime Activities

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

1. Point to everyday objects and ask your child to identify the shapes he or she sees and describe their attributes. For example, your child might see rectangles on the sides of a shoe box and point out the parallel sides and right angles, or he or she might see hexagons on a soccer ball and note that they each have 6 equal-length sides.

2. Name a shape (such as a rectangle) or an attribute (such as a right angle) and ask your child to find an object with that shape or attribute. For example, if asked to find a shape with 4 right angles, your child might identify a book cover or a doorway.

3. Look for real-life examples of equal groups or arrays and ask your child to figure out how many objects there are in each one. For example, most telephone keypads have 4 rows of 3 keys each. That's $3 + 3 + 3 + 3 = 12$ (or $4 + 4 + 4 = 12$) keys in all. Other examples of real-life equal groups or arrays might include floor or ceiling tiles, window panes, or packages of pencils or markers.

Building Skills through Games

In Unit 8 your child will practice mathematical skills by playing a variety of games, including the following new games.

Shape Capture
Players have a set of Shape Cards spread out in front of them. One at a time, players draw an Attribute Card and "capture" all the shapes that have that attribute. The player who captures the most shapes wins.

The Number-Grid Difference Game
Each player draws two number cards and uses them to form a 2-digit number. Players mark the numbers on a number grid, and one player finds the difference between the two numbers. The difference is that player's score for the round.

Array Concentration
Players arrange a set of *Array Concentration* Number Cards and Array Cards facedown in front of them. A player flips over one of each type of card. If the cards "match"—that is, if the number on the number card equals the total number of dots in the array—the player takes the cards and takes another turn.

These cards match because there are 6 dots in the array.

Array Bingo
Players arrange a set of array cards to form a bingo card. Children take turns drawing number cards and calling out the number. If players have an array on their bingo card that has that number of dots, they turn over the array card. The first player to turn over three arrays in a row (vertically, horizontally, or diagonally) wins.
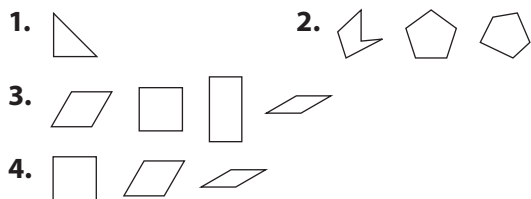
As You Help Your Child with Homework

As your child brings home assignments, you may go over the instructions together, clarifying them as needed. The answers below will guide you through the Unit 8 Home Links.

Home Link 8-1

1.–4. Answers vary.

5. 36 **6.** 52 **7.** 83

Home Link 8-2

1. **2.**

3.

4.

Home Link 8-3

1.–3. Sample drawings are given.

1. ; Hexagon **2.** ; Pentagon

3. ; Sample answer: Quadrilateral

4. Yes. Sample answer: They are all closed shapes with straight sides that don't cross.

Home Link 8-4

1. Answers vary. **2.** Answers vary.

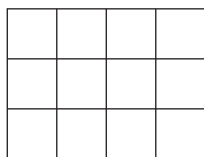**3.** Sample answer: A triangle has 3 sides, and a quadrilateral has 4 sides.

4. Answers vary.

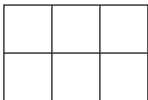**5a.** 61 **5b.** 73 **5c.** 94 **5d.** 72

Home Link 8-5

1.–3. Answers vary. **4.** 45 **5.** 50 **6.** 94

Home Link 8-6

1. 12 **2.** 12

Home Link 8-7

1.

6 squares

2. 39 **3.** 80 **4.** 96

Home Link 8-8

1. 10 fingers; Sample answers: $5 + 5 = 10$; $2 \times 5 = 10$

2. 12 muffin cups; Sample answers: $4 + 4 + 4 = 12$; $3 \times 4 = 12$

3. 8 shoes; Sample answers: $2 + 2 + 2 + 2 = 8$; $2 \times 4 = 8$

Home Link 8-9

1.

12; Sample answers: $3 + 3 + 3 + 3 = 12$; $4 \times 3 = 12$

2. 15; Sample answers: $5 + 5 + 5 = 15$; $3 \times 5 = 15$

3. 8; Sample answers: $2 + 2 + 2 + 2 = 8$; $4 \times 2 = 8$

4. 55 **5.** 91 **6.** 94

Home Link 8-10

1. 20; Sample answers: $4 + 4 + 4 + 4 + 4 = 20$; $5 + 5 + 5 + 5 = 20$; $4 \times 5 = 20$; $5 \times 4 = 20$

2. 2; Sample answers: $1 + 1 = 2$; $1 \times 2 = 2$; $2 \times 1 = 2$

3. 8; Sample answers: $4 + 4 = 8$; $2 + 2 + 2 + 2 = 8$; $2 \times 4 = 8$; $4 \times 2 = 8$

Home Link 8-11

1. Answers vary.