Name Date Time

HOME LINK 9•1

Who Am I?

Family Note The problems in this Home Link involve children solving whole-number riddles. Your child will use place-value concepts, number sense, and computation skills to solve the riddles. To provide practice with basic and extended facts, multiplication fact practice is added at the bottom of this Home Link.

Please return this Home Link to school tomorrow.

In each riddle, I am a different whole number. Use the clues to find out who I am.

1. **Clue 1:** I am greater than 30 and less than 40.
Clue 2: The sum of my digits is less than 5.
Who am I? _____

2. **Clue 1:** I am greater than 15 and less than 40.
Clue 2: If you double me, I become a number that ends in 0.
Clue 3: $\frac{1}{5}$ of me is equal to 5.
Who am I? _____

3. **Clue 1:** I am less than 100.
Clue 2: The sum of my digits is 4.
Clue 3: Half of me is an odd number.
Who am I? _____

4. **Clue 1:** If you multiply me by 2, I become a number greater than 20 and less than 40.
Clue 2: If you multiply me by 6, I end in 8.
Clue 3: If you multiply me by 4, I end in 2.
Who am I? _____

5. **Clue 1:** Double my tens digit to get my ones digit.
Clue 2: Double me and I am less than 50.
Who am I? _____

Practice

Solve.

6. $8 \times 7 =$ _____
$80 \times 7 =$ _____
$800 \times 7 =$ _____

7. $5 \times 4 =$ _____
$5 \times 40 =$ _____
$50 \times 400 =$ _____

Name Date Time

HOME LINK 9•2

Multiplication Facts and Extensions

Family Note Help your child practice multiplication facts and their extensions. Observe as your child creates fact extensions, demonstrating further understanding of multiplication.

Please return this Home Link to school tomorrow.

Solve each problem.

1. a. 8 [7s] = _____, or 8 × 7 = _____

b. 8 [70s] = _____, or 8 × 70 = _____

c. How many 8s in 56? _____

d. How many 8s in 560? _____

e. How many 7s in 56? _____

f. How many 70s in 560? _____

2. a. 9 [7s] = _____, or 9 × 7 = _____

b. 9 [70s] = _____, or 9 × 70 = _____

c. How many 9s in 63? _____

d. How many 9s in 630? _____

e. How many 7s in 63? _____

f. How many 70s in 630? _____

3. a. 8 [5s] = _____, or 8 × 5 = _____

b. 8 [50s] = _____, or 8 × 50 = _____

c. How many 8s in 400? _____

d. How many 80s in 4,000? _____

e. How many 50s in 400? _____

f. How many 50s in 4,000? _____

4. Write a multiplication fact you are trying to learn. Then use your fact to write some fact extensions like those above.

_____

_____

_____

_____

Name Date Time

HOME LINK 9•3

Multiplication Number Stories

Family Note Your child's class is beginning to solve multidigit multiplication and division problems. Although we have practiced multiplication and division with multiples of 10, we have been doing most of our calculating mentally. Encourage your child to explain a solution strategy for each of the problems below.

Please return this Home Link to school tomorrow.

1. How many 30-pound raccoons would weigh about as much as a 210-pound harp seal? _____

2. How much would an alligator weigh if it weighed 10 times as much as a 50-pound sea otter? _____

3. How many 20-pound arctic foxes would weigh about as much as a 2,000-pound beluga whale? _____

4. Each porcupine weighs 30 pounds. A black bear weighs as much as 20 porcupines. How much does the black bear weigh? _____

5. A bottle-nosed dolphin could weigh twice as much as a 200-pound common dolphin. How much could the bottle-nosed dolphin weigh? _____

Try This

6. How many 2,000-pound beluga whales would weigh as much as one 120,000-pound right whale? _____

Name Date Time

HOME LINK 9•4

The Partial-Products Algorithm

Family Note Today the class began working with our first formal procedure for multiplication—the partial-products algorithm. Encourage your child to explain this method to you.

Please return this Home Link to school tomorrow.

Use the partial-products algorithm to solve these problems:

Example

$$\begin{array}{rr} & 46 \\ \times & 7 \\ \hline 7\ [40s]\rightarrow & 280 \\ 7\ [6s]\rightarrow & +\ 42 \\ \hline 280 + 42\rightarrow & 322 \end{array}$$

1.

$$\begin{array}{r} 31 \\ \times\ 3 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 75 \\ \times\ 5 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 85 \\ \times\ 9 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 43 \\ \times\ 6 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 162 \\ \times\ \ 7 \\ \hline \end{array}$$

Name Date Time

HOME LINK 9•5

Saving at the Stock-Up Sale

Family Note Today the class used mental math and the partial-products algorithm to solve shopping problems. Note that for some of the problems below, an estimate will answer the question. For others, an exact answer is needed. If your child is able to make the calculations mentally, encourage him or her to explain the solution strategy to you.

Please return this Home Link to school tomorrow.

Decide whether you will need to estimate or calculate an exact answer to solve each problem below. Then solve the problem and show what you did. Record the answer and write the number model (or models) you used.

1. Phil has $6.00. He wants to buy Creepy Creature erasers. They cost $1.05 each. If he buys more than 5, they are $0.79 each. Does he have enough money to buy 7 Creepy Creature erasers? _____

_____

Number model: _____

2. Mrs. Katz is buying cookies for a school party. The cookies cost $2.48 per dozen. If she buys more than 4 dozen, they cost $2.12 per dozen. How much are 6 dozen? _____

_____

Number model: _____

3. Baseball cards are on sale for $1.29 per card, or 5 cards for $6. Marty bought 10 cards. How much did he save with the special price? _____

Explain how you found your answer.

_____

_____

_____

_____

Name Date Time

HOME LINK 9•6

Arrays and Factors

Family Note Discuss with your child all the ways to arrange 18 chairs in equal rows. Then help your child use this information to list the factors of 18 (pairs of numbers whose product is 18).

Please return this Home Link to school tomorrow.

Work with someone at home.
The third-grade class is putting on a play. Children have invited 18 people. Gilda and Harvey are in charge of arranging the 18 chairs. They want to arrange them in rows with the same number of chairs in each row, with no chairs left over.

Yes or no: Can they arrange the chairs in ...	**If yes, how many chairs in each row?**
1 row? _____	_____ chairs
2 rows? _____	_____ chairs
3 rows? _____	_____ chairs
4 rows? _____	_____ chairs
5 rows? _____	_____ chairs
6 rows? _____	_____ chairs
7 rows? _____	_____ chairs
8 rows? _____	_____ chairs
9 rows? _____	_____ chairs
10 rows? _____	_____ chairs
18 rows? _____	_____ chairs

List all the factors of the number 18. (*Hint:* 18 has exactly 6 factors.)

_____ _____ _____

_____ _____ _____

How does knowing all the ways to arrange 18 chairs in equal rows help you find the factors of 18? Tell someone at home.

_____

_____

_____

_____

_____

_____

_____

Name Date Time

HOME LINK 9·7

Sharing Money with Friends

Family Note In class we are thinking about division, but we have not yet introduced a procedure for division. We will work with formal division algorithms in *Fourth Grade Everyday Mathematics.* Encourage your child to solve the following problems in his or her own way and to explain the strategy to you. These problems provide an opportunity to develop a sense of what division means and how it works. Sometimes it helps to model problems with pennies, beans, or other counters that stand for bills and coins.

Please return this Home Link to school tomorrow.

1. $77 is shared equally by 4 friends.

a. How many $10 bills does each friend get? _____

b. How many $1 bills does each friend get? _____

c. How many $1 bills are left over? _____

d. If the leftover money is shared equally, how many cents does each friend get? _____

e. Each friend gets a total of $_____.

f. Number model: _____

Practice

Use the partial-products method to solve these problems. Show your work.

2. 21 × 2

3. 48 × 4

4. 63 × 5

Name Date Time

HOME LINK 9•8

Equal Shares and Equal Parts

Family Note As the class continues to investigate division, we are looking at remainders and what they mean. The focus of this assignment is on figuring out what to do with the remainder, NOT on using a division algorithm. Encourage your child to draw pictures, use a calculator, or use counters to solve the problems.

Please return this Home Link to school tomorrow.

Solve the problems below. Remember that you will have to decide what the remainder means in order to answer the questions. You may use your calculator, counters, or pictures to help you solve the problems.

1. There are 31 children in Dante's class. Each table in the classroom seats 4 children. How many tables are needed to seat all of the children?

_____

2. Emily and Linnea help out on their uncle's chicken farm. One day the hens laid a total of 85 eggs. How many cartons of a dozen eggs could they fill?

_____

3. Ms. Jerome is buying markers for a scout project. She needs 93 markers. If markers come in packs of 10, how many packs must she buy?

_____

Practice

Solve each problem using the partial-products algorithm. Use the back of this Home Link.

4. $29 \times 4 =$ _____ **5.** $85 \times 5 =$ _____ **6.** $96 \times 8 =$ _____

Name Date Time

HOME LINK 9•9

Multiplication Two Ways, Part 1

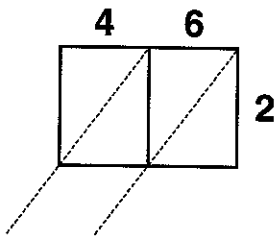
Family Note Observe as your child solves these problems. See if your child can use more than one method of multiplication, and find out which method your child prefers. Both methods are discussed in the *Student Reference Book* on pages 68–72 and in the Unit 9 Family Letter.

Please return this Home Link to school tomorrow.

SRB 68–72

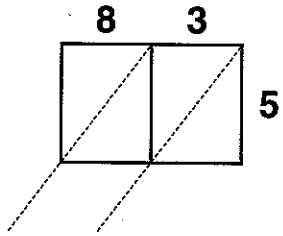
Use the lattice method and the partial-products algorithm.

1. $2 \times 46 =$ _____



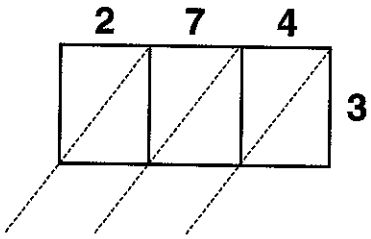
$$\begin{array}{r} 46 \\ \times\ 2 \\ \hline \end{array}$$

2. $5 \times 83 =$ _____



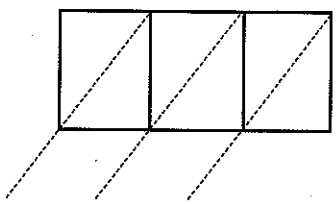
$$\begin{array}{r} 83 \\ \times\ 5 \\ \hline \end{array}$$

3. $3 \times 274 =$ _____



$$\begin{array}{r} 274 \\ \times\ 3 \\ \hline \end{array}$$

4. $8 \times 906 =$ _____



$$\begin{array}{r} 906 \\ \times\ 8 \\ \hline \end{array}$$

Name Date Time

HOME LINK 9•10

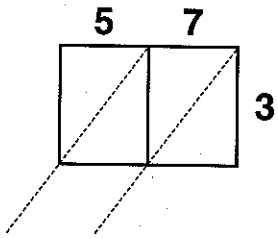
Multiplication Two Ways, Part 2

Family Note The class continues to practice the partial-products algorithm and the lattice method. Encourage your child to try these problems both ways and to compare the answers to be sure they are correct.

Please return this Home Link to school tomorrow.

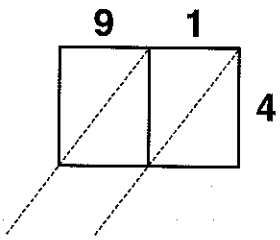
Show someone at home how to use both the lattice method and the partial-products algorithm.

1. $3 \times 57 =$ _____



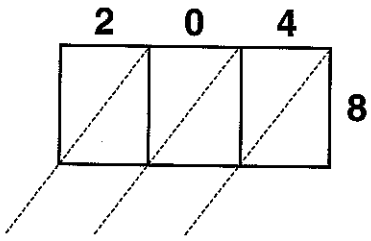
$$\begin{array}{r} 57 \\ \times\ 3 \\ \hline \end{array}$$

2. $4 \times 91 =$ _____



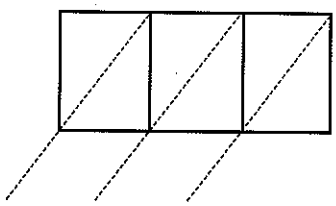
$$\begin{array}{r} 91 \\ \times\ 4 \\ \hline \end{array}$$

3. $8 \times 204 =$ _____



$$\begin{array}{r} 204 \\ \times\ 8 \\ \hline \end{array}$$

4. $9 \times 480 =$ _____



$$\begin{array}{r} 480 \\ \times\ 9 \\ \hline \end{array}$$

Name Date Time

HOME LINK 9•11

2-Digit Multiplication: Two Ways

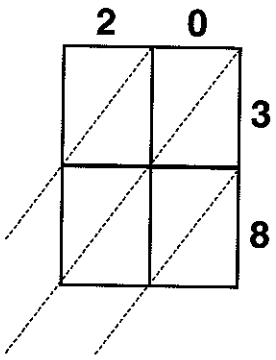
Family Note Your child's class continues to practice the partial-products algorithm and the lattice method, now with 2-digit numbers and 2-digit multiples of 10.

Please return this Home Link to school tomorrow.

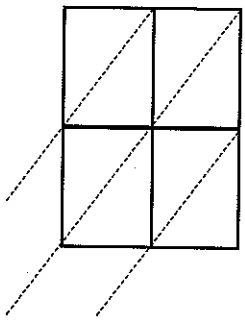
SRB 68–72

Use the lattice method and the partial-products algorithm.

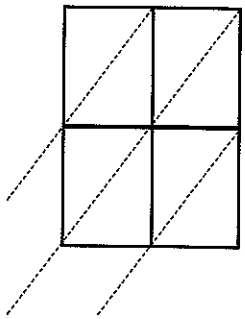
1. $20 \times 38 =$ _____



2. $50 \times 17 =$ _____



3. $90 \times 62 =$ _____



Practice

On the back of this page, use your favorite method to solve these problems.

4. $40 \times 28 =$ _____

5. $60 \times 35 =$ _____

Name Date Time

HOME LINK 9•12

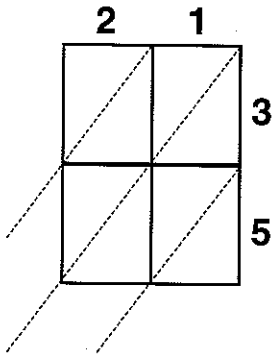
2 Digits × 2 Digits

Family Note The class continues to practice the partial-products algorithm and the lattice method, now with any 2-digit numbers. Encourage your child to try these problems both ways and to compare the answers to be sure they are correct.

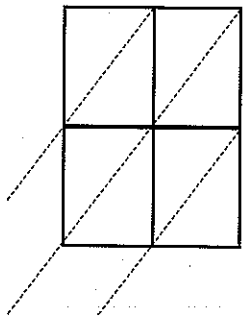
Please return this Home Link to school tomorrow.

Use the lattice method and the partial-products algorithm.

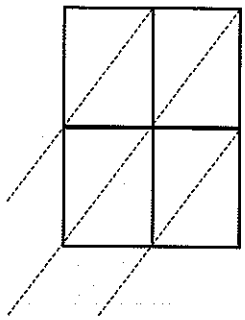
1. 21 × 35 = _____



2. 17 × 43 = _____



3. 58 × 62 = _____



Practice

On the back of this page, use your favorite method to solve these problems.

4. 55 × 49 = _____

5. 91 × 33 = _____

Name _____ Date _____ Time _____

HOME LINK 9•13

Positive and Negative Temperatures

Family Note Encourage your child to use the thermometer pictured here to answer questions about thermometer scales, temperature changes, and temperature comparisons. If you have a real thermometer, try to show your child how the mercury moves up and down.

Please return this Home Link to school tomorrow.

SRB 170–173

1. What is the coldest temperature this thermometer could show?

a. _____ °F **b.** _____ °C

2. What is the warmest temperature this thermometer could show?

a. _____ °F **b.** _____ °C

3. What temperature is 20 degrees warmer than −10°C? _____

4. How much colder is −9°C than 9°C? _____

5. Would 30°C be a good temperature for swimming outside? _____

For sledding? _____ Explain.

_____

_____

6. Would −6°C be a good temperature for ice-skating? _____

For in–line skating? _____ Explain.

_____

_____

_____