



Multiplication and Division

In Unit 7, children will focus on learning the multiplication and division facts. Many of the same strategies that were used in previous grades for addition and subtraction will also be used for multiplication and division.

Children will review multiplication by 0, by 1, and by 10; multiplication facts having square products, such as $5 \times 5 = 25$ and $2 \times 2 = 4$; and the turn-around rule, which shows that $2 \times 5 = 10$ is the same as $5 \times 2 = 10$.

Children will also continue to work with fact families and Fact Triangles as they learn the multiplication and division facts.

$7 \times 8 = 56$	
$8 \times 7 = 56$	
$56 \div 7 = 8$	
$56 \div 8 = 7$	
Fact family for the numbers 7, 8, and 56	

Fact Triangle

The goal is for children to demonstrate automaticity with $\times 0$, $\times 1$, $\times 2$, $\times 5$, and $\times 10$ multiplication facts and to use strategies to compute remaining facts up to 10×10 by the end of the year.

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

Vocabulary

Important terms in Unit 7:

factor Each of 2 or more numbers in a product. For example, $4 \times 3 = 12$; so 12 is the product, and 4 and 3 are the factors.

$$\begin{array}{ccccccc} & & 4 & \times & 3 & = & 12 \\ & \uparrow & & & \uparrow & & \uparrow \\ \text{factors} & \text{---} & & & \text{---} & & \text{---} & \text{product} \end{array}$$

product The result of multiplying 2 numbers, called factors. For example, in $4 \times 3 = 12$, the product is 12.

square number The product of a counting number and itself. For example, 25 is a square number, because $5 \times 5 = 25$.

estimate (1) An answer close to, or approximating, an exact answer. (2) To make an estimate.

parentheses () Grouping symbols used to indicate which parts of an expression should be done first.

extended multiplication fact A multiplication fact involving multiples of 10, 100, and so on. In an extended multiplication fact, each factor has only one digit that is not 0. For example, 60×7 , 70×6 , and 60×70 are extended facts.

Building Skills through Games

In Unit 7, your child will practice multiplication and division skills by playing the following games. For detailed instructions, see the *Student Reference Book*.

Baseball Multiplication

Players use multiplication facts to score runs. Team members take turns pitching by rolling two dice to get two factors. Then players on the batting team take turns multiplying the two factors and saying the product.



Multiplication Bingo

Players take turns calling out the product of two numbers. If that number appears on their *Multiplication Bingo* cards, they put a penny on that number. The first player to get 4 pennies in a row, column, or diagonal calls out "Bingo!" and wins the game.

Name That Number

Players turn over a card to find a number they must rename using any combination of five faceup cards. They may add, subtract, multiply, or divide the numbers on 2 or more of the 5 cards that are number-side up.



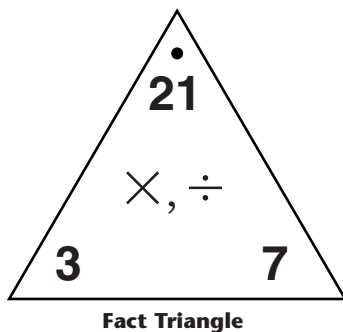
The number 15 can be renamed using 3 cards as $3 \times 7 = 21$

$$21 - 6 = 15$$

Do-Anytime Activities

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

1. Practice multiplication facts by playing games and by working with Fact Triangles.



$$3 \times 7 = 21$$

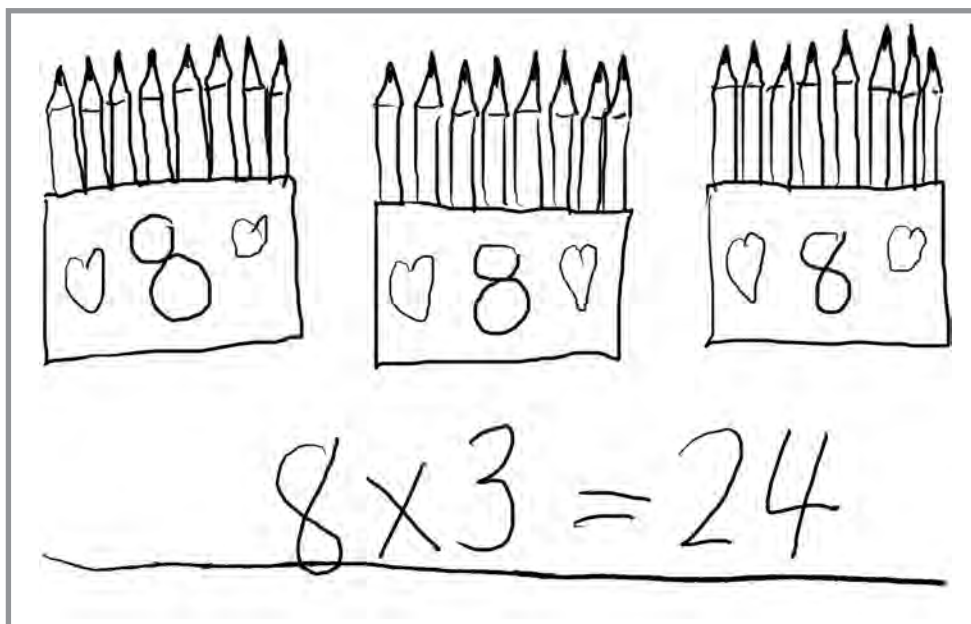
$$7 \times 3 = 21$$

$$21 \div 7 = 3$$

$$21 \div 3 = 7$$

Fact families for the numbers 3, 7, and 21

2. Ask your child to count by certain intervals.
For example: Start at zero and count by 6s.
3. Provide your child with problems with missing factors for multiplication practice.
For example: 6 times what number equals 18?
4. Ask your child to estimate costs at the store.
For example: One loaf of bread costs \$1.49. Two loaves are about \$3.00.
5. Ask questions that involve equal sharing.
For example: Eight children share 64 paperback books. How many books does each child get?
6. Ask questions that involve equal groups.
For example: Pencils are packaged in boxes of 8. There are 3 boxes. How many pencils are there in all?



Child's drawing of equal groups

As You Help Your Child with Homework

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

Home Link 7•2

1.

Factor	Factor	Product
3	5	15
7	2	14
4	10	40
8	8	64
4	8	32
864	1	864
10	10	100
0	999	0
1	48	48
243	0	0

5. 14,189

6. 3,166

Home Link 7•4

- 1a. $(17 - 10) + 3 = 10$ 1b. $17 - (10 + 3) = 4$
 2a. $(26 - 7) \times 2 = 38$ 2b. $26 - (7 \times 2) = 12$
 3a. $(24 - 17) - 6 = 1$ 3b. $24 - (17 - 6) = 13$
 4a. $3 \times (6 + 13) = 57$ 4b. $(3 \times 6) + 13 = 31$
 7. The parentheses are placed incorrectly.
 The number model should be $(8 \times 4) + 4 = 36$.

Home Link 7•5

Scoring 15 Basketball Points

Number of 3-point baskets	Number of 2-point baskets	Number of 1-point baskets	Number models
5	0	0	$(5 \times 3) + (0 \times 2) + (0 \times 1) = 15$
0	5	5	$(0 \times 3) + (5 \times 2) + (5 \times 1) = 15$
3	3	0	$(3 \times 3) + (3 \times 2) + (0 \times 1) = 15$
4	0	3	$(4 \times 3) + (0 \times 2) + (3 \times 1) = 15$
2	3	3	$(2 \times 3) + (3 \times 2) + (3 \times 1) = 15$
1	6	0	$(1 \times 3) + (6 \times 2) + (0 \times 1) = 15$

1. 186 2. 509 3. 24

Home Link 7•6

1. $8 \times 200 = 1,600$ 2. $9 \times 30 = 270$
 $200 \times 8 = 1,600$ $30 \times 9 = 270$
 $1,600 \div 8 = 200$ $270 \div 9 = 30$
 $1,600 \div 200 = 8$ $270 \div 30 = 9$
 3. $6 \times 40 = 240$
 $40 \times 6 = 240$
 $240 \div 6 = 40$
 $240 \div 40 = 6$

Home Link 7•7

2. b. 1,750 c. 1,251 f. 545 g. 614
 i. 522

Home Link 7•8

5. a. 1,200 b. 1,400 c. 400 d. 800
 e. 2,000 f. 200 g. 2,000 h. 1,000
 i. 0 Total = 9,000

Sample answers:

6. a. 10×10 b. 3×50 $\begin{array}{|c|c|} \hline \mathbf{a} & \mathbf{b} \\ \hline 100 & 150 \\ \hline \mathbf{c} & \mathbf{d} \\ \hline 90 & 160 \\ \hline \end{array} = 250$
 c. 30×3 d. 40×4 $\begin{array}{|c|c|} \hline \mathbf{c} & \mathbf{d} \\ \hline 90 & 160 \\ \hline \end{array} = 250$

Total
500

Home Link 7•9

Mystery Numbers:

100; 199; 70; 44; 1,000; and 998