



Unit 7: Multiplication and Division

In Unit 7, children will focus on developing automatic recall of 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.

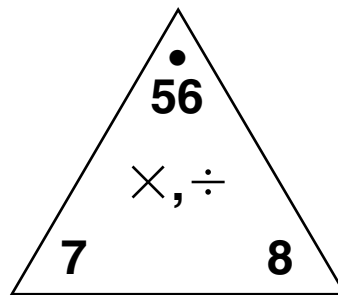
$$7 \times 8 = 56$$

$$8 \times 7 = 56$$

$$56 \div 7 = 8$$

$$56 \div 8 = 7$$

Fact family for the numbers 7, 8, and 56



Fact Triangle

The ultimate goal is for children to memorize all the basic arithmetic facts by the end of the year. Please keep in mind that even as your child is making progress, he or she may still experience difficulty with particular facts. Until all facts needed to solve a given problem are memorized, continue to encourage your child to “figure out” an answer by any available means.

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



Vocabulary

Important terms in Unit 7:

factors The numbers being multiplied.

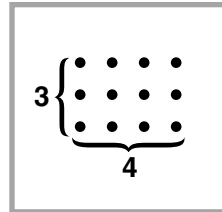
$$\begin{array}{ccccccc} & & \mathbf{4} & \times & \mathbf{3} & = & \mathbf{12} \\ & \uparrow & & & \uparrow & & \uparrow \\ \text{factors} & \text{---} & & & \text{---} & & \text{---} & \text{product} \end{array}$$

product The result of doing multiplication.

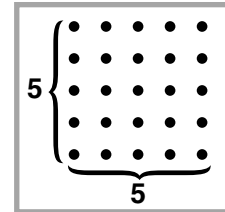
square number A number that is the product of a number multiplied by itself; a number that can be represented by a square array. For example, $5 \times 5 = 25$ forms a square array; therefore, 25 is a square number.

estimate A calculation of a close, rather than an exact, answer; a number close to another number.

array A rectangular arrangement of objects in rows and columns.



3-by-4 array



5×5 array

multiple of a number The product of that number multiplied by a whole number. For example, 18 is a multiple of 6 because $6 \times 3 = 18$.

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.

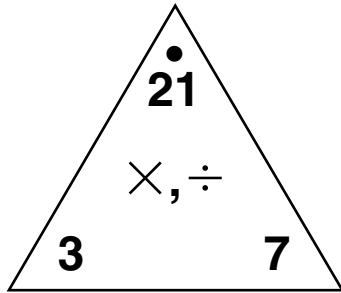
Number Top-It (3-Place Decimals)

As players pick each card, they must decide in which place-value box (from ones to thousandths) to place the card so that they end up with the largest number possible.

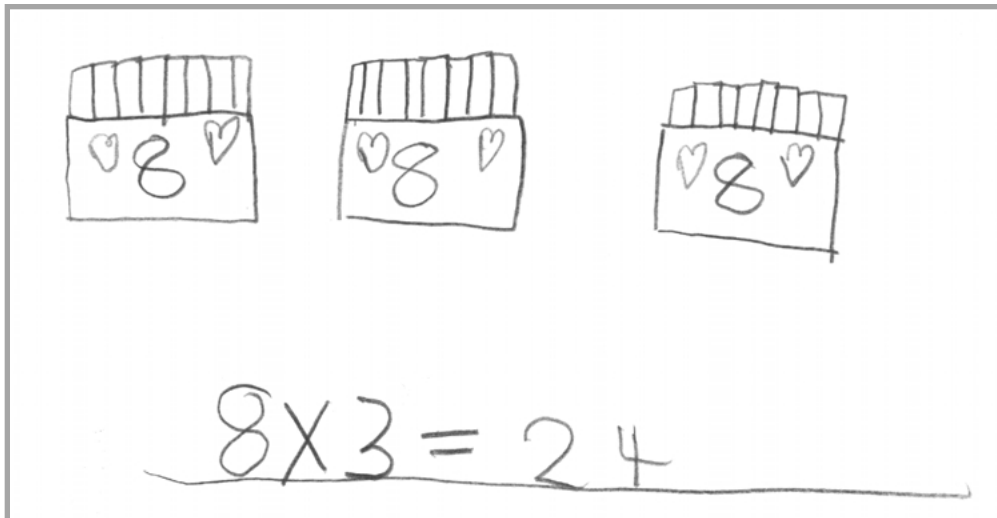
Do-Anytime Activities

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

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



- 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 questions that involve equal sharing.
For example: "Eight children share 64 paperback books. How many books does each child get?"
- 5 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?"



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
9	5	45
4	8	32
864	1	864
10	10	100
0	999	0
1	48	48
7	7	49
243	0	0

Home Link 7.4

1. $(17 - 10) + 3 = 10$ 2. $17 - (10 + 3) = 4$
 3. $(26 - 7) \times 2 = 38$ 4. $26 - (7 \times 2) = 12$
 5. $(24 - 17) - 6 = 1$ 6. $24 - (17 - 6) = 13$
 7. $3 \times (6 + 13) = 57$ 8. $(3 \times 6) + 13 = 31$
10. The parentheses are placed incorrectly.
 The number model should be $(8 \times 4) + 4 = 36$.

Home Link 7.5

Scoring 15 Basketball Points

Possible answers:

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	$(1 \times 3) + (6 \times 2) + (0 \times 1) = 15$

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. 515 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
 c. 30×3 d. 40×4

a	b	= 250
100	+ 150	
c	d	= 250
90	+ 160	

Total 500

Home Link 7.9

Mystery Numbers:

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