



Grade 3 Parent Newsletter

Theme 3 Unit 7b

Dear Parents,

Your third will be developing a solid understanding of the connection between multiplication and division. The major representation used will be square tiles (to form arrays), visual representations (to show equal groups), and number lines (to show forward jumps and backward as they relate to multiplication and division). This conceptual understanding is developed through the work with arrays and equal groups through the use of manipulatives and visual representations. Through exploration and problem solving, students will extend the concept that multiplication and division are inverse operations. In this unit students will use factors and products 1-100 in standard basic facts and fact families.

Thank you for your continued support,

Your Child's 3rd Grade Teacher

How can you help your child be successful in mathematics?

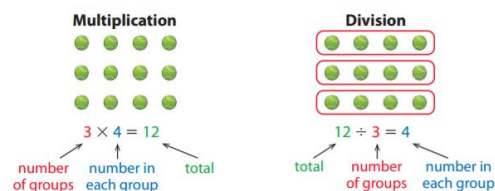
Children learn math best when they can connect math concepts and procedures to their everyday experience.

- Be positive about math! Let your child know that everyone can learn math.
- Point out how math is used in daily activities.
- Include your child in activities that involve math, such as making purchases, measuring ingredients, and determining elapsed time.
- Play math-related games with your child.
- Encourage your child to explain his/her thinking when solving problems.
- Count everything with young mathematicians.
- Make connections between real world situations involving multiplication and division.
- Instead of validating answers, ask your child how they know, and if their answer is reasonable.

When a math moment presents itself, make the most of it!

Vocabulary

Multiplication joins equal groups to find a total, or product. Division starts with a total and breaks it up into equal groups. The result is called the **quotient**.



Fact families are sets of related multiplication and division facts. Here is one example:

$3 \times 8 = 24$ $8 \times 3 = 24$ $24 \div 8 = 3$ $24 \div 3 = 8$

This fact family has two multiplication facts and two division facts. All the facts use the same three numbers: 3, 8, and 24. If you know one fact in the family, you can find all the others, too.

Think about it!

Think Division equations have related multiplication equations.

To help you solve a division problem, you can write a multiplication equation that uses the same numbers. Look at the problem below.

Nina buys 20 stickers. She puts the same number of stickers on each of 5 pages in her scrapbook. How many stickers does she put on each page?

5 times what number equals 20?

You know the total number of stickers is 20. You also know the number of groups, or pages, is 5. The unknown number you need to find is how many in each group, or the number of stickers on each scrapbook page.



One Way

You can write a division equation.

$20 \div 5 = \square$

$20 \div 5 = 4$

Nina puts 4 stickers on each page.

Another Way

You can write a multiplication equation.

$5 \times \square = 20$

$5 \times 4 = 20$



Strategies to Support Student Learning

Using color tiles to represent equal groups and arrays.

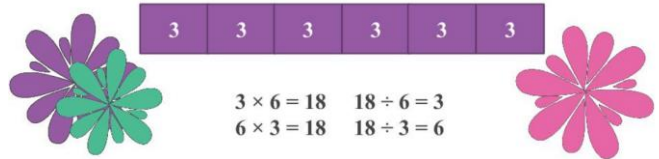


10

$$10 \times 3 = 3 \times 10$$

10 groups of 3 equals 3 groups of 10

Drawings and equations can be used to represent and solve multiplication and division.

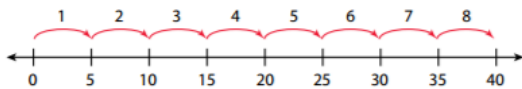


$$3 \times 6 = 18 \quad 18 \div 6 = 3$$

$$6 \times 3 = 18 \quad 18 \div 3 = 6$$

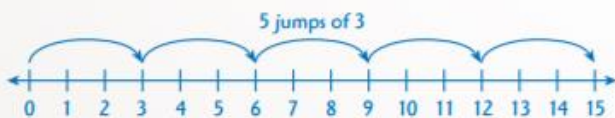
Use strategies to solve multiplication and division, such as skip counting.

Skip count by 5s to find the answer. Start at 0 and jump by 5s until you get to 40.



Today some students will give an oral report. The teacher is planning to have all the reports done in 15 minutes. Each student will get 3 minutes. How many students will give reports? Solve $3 \times \square = 15$.

Look at how you could show your work using a number line.



Solution 5 students

When multiplying and dividing within 100, use your understanding of inverse operations to help solve problems.



2 groups of 5 fish

$$2 \times 5 = 10$$



10 fish put into 2 equal groups

$$10 \div 2 = 5$$

There are 12 eggs in the carton. They are arranged in an array.



There are 2 equal rows. There are 6 eggs in each row.

$$2 \times 6 = 12 \quad 12 \div 2 = 6$$



Activities to Support Home-to-School Connection

Taken from Ready Common Core

Fact Family Activity

Materials: scissors, index cards, and pencil (optional)

Play this game to practice recognizing facts that are in the same family.

Create fact family cards by cutting out the facts below, or by writing the facts on index cards.

- Each player chooses one of the single-number cards (42 or 56) and places it face-up in front of him or her. Shuffle the fact cards. Place them face-down in 2 rows with 4 cards in each row.
- Players take turns flipping over two cards.
 - If *both* the cards are in the same fact family as the number card, then the player keeps the cards.
 - If either of the cards is *not* in the same fact family as the player's number card, then put both cards face down in a discard pile.
 - Reshuffle the discard pile as needed.
- The first player to find the 4 cards that make a fact family that goes with his or her number card wins.

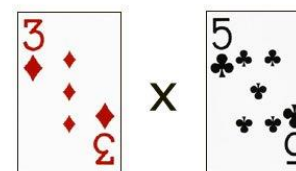


$8 \times 7 = 56$	$7 \times 8 = 56$	$56 \div 8 = 7$	
$56 \div 7 = 8$	$7 \times 6 = 42$	$6 \times 7 = 42$	
$42 \div 7 = 6$	$42 \div 6 = 7$	56	42

Multiplication Card Game

Materials:

- Deck of cards



What to do:

- Place a well shuffled deck of cards, face down, in the center of the playing area.
- Each player begins by taking one card and placing it face up in front of themselves. Players write the value of this card down at the top of their papers. (aces are worth 1 and face cards are all 10).
- When all players are ready, all players pick another card. They multiply the value of the cards together.
- Multiply the value of the two cards together.
- The player who has the greatest product wins the cards.
- Play until the deck of cards is complete.



Real World Connections

Multiplication and Division All Around

Explore multiplication and division in the world around us. When grocery shopping encourage children to see examples of items that come in packages that show equal groups. Discuss how they can find the total number of items in the package quickly using multiplication facts.



Challenge children to equally divide a lunch bill at Chick-fil-A. Children will add up the cost and divide by the number of people eating. For example,

You bought this:	Total
 +  + 	\$10.00
 +  + 	\$7.00
 +  + 	\$11.00
 +  + 	\$10.00
 +  + 	\$8.00
 +  + 	\$20.00
 +  + 	\$10.00