



MATH NEWS



Grade 3, Module 3, Topic C

3rd Grade Math

Module 3: Multiplication and Division with Units of 0, 1, 6-9, and Multiples of 10

Math Parent Letter

This document gives parents and students a better understanding of the Eureka math concepts that are taught in the classroom. Module 3 of Eureka Math covers Multiplication and Division with Units of 0, 1, 6-9 and Multiples of 10. This newsletter will discuss Module 3, Topic C.

Topic C. Multiplication and Division Using Units up to 8

Vocabulary Words

- Associative Property
- Distributive Property
- Product
- Mental Math
- Parentheses
- Unknown

Division Word Problem

The store sells 1 meter of fabric for \$7. Tonya buys some fabric that costs a total of \$56. She uses 3 meters to sew a dress. How many meters of fabric does she have left?

$\$56 \div \$7 = f$	$8 - 3 = r$
$f = 8$	$r = 5$
Tonya bought 8 meters of fabric.	Tonya has 5 meters of fabric left.

OBJECTIVE OF TOPIC C

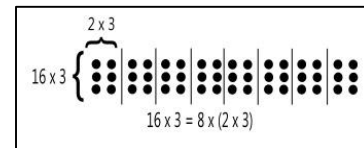
- 1 Understand the function of parentheses and apply to solving problems.
- 2 Model the associative property as a strategy to multiply.
- 3 Use the distributive property as a strategy to multiply and divide.
- 4 Interpret the unknown in multiplication and division to model and solve.

Focus Area- Topic C

Multiplication and Division Using Units up to 8

Solve 16×3

This is a difficult problem to solve. Let's simplify the problem. Begin by listing the factors of 16. 2, 4 and 8 are factors of 16. Knowing that 8×2 are factors we can rewrite the problem as $(8 \times 2) \times 3$. In math the **parentheses** are used to group important things together, so you always do them first. (8×2) is in parentheses so you would multiply them first to get 16. This problem is still hard to solve because we are still trying to multiply 16×3 . We can use the associative property to help solve the problem. The **associative property** says that when we are multiplying all numbers together we can multiply the numbers in any order and still get the same answer. So we can move the parentheses to make the problem easier to solve. $8 \times (2 \times 3)$. Drawing an array to solve the problem is a simple solution to the problem. Draw 8 groups of 2×3 .



Students may also realize that the problem can also be written as 8×6 or they may use the **distributive property** to solve the problem. The distributive property says that when one of the factors of a product is a sum, multiplying each addend before adding will not change the **product** or answer.

$ \begin{aligned} 16 \times 3 &= (8 + 8) \times 3 \\ &= (8 \times 3) + (8 \times 3) \\ &= 24 + 24 \\ &= 48 \end{aligned} $

Moving Parentheses

The first time we solved this problem the parentheses was around the addition problem. Now the parentheses are around the multiplication problem. The parentheses tell us what problems to solve first. First multiply the problem in the parentheses, $8 \times 3 = 24$. Next we add 8 to that answer. $24 + 8 = 32$. It is very important to solve the problems in parentheses first because the answer will not be the same.

$ \begin{aligned} 16 \times 3 &= 8 + (8 \times 3) \\ &= 8 + (24) \\ &= 32 \end{aligned} $
