



# MATH NEWS



Grade 3, Module 3, Topic A

## 3<sup>rd</sup> 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 A.

Topic A. Properties of Multiplication and Division

### Vocabulary Words

- Commutative Property
- Product
- Unknown
- Factors
- Tape Diagram
- $n + 1$

### Things to Remember!!!

#### What is a tape diagram?

A tape diagram uses a rectangle(s) with numbers to represent the number in a word problem. Now that numbers are getting bigger a rectangle is used to represent the number instead of drawing dots or pictures. A tape diagram allows the student to visualize the problem.

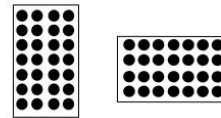
## OBJECTIVE OF TOPIC A

- 1 Study commutatively to find known facts of 6, 7, 8 and 9.
- 2 Apply the distributive and commutative properties to relate multiplication facts of  $5 \times n + n$  to  $6 \times n$  and  $n \times 6$  where  $n$  is the size of the unit.
- 3 Multiply and divide with familiar facts using a letter to represent the unknown.

## Focus Area- Topic A

### Properties of Multiplication and Division

The **commutative** property of multiplication means that changing the order of **factors** does not change the answer or **product**. This means that  $7 \times 4 = 4 \times 7$ .



$$7 \times 4 = 4 \times 7$$

By understanding this property students also learn that a majority of their multiplication facts are already known.

Learning how to solve multiplication problems by using the commutative property and  $n+1$  is also taught in this topic. Solve  $8 \times 6$

The commutative property states that factors can change order and still have the same product.  $6 \times 8$  can also be written as  $5 \times 8 + 1 \times 8$ . By using a multiplication fact that is already known, solving  $6 \times 8$  can be easy. The  $n+1$  rule is simply saying to add one more group. In this case we know  $5 \times 8$  is 40 and if 1 more group of 8 is added (repeated addition), then 6 groups of 8 =  $6 \times 8 = 42$ .

In previous lessons a question mark (?) was used to represent an unknown number. In this topic using a letter to represent the **unknown** is also introduced.

$48 = 8 \times r$	$48 \div s = 8$
$48 = 8 \times 6$	$48 \div 6 = 8$
$r = 6$	$s = 6$

Mrs. James has 48 pencils for her library. Mrs. James placed a pack of 6 pencils on each desk. How many packs of pencils does Mrs. James have?

