

# Math Connections for Parents

Grade 3 Module 1

Properties of Multiplication and Division

Welcome to Third Grade Math! Newark City Schools is using the EngageNY curriculum, which is aligned with Ohio's New Learning Standards. This guide is designed to give you an overview of the Math Modules that your child is learning in class, and to provide support as you help your child with mathematics at home.

## Important Words and Concepts

- Array: set of numbers or objects in rows and columns
- Commutative Property:  $3 \times 5 = 5 \times 3$
- Equation or Number Sentence:  $3+5 = 8$
- Distributive Property:  
 $12 \times 3 = (10 \times 3) + (2 \times 3)$
- Factors: numbers multiplied to obtain a product
- Product: answer from a multiplication problem
- Quotient: answer from a division problem

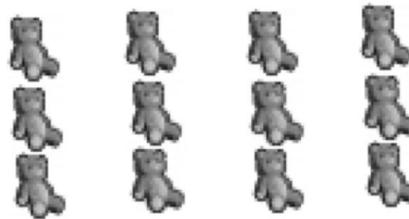
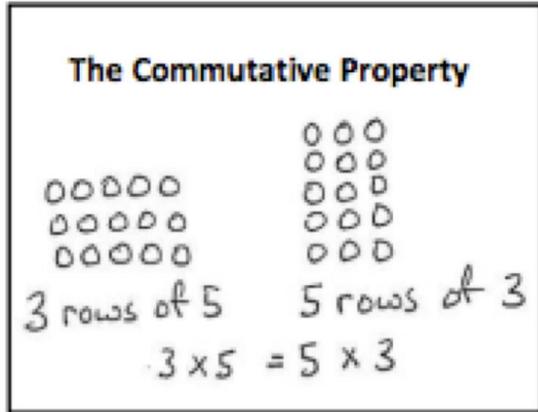
## **Multiplication and Division within 100**

Fluency of multiplication and division facts, up to 100 will be worked on starting in Grade 3, Module 1. By the end of grade 3, students are expected to know from memory all products of two one-digit numbers. They also should see the relationship between multiplication and division (i.e. knowing that  $8 \times 5 = 40$ , so you also know  $40 \div 5 = 8$ ). Work with your child at home on mastering these basic math facts.

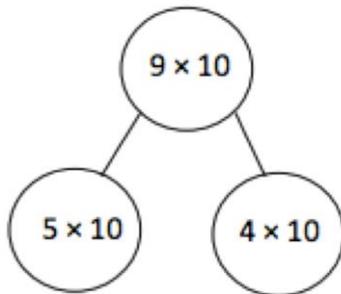
## KEY STANDARDS

- Represent and solve problems involving multiplication and division (such as equal groups, arrays and measurement quantities)
- Understand properties of multiplication and how multiplication and division are related (understand division as  $45 \div 9 = 5$ , and I also know  $9 \times 5 = 45$ )
- Solve two step word problems using the four operations (add, subtract, multiply, divide)

## Graphics and Strategies you may see...



Arrays can be used to show multiplication problems, such as with these teddy bears. 3 x 4 or 3 rows with 4 bears in each row.

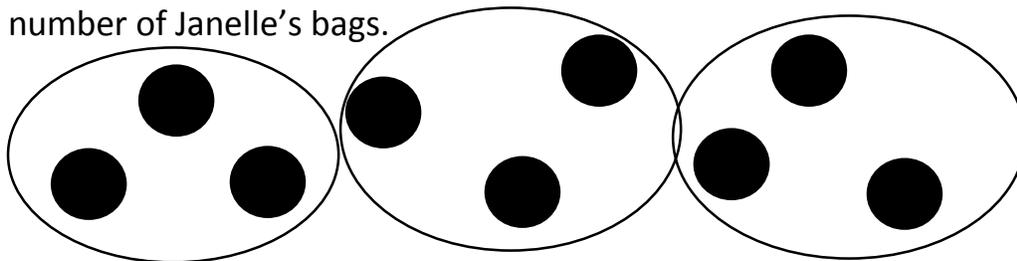


A number bond shows the Distributive Property:

$$9 \times 10 = (5 \times 10) + (4 \times 10)$$

## Sample Word Problem:

Janelle has 9 crackers. She puts 3 crackers in each bag. Circle the crackers to show Janelle's bags. Write a division sentence where the answer represents the number of Janelle's bags.



$$9 \div 3 = 3 \text{ Crackers in each bag}$$