3rd grade On-Level Math

Unit 2: Exploring Multiplication

Dear Families,

We want to make sure that you understand the mathematics your child will be learning this year. Below you will find the standards we will be learning in Unit 2.

Each standard is in bold print and below each one is an explanation with student examples. Please let your teacher know if you have any questions. We appreciate your partnership and support.

3.PAR.3.1: Describe, extend, and create numeric patterns related to multiplication. Make predictions related to the patterns.

Students need to be able to identify a numeric pattern and then solve for the solution based on the numeric pattern.

Example:

1. In a sticker book, each page has 6 stickers on the page. How many stickers would 4 pages of the sticker book have?

1 page	2 pages	3 pages	4 pages
6	12		

Answer:

1. 24 stickers (6 x4 =24 stickers)

3.PAR.3.2 *: Represent single digit multiplication and division facts using a variety of strategies. Explain the relationship between multiplication and division (*Only multiplication in this unit).

Students need to be able to represent a multiplication sentence using repeated addition, a number sentence, and express it as a word problem.

Examples: Which examples represent the total number of tickets?



1. 5 x 3
2. 3 + 3 + 3
3. 5 + 5 + 5
4. 5 + 5 + 5 + 5 + 5

Answers:

1. 5 x 3 or 5 + 5 + 5
2. Other examples could include 3 x 5 or 3 + 3 + 3 + 3 + 3

3.PAR.3.3: Apply properties of operations (i.e., commutative property, associative property, distributive property) to multiply and divide within 100.

Examples:

1. Billy's farm has 5 rows of corn in the field. Each row of corn has 6 stalks on it. How many stalks of corn are in the field?
2. Sally and her mom are baking chocolate chip cookies. The pan has 4 rows of cookies with 6 cookies in each. How many cookies are Sally and her mom baking?

Answers:

1. 5 x 6 = 30 stalks
2. 4 x 6 = 24 cookies

3.PAR.3.4: Use the meaning of the equal sign to determine whether expressions involving addition, subtraction, and multiplication are equivalent.

Students are responsible for determining whether expressions are equivalent.

Example:

1. Which set of equations are equivalent?
    a. 2 x 6 and 12 x 1
    b. 3 x 9 and 9 x 2
    c. 4 x 3 and 3 x 4
    d. 8 x 2 and 8 x 4

Answer:

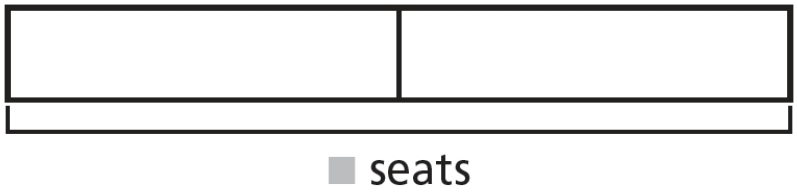
1. A and C

3.PAR.3.6: Solve practical, relevant problems involving multiplication and division within 100 using part-whole strategies, visual representations, and/or concrete models.

Students can use arrays, repeated addition, number lines, and bar models to represent their model.

Example:

1. The cars on the Big Dip Roller Coaster ride at the amusement park are the same size. There are 2 cars. Each car has 6 seats. How many seats are on the roller coaster ride?



Answer:

1. Students would draw 6 seats on each side of the model representing 6 x 2 or 6 + 6 = 12 seats.

3.PAR.3.7: Use multiplication and division to solve problems involving whole numbers to 100. Represent these problems using equations with a letter standing for the unknown quantity. Justify solutions.

Students need to be able to represent an unknown quantity as a variable in a number sentence.

Example:

1. Lamar's game board has 5 rows with some squares in each row. Lamar's game board has a total of 30 squares on the whole board. How many squares does he have in each row?

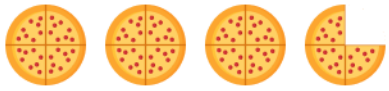
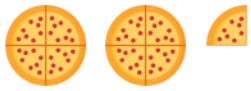
Answer:

1. 5 x ☐ = 30 squares
    a. 5 x 6= 30 squares

3.MDR.5.1: Ask questions and answer them based on gathered information, observations, and appropriate graphical displays to solve problems relevant to everyday life.

Students need to be able to review, interpret, and answer questions based on data from graphs.

Example:

Flavor	Number of Children
Cheese	
Corn	
Veggie	
Key :  represents 4 children	

1. How many more children wanted cheese pizza over veggie pizza?
2. How many total children picked a pizza flavor?

Answer:

1. 4 children
2. 35 children