

What Your Child Will Learn

- ✓ Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects
- ✓ Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share
- ✓ Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities
- ✓ Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = _$
- ✓ Apply properties of operations as strategies to multiply and divide.
- ✓ Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.
- ✓ Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$).
- ✓ By the end of Grade 3, know from memory all products of two one-digit numbers.
- ✓ Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity.
- ✓ Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Terminology and Symbols

New or Recently Introduced Terms

- ✓ Array - a set of numbers or objects that follow a specific pattern, a matrix
- ✓ Column
- ✓ Commutative Property/Commutative - factors in a multiplication sentence can switch places
- ✓ Equal groups - one factor is the number of objects in a group and the other is a multiplier that indicates the number of groups
- ✓ Equation- a statement that 2 expressions are equal. E.g., $3 \times 4 = 12$
- ✓ Distribute - e.g. In $12 \times 3 = (10 \times 3) + (2 \times 3)$ the 3 is multiplier for each part of the decomposition
- ✓ Divide/division- show how many equal groups add up to a specific number
- ✓ Factors - numbers that are multiplied to obtain a product
- ✓ Multiplication/multiply - an operation showing how many times a number is added to itself e.g., $5 \times 3 = 15$
- ✓ Number of groups (factor in a multiplication problem that refers to the total equal groups
- ✓ Parentheses - e.g., () used around a fact or numbers within an equation
- ✓ Quotient - the answer when one number is divided by another
- ✓ Rotate - turn, used with reference to turning arrays 90 degrees
- ✓ Row/column - in reference to rectangular arrays
- ✓ Size of groups - factor in a multiplication problem that refers to how many in a group
- ✓ Unit - i.e., one segment of a partitioned tape diagram
- ✓ Unknown - i.e., the "missing" factor or quantity in multiplication or division

Activities at Home

- ✓ Make arrays out of household items (e.g., pennies, beans, blocks) Determine how many items are on each row
- ✓ Select multiplication or division facts to illustrate or write a word problem.
- ✓ Hunt for multiple sets of objects in the home. Use repeated addition and multiplication to find the totals.
- ✓ Sort coins according to type, count the number of coins and then multiply to find the total value of pennies (x 1), nickels (x 5), dimes (x 10) and quarters (x 25).
- ✓ Roll 2 number cubes. Find the products of the factors.
- ✓ Count quantities of items by 2's, 3's, 5's, and 10's.
- ✓ Roll 2 number cubes to determine the factors. Make an array to find the product.
- ✓ Act out division problems with counters. For example, Brad has 12 rabbits. He puts the same number of rabbits into each of 4 cages. How many rabbits does Brad put in each cage?
- ✓ Roll 2 number cubes and write the fact families. For example, for rolls of 4 and 6, write: $4 \times 6 = 24$, $6 \times 4 = 24$
- ✓ Ask your child to find the missing factor. For example, $5 \times \text{what number?} = 35$?
- ✓ Consider reading *A Remainder of One*

Helpful videos

[Number bonds](#)

[Array](#)

[Interpreting products as whole numbers](#)

[Solve multiplication problems using arrays](#)

[Solve division problems using an array](#)

Games

[Under the Sea](#)

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[Multiplication](#)

[Algebraic reasoning](#)

[Multiplication and Division practice](#)

Adapted from Eureka Story of Units and Lafayette Parish School District