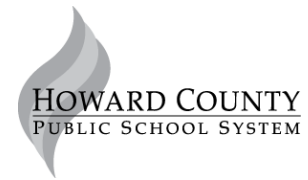


Grade 3 • Operations and Algebraic Thinking



What Your Child Will Learn

Understand the meaning of multiplication (3.OA.1)	Quarter 1
Understand the meaning of division (3.OA.2)	Quarter 1
Solve word problems using multiplication and division (3.OA.3)	Quarter 1 and 2
Determine the unknown whole number in a multiplication or division problem ($? \times 8 = 24$) (3.OA.4)	Quarter 1, 2, 3, and 4
Understand the properties of multiplication (3.OA.5)	Quarter 1 and 2
Understand division as an unknown factor problem (3.OA.6)	Quarter 2
Fluently multiply and divide within 100 (3.OA.7)	Quarter 1, 2, 3, and 4
Solve word problems using addition, subtraction, multiplication and/or division (3.OA.8)	Quarter 1, 2, 3, and 4
Identify and explain arithmetic patterns (3.OA.9)	Quarter 1, 2, 3, and 4

Vocabulary

Division: to make equal groups	Dividend: a number that is divided by another number
Array: an arrangement that shows objects in columns and rows	Equation: a mathematical statement containing an equal sign, to show that two expressions are equal
unknown	Product: the result of multiplication
Grouping: dividing things into equal groups (sets)	Quotient: the number, not including the remainder, that results from dividing
Partition: to divide into parts	Multiplication: an operation on two numbers to find their product. It can be thought of as repeated addition.
Multiple: a product of two whole numbers	Remainder: the amount left over when a whole number cannot be divided into equal whole numbers
Factor: a number that is multiplied by another number to get a product	Subtraction: To find the difference when two groups are compared or to find out how many are left when items are taken away from a group.
Addition: To join two or more groups. $2 + 3 = 5$	Addend: A number that is added to another in an addition problem. In $2 + 3 = 5$, 2 and 3 are addends.
Sum: The answer to an addition problem. In $2 + 3 = 5$, 5 is the sum.	Difference: The answer to a subtraction problem. In $8 - 3 = 5$, 5 is the difference.
Estimation: a number close to an exact amount	Mental Computation: the calculation of something mentally

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Activities at Home (optional)

- Make arrays out of household items (e.g., pennies, beans, blocks)
- 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.
- Use a calculator to solve word problems using multiplication and division. For example, Callie wants to buy 20 apples that cost \$.19 each. What is the total cost of her purchase? Michael has 332 quarters. He wants to put them into groups of 4. How many groups will he make?
- 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: $4 \times 6 = 24$, $6 \times 4 = 24$, $24 \div 6 = 4$, $24 \div 4 = 6$.
- Ask your student to find the missing factor. For example, $5 \times \text{what number?} = 75$?