

Math Connections for Parents

Grade 4 Module 1

Place Value, Rounding, and Algorithms for Addition and Subtraction

Welcome to Fourth 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

- Ten thousands, hundred thousands, one million, ten millions, hundred millions (as places on the place value chart)
- Algorithm: a step by step procedure for solving a problem
- Variable: symbol that stands for a number
- Sum: answer to an addition problem
- Difference: answer to a subtraction problem
- Standard form: a number written in the format e.g. 135
- Expanded form: $135 = 100 + 30 + 5$
- Word form: one hundred thirty-five
- Tape Diagram: a graphic organizer used to solve word problems. (See an example of one on the next page)
- Bundling: making, renaming, changing, exchanging, regrouping (exchanging 10 ones for 1 ten)

Add and Subtract Multi-Digit Numbers

Fluency of multiplication and division facts, up to 100, was worked on in grade 3. Students in fourth grade are expected to know from memory all products of two one-digit numbers. They will also be working on adding and subtracting multi-digit numbers, using a standard algorithm. You can help your child by making sure they know their basic addition, subtraction, multiplication and division facts.



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KEY STANDARDS

- Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000 (recognize that a digit in one place represents ten times what it represents to the right i.e. $700 \div 10 = 70$)
- Read and write multi-digit whole numbers using numerals, number names, and expanded form, and compare the numbers using $<$ $>$ $=$
- Round multi-digit whole numbers to any place

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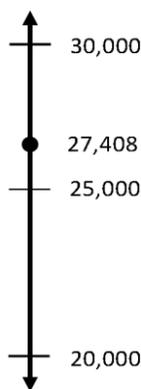
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Graphics and Strategies you may see...

Place Value Chart

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones



A vertical number line can help students understand how to round numbers to specific place values.

27,408 rounded to the nearest ten thousands = 30,000.

Millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones
			●●●●●	●●●●●	●●●●●	
				●●●●●	●●●●●	

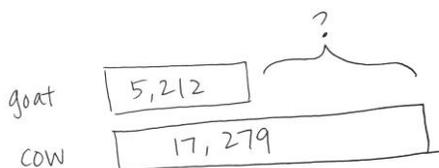
Note: In the original image, arrows labeled 'x10' point from the hundreds and tens columns to the thousands column, and a bracket groups the hundreds and tens columns.

Place value charts with disks help students show how to bundle and change place values by making groups of ten.

Sample Word Problem

A goat produces 5,212 gallons of milk a year. A cow produces 17,219 gallons of milk a year. How much more milk does a goat need to produce to make the same amount of milk as a cow?

A *tape diagram* can be useful in solving word problems:



$$17,279 - 5,212 = ?$$

A goat needs to produce _____ gallons more to make the same amount as a cow.