LETTER HOME

Numbers and Number Operations

Dear Family Member:

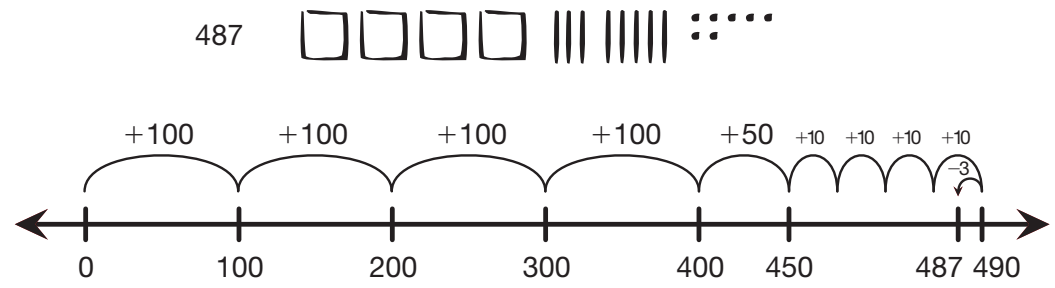
In this unit we focus on strengthening your child's understanding of our number system. To be able to compute, we need to understand place value—the idea that the value of a digit in a number depends upon where it is placed. For example, the 2 in 426 is 2 tens, but in 4235 it is 2 hundreds. This unit reviews addition, subtraction, and multiplication with an emphasis on understanding place value. Students learn a variety of strategies to solve problems, matching a problem with an efficient strategy for solving it. They learn estimation strategies to check the reasonableness of their answers.

You can help your child with place value and whole number operations using the following ideas:

What's It Worth? Give your child a number to write down. Then, ask for the value of each digit in the number. For example, ask your child to write "three hundred twenty-four." Then ask, "What is the value of the 3?" Your child should say, "three hundred."

Different Ways to Partition the Same Number. Ask your child to write down a multidigit number. Then ask them to write the number in expanded form using hundreds, tens, and ones. Then challenge your child to write a new number sentence that partitions the number a different way or with different representations.

For Example: 487 or 400 + 80 + 7 or 300 + 180 + 7 or 400 + 50 + 37



Digits Game. Play the digits game as a family. A player chooses a playing board that is a template for an addition or subtraction problem. Cards are drawn one at a time from a deck of 0–9 Digit Cards. After each draw, players write a digit in a box on the playing board trying to find the largest sum or difference correctly. Directions and game boards are in Lesson 7 in the *Student Guide*.

Strategy Menus. Encourage your child to use and reference the various strategy menus created and referenced in this unit as they are working. The following menus can be found in the Student Guide Reference section.

- *Addition Strategies Menu*
- *Subtraction Strategies Menu*
- *Multiplication Strategies Menu*

Subtraction Strategies Menu

Finding Friendly Numbers to Estimate

428 – 179

430 – 200 = 230

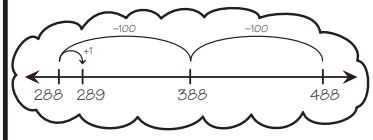
230 is a reasonable estimate

Using the Compact Method

$$\begin{array}{r} {\scriptstyle 11}\\ {\scriptstyle 3\ 1\ 13}\\ \not{4}\not{2}\not{3}\\ -\ 1\ 6\ 5\\ \hline 2\ 5\ 8 \end{array}$$

Counting Back

488 – 199 = 289



Using Expanded Form

$$\begin{array}{rrcl} & {\scriptstyle 300} & {\scriptstyle 110} & {\scriptstyle 13}\\ 423 & \not{4}\not{0}\not{0} + & \not{2}\not{0} + & \not{3}\\ \text{Subtract } \underline{165} & = & \underline{165} + & \underline{60} + \underline{5}\\ & & 200 + 50 + 8 = 258 & \end{array}$$

Another Strategy: _____

Counting Up

300 – 198

198 + (2) = 200

200 + (100) = 300

100 + 2 = 102

Math Facts and Mental Math

This unit continues the systematic review and assessment of the multiplication facts.

Multiplication Facts. Students review the 2s, 3s, and 9s to maintain and increase fluency and to learn to apply multiplication strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Skip counting. To solve 2×8, skip count: 2, 4, 6, 8, 10, 12, 14, 16, 18

Doubling. To solve 2×8, think $8 + 8 = 16$

Reasoning from known facts. To solve, 9×4 , $9 \times 2 = 18$ and $18 + 18 = 36$ or use 10×4 to solve 9×4. $10 \times 4 = 40$ and $40 - 4 = 36$.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s: $40 \times 50 = 200$, $90 \times 200 = 18000$, $3 \times 300 = 900$.

Thank you for taking the time to talk with your child about what he or she is doing in math.

Sincerely,