Dear Parents,

During Unit 1, your children will develop and practice efficient addition and subtraction of multi-digit whole numbers, while extending their understanding of place value concepts. Fourth grade is the initial grade level in which students are expected to be proficient at using the standard algorithm for addition and subtraction. As well, your children may continue to use previously learned strategies, based on place value concepts and the properties of operations. They will reason about the magnitude of the digits in a whole number. Your children will demonstrate flexibility with the different forms that numbers can be written. They will apply their understanding of place value and number sense to reason and explain about rounded answers.

ADDITION AND SUBTRACTION WITH MULTI-DIGIT NUMBERS

Students need to:

- Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

- Use place value understanding to round multi-digit whole numbers to any place.

- Add and subtract multi-digit whole numbers using the standard algorithm.

KEY VOCABULARY

Algorithm	Hundreds
Commutative property	Million
Difference	Place value
Digits	Sum
Equation	Thousands
Estimate	Variable
Expanded form	Value
Expression	

WAYS PARENTS CAN HELP

- Encourage your child to practice their basic addition and subtraction math facts.
- Challenge your child to use their knowledge of subtraction to create problems for each of the following conditions:

a. You don't have to use regrouping.

b. You would naturally use regrouping from the tens to the ones place.

c. You would naturally use regrouping from the hundreds place to the tens place.

d. You would naturally use regrouping in all places.

- Challenge your child to use their knowledge of addition and subtraction to create problems for each of the following conditions:

a. The answer rounded to the nearest ten is 90 (or any two-digit multiple of 10).

b. The answer rounded to the nearest hundred is 500 (or any three-digit multiple of 100).

c. The answer rounded to the nearest thousand is 3,000 (or any four-digit multiple of 1,000).

In 4th grade, students will become proficient at using the standard algorithm for addition and subtraction. However, students may continue to use previously learned place value methods to add and subtract. Some examples are shown below.

Standard Algorithm

Addition

$$
\begin{array}{r}
^1\ \ ^1\ ^1 \\
3,4\,2\,8 \\
+\ \ 1,8\,7\,6 \\
\hline
5,3\,0\,4
\end{array}
$$

Subtraction

$$
\begin{array}{r}
^6\ ^{14}\ ^{12} \\
8,\cancel{7}\,\cancel{5}\,\cancel{2} \\
-\ \ 6,4\,9\,3 \\
\hline
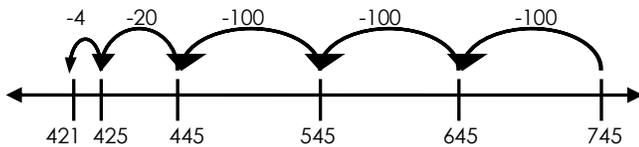2,2\,5\,9
\end{array}
$$

Place Value Equations

$$527 + 618$$

$$500 + 20 + 7\ +\ 600 + 10 + 8$$

$$
\left.
\begin{array}{l}
500 + 600 = 1,100 \\
20 + 10 = 30 \\
7 + 8 = 15
\end{array}
\right\}
1,100 + 30 + 15 = 1,145
$$

Open Number Line

$$745 - 324$$

-4   -20   -100   -100   -100

421 425   445   545   645   745

Bar Model

An average male giraffe weighs 2,600 pounds. This is 2,402 pounds heavier than the average male leopard. How heavy is a leopard?

Giraffe

2,600

Leopard

?	2,402