

**Family Letter**

Dear Family,

Your child is learning math in an innovative program called *Math Expressions*. In Unit 1, your child will use place value drawings and charts to understand that the value of each place is 10 times greater than the value of the place to its right. This understanding is essential when comparing, rounding, or adding multidigit numbers. *Math Expressions* encourages children to think about “making new groups” to help them understand place values.

We call the method below “New Groups Above”. The numbers that represent the new groups are written above the problem.

1. Add the ones:

$5 + 7 = 12$  ones  
 $12 = 2$  ones + 10 ones,  
 and 10 ones = 1 new ten.

$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 2 \end{array}$$

2. Add the tens:

$1 + 7 + 6 = 14$  tens  
 $14 = 4$  tens + 10 tens,  
 and 10 tens = 1 new hundred.

$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 42 \end{array}$$

3. Add the hundreds:

$1 + 1 + 9 = 11$  hundreds  
 $11 = 1$  hundred + 10 hundreds,  
 and 10 hundreds = 1 new thousand.

$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 142 \end{array}$$

4. Add the thousands:

$1 + 5 + 3 = 9$  thousands

$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 9, 142 \end{array}$$

We call the following method “New Groups Below.” The steps are the same, but the new groups are written below the addends.

It is easier to see the totals for each column (12 and 14) and adding is easier because you add the two numbers you see and then add the 1.

1. 
$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 2 \end{array}$$

2. 
$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 42 \end{array}$$

3. 
$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 142 \end{array}$$

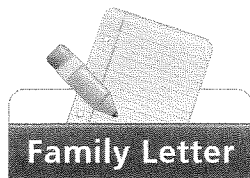
4. 
$$\begin{array}{r} 5, 175 \\ + 3, 967 \\ \hline 9, 142 \end{array}$$

It is important that your child maintains his or her home practice with basic multiplication and division.

Sincerely,  
 Your child's teacher



This unit includes the Common Core Standards for Mathematical Content for Number and Operations in Base Ten and Measurement and Data, 4.NBT.1, 4.NBT.2, 4.NBT.3, 4.NBT.4, 4.MD.2 and all Mathematical Practices.



## Dear Family,

Your child is now learning about subtraction. A common subtraction mistake is subtracting in the wrong direction. Children may think that they always subtract the smaller digit from the larger digit, but this is not true. To help children avoid this mistake, the *Math Expressions* program encourages children to “fix” numbers first and then subtract.

$$\begin{array}{r} 1,634 \\ - 158 \\ \hline 1,524 \end{array}$$

When one or more digits in the top number are smaller than the corresponding digits in the bottom number, fix the numbers by “ungrouping.” For example,  $1,634 - 158$  is shown below:

1. We cannot subtract 8 ones from 4 ones. We get more ones by ungrouping 1 ten to make 10 ones.

We now have 14 ones and only 2 tens.

$$\begin{array}{r} 214 \\ 1,6\cancel{3}4 \\ - 158 \\ \hline \end{array}$$

2. We cannot subtract 5 tens from 2 tens. We get more tens by ungrouping 1 hundred to make 10 tens.

We now have 12 tens and only 5 hundreds.

$$\begin{array}{r} 12 \\ 5\cancel{2}14 \\ 1,6\cancel{3}4 \\ - 158 \\ \hline \end{array}$$

3. Now we can subtract:  
 $1 - 0 = 1$  thousand  
 $5 - 1 = 4$  hundreds  
 $12 - 5 = 7$  tens  
 $14 - 8 = 6$  ones

$$\begin{array}{r} 12 \\ 5\cancel{2}14 \\ 1,6\cancel{3}4 \\ - 158 \\ \hline 1,476 \end{array}$$

In the method above, the numbers are ungrouped from right to left, but students can also ungroup from left to right. Children can choose whichever way works best for them.

Your child should also continue to practice multiplication and division skills at home.

If you have any questions or comments, please call or write me.

Sincerely,  
Your child's teacher



This unit includes the Common Core Standards for Mathematical Content for Number and Operations in Base Ten and Measurement and Data 4.NBT.3, 4.NBT.4, 4.MD.2 and all Mathematical Practices.