



Dear Family:

Your child is learning math in a program called *Math Expressions*, which links mathematical ideas to a child's everyday experiences. This helps children understand math better.

In this program, your child will learn math and have fun by

- working with objects and making drawings of math situations.
- listening to and working with other children and sharing ways to solve problems.
- writing and solving problems and connecting math to daily life.
- helping classmates learn.

Your child will have homework almost every day. He or she needs a Homework Helper. The helper may be anyone—a family member, an older brother or sister, a neighbor, or a friend. Set aside a definite time for homework and provide your child with a quiet place to work where there are no distractions. Encourage your child to talk about what is happening in math class. If your child is having problems with math, please talk to me to see how you might help.

Please cut, fill in, and return the bottom part of this letter.

Thank you. You are very important to your child's learning.

Sincerely,
Your child's teacher



Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, 2.OA.2, 2.OA.3, Numbers and Operations in Base Ten 2.NBT.5, 2.NBT.6, 2.NBT.9, and all Mathematical Practices.



My child _____ will have
(child's name)

_____ as a Homework Helper.
(name of homework helper)

This person is my child's _____.
(relationship to child)

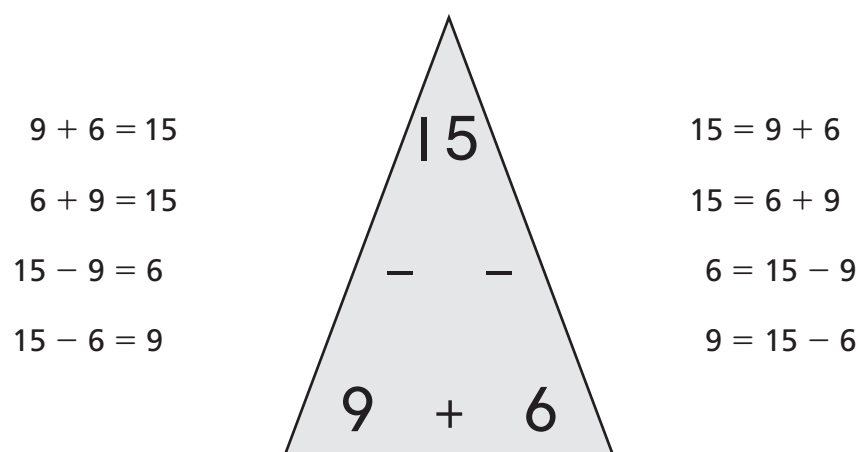
signature of parent or guardian



Dear Family:

Your child is exploring addition and subtraction equations with Math Mountain Cards. The cards have a large number at the top and two smaller numbers at the bottom. From the cards, children can see that two smaller numbers can be added together to make a larger number. They can also see that a large number can be broken apart into two smaller numbers.

Children will write addition and subtraction equations that they can make from the cards, as shown in the example. The two partners, 9 and 6, can be added to make the total, 15. They can be switched (6 and 9) and still make 15.



Students see and write all eight equations. It is important for understanding algebra that they sometimes see equations with only one number on the left.

Please call if you need practice materials. Thank you for helping your child learn about the relationship between addition and subtraction.

Sincerely,
Your child's teacher



Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, 2.OA.2, 2.OA.3, Numbers and Operations in Base Ten 2.NBT.5, 2.NBT.6, 2.NBT.9, and all Mathematical Practices.



Dear Family:

Your child is learning to solve word problems called *Add To* and *Take From* problems. These problems begin with a quantity that is then modified by change—something is added or subtracted—which results in a new quantity.

Proof drawings show what your child was thinking when solving the problem. It is important that children label their drawings to link them to the problem situation.

Add To Problem		
<p>Joe has 9 toy cars. Then he gets 3 more. How many toy cars does he have now?</p>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: right;">has 9</div> <div style="text-align: center;"> <div style="border: 1px solid black; padding: 5px; margin: 0 auto;">12</div> <div style="display: flex; justify-content: space-between; width: 100px;"> now </div> </div> <div style="text-align: left;">3 gets</div> </div>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: right;">has 12</div> <div style="text-align: center;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div>11</div> <div>10</div> <div>9</div> </div> </div> <div style="text-align: left;">3 gets</div> </div>
$9 + 3 = \boxed{12}$ has gets now		$9 + 3 = \boxed{12}$
Take From Problem		
<p>Sue has 12 books. Then she gives her friend 9 books. How many books does Sue have now?</p>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: right;">has 12</div> <div style="text-align: center;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div>12</div> <div>11</div> <div>10</div> </div> </div> <div style="text-align: left;">3 gets</div> </div>	<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: right;">has 12</div> <div style="text-align: center;"> <div style="display: flex; flex-direction: column; align-items: center;"> <div>12</div> <div>11</div> <div>10</div> </div> </div> <div style="text-align: left;">3 gets</div> </div>
$12 - 9 = \boxed{3}$ has gives now		$12 - 9 = \boxed{3}$

Please call if you have any questions or concerns.

Sincerely,
Your child's teacher



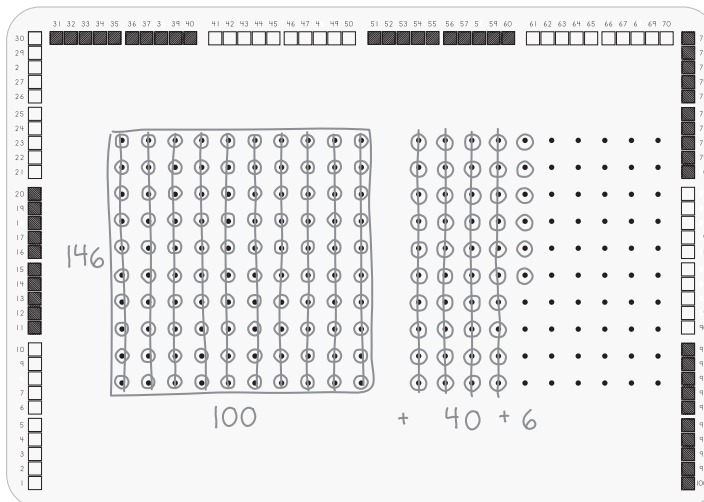
Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, 2.OA.2, 2.OA.3, Numbers and Operations in Base Ten 2.NBT.5, 2.NBT.6, 2.NBT.9, and all Mathematical Practices.



Dear Family:

Your child is learning about place value and will use this knowledge to add 2- and 3-digit numbers.

As we begin this unit, your child will represent numbers using drawings like this one:

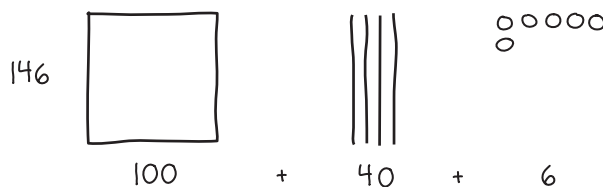


Then, children will begin to represent numbers using Quick Hundreds and Quick Tens.

Quick Hundred

Quick Tens

Ones



Name a 2- or 3-digit number and ask your child to make a drawing to represent that number.

Later in this unit, children will work on adding 2-digit numbers using the drawings to help them.

Thank you. Please call or write if you have any questions.

*Sincerely,
Your child's teacher*



Unit 2 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.1, 2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.8, 2.NBT.9; Measurement and Data, MD.8; and all Mathematical Practices.



Dear Family:

Your child is now learning how to add 2-digit numbers. The “big mystery” in adding is making a new ten or a new hundred. Children can write this new group in several ways.

Show All Totals	New Groups Below
$\begin{array}{r} 45 \\ + 28 \\ \hline \end{array}$ <p>Add tens. → 60 Add ones. → 13</p> $\begin{array}{r} 60 \\ + 13 \\ \hline 73 \end{array}$ <p>Find total tens. Find total ones.</p> <p>New ten</p>	$\begin{array}{r} 45 \\ + 28 \\ \hline 73 \end{array}$ <p>New ten</p> <p>Find total ones. (13) Write 3 and put the new ten in the tens column ready to add. Add the tens. ($4 + 2 = 6$, $6 + 1 = 7$)</p>

New Groups Above
$\begin{array}{r} 1 \\ 45 \\ + 28 \\ \hline 73 \end{array}$

Children usually find it easier to write the new ten below because then they add the new ten last. They add $4 + 2 = 6$ and then $6 + 1 = 7$.

Traditionally, most children have learned to write the new ten above. With this method, you add $1 + 4 = 5$ and then $5 + 2 = 7$. This is more difficult for many children, but some children may still choose this method, particularly if they have been taught to do so previously.

Thank you for helping your child learn mathematics.

Sincerely,
Your child's teacher



Unit 2 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.1, 2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.8, 2.NBT.9; Measurement and Data, MD.8; and all Mathematical Practices.

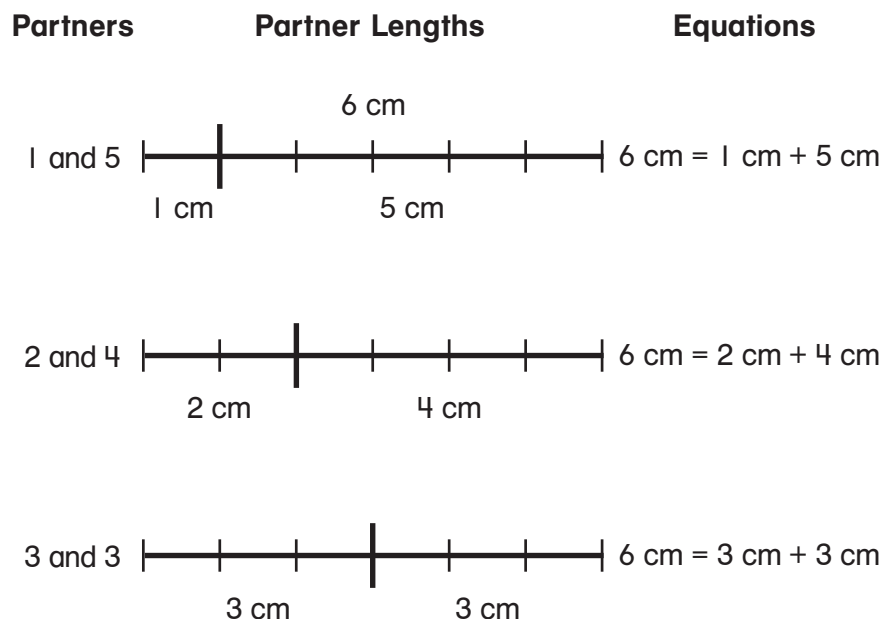


Dear Family:

Your child is working on a geometry and measurement unit. In this unit, children will use centimeter rulers to measure line segments and draw shapes.

You can help your child link geometry concepts learned in school with the real world. Encourage your child to find examples of different shapes (triangles, quadrilaterals including rectangles and squares, pentagons, and hexagons) in your home or neighborhood. This will help your child enjoy and understand geometry.

In Lesson 1 of this unit, your child will be asked to find the partner lengths of a line segment. An example is shown below.



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

Sincerely,
Your child's teacher



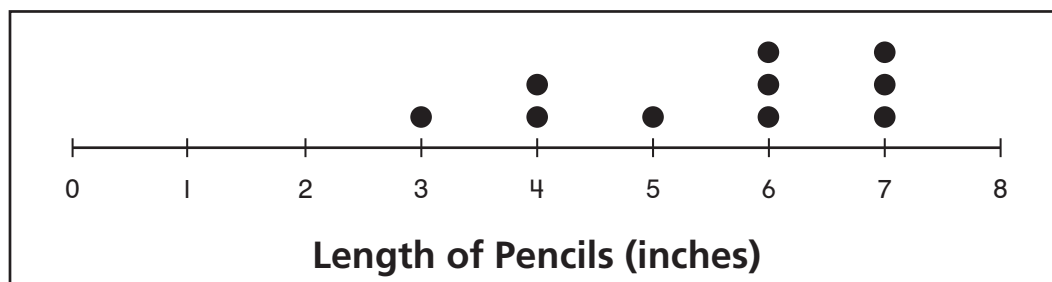
Unit 3 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.2, Number and Operations in Base Ten 2.NBT.4, 2.NBT.5, 2.NBT.6, Geometry 2.G.1, Measurement and Data 2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4, 2.MD.9, and all Mathematical Practices.



Dear Family:

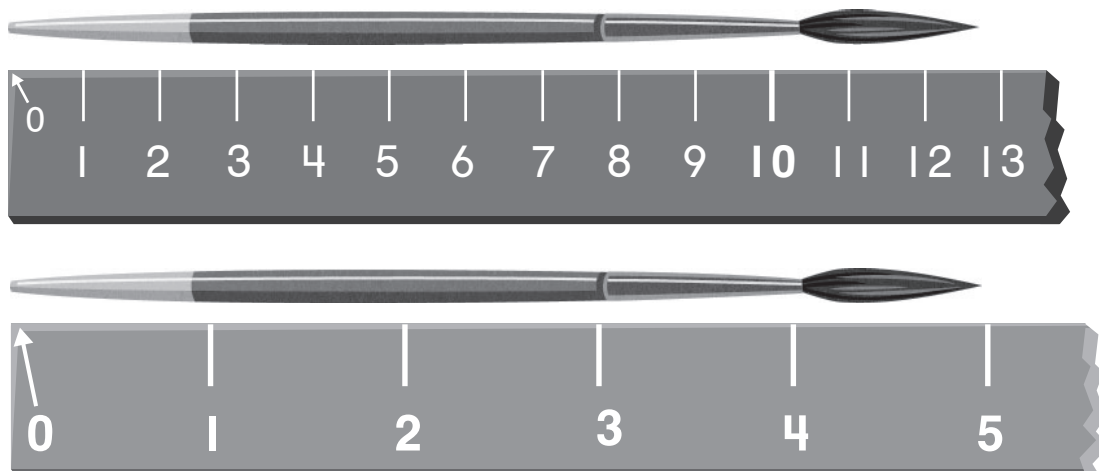
In this unit, your child will be collecting measurement data and using that data to make line plots. A *line plot* is a display that uses a number line and dots (or other marks) to represent data. For this reason, line plots are sometimes called *dot plots*.

Your child will be asked to bring one or two pencils to school. The length of each pencil should be more than 1 inch and less than 8 inches. Children will work in small groups. They will measure each pencil brought in by the members of their group and then make a line plot similar to the one shown below.



In this unit, your child will also be given several experiences that will help build understanding that the smaller the unit used to measure a given length or distance, the more of those units will be needed.

So, for example, since centimeters are shorter than inches, when the paintbrush below is measured in both centimeters and inches, the number of centimeters is more than the number of inches.



Sincerely,
Your child's teacher

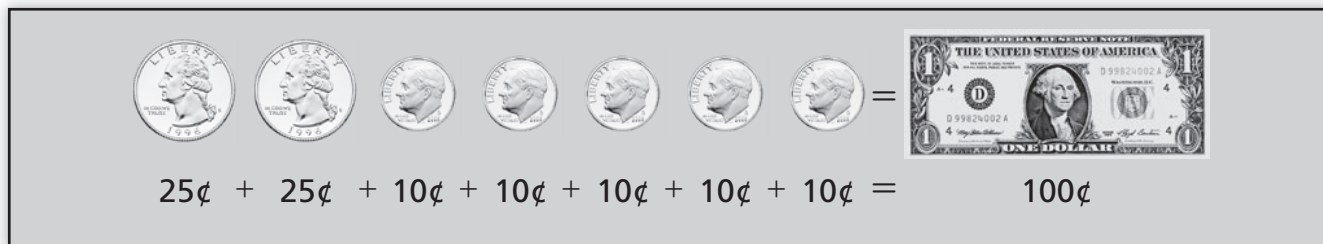


Unit 3 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.2, Numbers and Operations in Base Ten 2.NBT.4, 2.NBT.5, 2.NBT.6, Geometry 2.G.1, Measurement and Data 2.MD.1, 2.MD.2, 2.MD.3, 2.MD.4, 2.MD.9, and all Mathematical Practices.

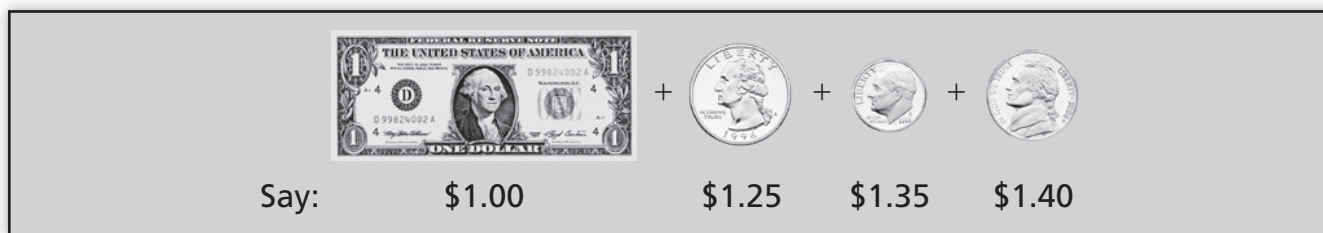


Dear Family:

In this unit, your child will find the value of various coin combinations. Children will also combine different coins to equal one dollar.



Then your child will count both dollars and coins.



You can help at home by providing opportunities for your child to practice counting money. Begin with amounts less than \$1.00.

Please call if you have any questions or concerns. Thank you for helping your child to learn mathematics.

Sincerely,
Your child's teacher

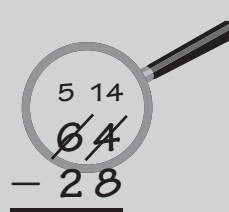
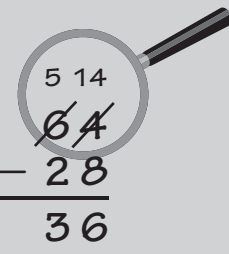


Unit 4 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.4, 2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.8, 2.NBT.9; Measurement and Data, 2.MD.8; and all Mathematical Practices.



Dear Family:

In this program, children learn these two methods for 2-digit subtraction. However, children may use any method that they understand, can explain, and can do fairly quickly.

Expanded Method	Ungroup First Method
<p>Step 1 “Expand” each number to show that it is made up of tens and ones.</p> $\begin{array}{r} 64 = 60 + 4 \\ - 28 = 20 + 8 \end{array}$ <p>Step 2 Check to see if there are enough ones to subtract from. If not, ungroup a ten into 10 ones and add it to the existing ones.</p> $\begin{array}{r} \\ 64 = \cancel{60} + \cancel{4} \\ - 28 = 20 + 8 \end{array}$ <p>Step 3 Subtract to find the answer. Children may subtract from left to right or from right to left.</p> $\begin{array}{r} \\ 64 = \cancel{60} + \cancel{4} \\ - 28 = 20 + 8 \\ \hline 30 + 6 = 36 \end{array}$	<p>Step 1 Check to see if there are enough ones to subtract from. If not, ungroup by opening up one of the 6 tens in 64 to be 10 ones. 4 ones plus these new 10 ones make 14 ones. We draw a magnifying glass around the top number to help children focus on the regrouping.</p>  $\begin{array}{r} \\ 64 = \cancel{60} + \cancel{4} \\ - 28 = 20 + 8 \end{array}$ <p>Step 2 Subtract to find the answer. Children may subtract from left to right or from right to left.</p>  $\begin{array}{r} \\ 64 = \cancel{60} + \cancel{4} \\ - 28 = 20 + 8 \\ \hline 36 \end{array}$

In explaining any method they use, children are expected to use “tens and ones” language. This shows that they understand they are subtracting 2 tens from 5 tens (not 2 from 5) and 8 ones from 14 ones.

Please call if you have any questions or comments.

Sincerely,
Your child’s teacher



Unit 4 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.4, 2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.8, 2.NBT.9; Measurement and Data, 2.MD.8; and all Mathematical Practices.



Dear Family:

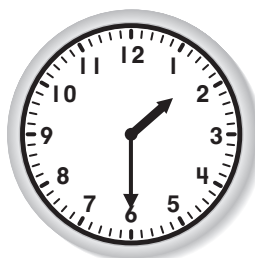
Your child is beginning a new unit on time.

You can help your child link the time concepts learned in school with the real world.

Together, look for clocks in your home. You might search for watches, alarm clocks, digital clocks, and clocks on appliances.

Talk about time throughout your family's day. For example, you can point to the clock during breakfast and say, "We usually eat breakfast at this time. It is 7:30 A.M."

In this unit, your child will learn to tell time to the hour, half hour, and five minutes. Your child will practice writing the time.



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

Sincerely,
Your child's teacher

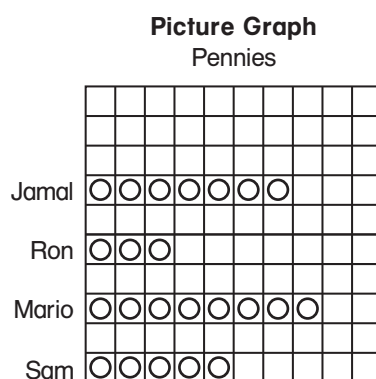
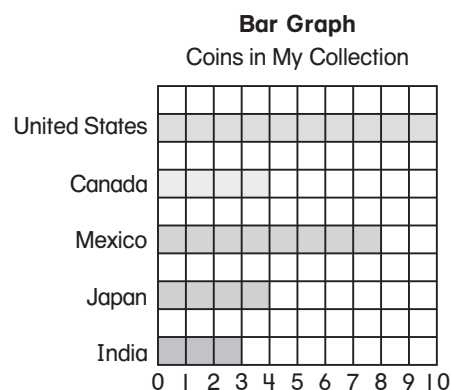


Unit 5 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.2, 2.NBT.5; Measurement and Data, 2.MD.7, 2.MD.10; Geometry, 2.G.3 and all Mathematical Practices.



Dear Family:

Your child is learning how to show information in various ways. In this unit, children will learn how to create and read picture graphs and bar graphs.



An important feature of *Math Expressions* is its emphasis on real world connections. Children will collect and represent data on graphs. They will also interpret the graph to answer questions about the data shown.

Children also explore the language of comparison by using such words as *same*, *more*, *less*, and *fewer*. The connection between pairs of terms is emphasized. For example: Carlos has 8 stickers. Maria has 3. Carlos has 5 *more* stickers than Maria. Maria has 5 *fewer* stickers than Carlos has.

Please call if you have any questions or concerns. Thank you for helping your child learn how to create, read, and interpret graphs.

Sincerely,
Your child's teacher



Unit 5 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 2.OA.1, 2.OA.2; Number and Operations in Base Ten, 2.NBT.2, 2.NBT.5; Measurement and Data, 2.MD.7, 2.MD.10; Geometry, 2.G.3 and all Mathematical Practices.

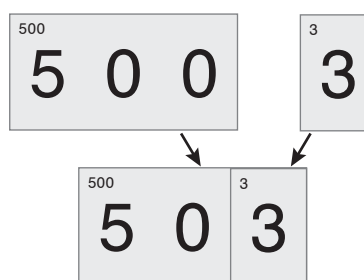


Dear Family:

In this unit, children will learn how to add 3-digit numbers that have totals up to 1,000.

Children begin the unit by learning to count to 1,000. They count by ones from a number, over the hundred, and into the next hundred. For example, 498, 499, 500, 501, 502, 503. You can help your child practice counting aloud to 1,000. Listen carefully as he or she crosses over the hundred.

Children will learn to write numbers to 1,000. Some children will write 5003 instead of 503 for five hundred three. Using Secret Code Cards will help children write the numbers correctly.



Help your child count small objects by making groups of 10 and then groups of 100. When the groups are made, help your child write the number of objects. This is a good way to help children recognize the difference between 5,003 and 503.

Please call if you have any questions or concerns. Thank you for helping your child learn about numbers to 1,000.

Sincerely,
Your child's teacher



Unit 6 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, Number and Operations in Base Ten 2.NBT.1, 2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.5, 2.NBT.7, 2.NBT.8, 2.NBT.9, Measurement and Data 2.MD.8, and all Mathematical Practices.



Dear Family:

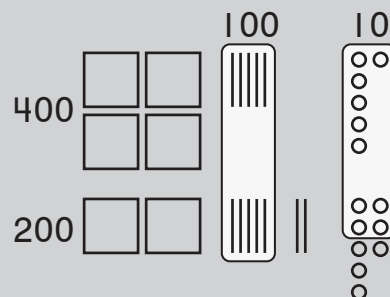
Your child is now learning how to add 3-digit numbers. The methods children use are similar to those used for adding 2-digit numbers.

New Groups Below

$$\begin{array}{r} \text{Step 1} \\ 456 \\ + 278 \\ \hline 4 \end{array}$$

$$\begin{array}{r} \text{Step 2} \\ 456 \\ + 278 \\ \hline 34 \end{array}$$

$$\begin{array}{r} \text{Step 3} \\ 456 \\ + 278 \\ \hline 734 \end{array}$$



Children put the new 1 hundred or 1 ten on the line instead of at the top of the column. Many children find this less confusing because:

- They can see the 14.
- It is easier to add the 1 after they add the 5 and the 7.

Show All Totals

$$\begin{array}{r} 456 \\ + 278 \\ \hline \text{hundreds} \rightarrow 600 \\ \text{tens} \rightarrow 120 \\ \text{ones} \rightarrow 14 \\ \hline 734 \end{array}$$

Children see the hundreds, tens, and ones they are adding. These also can be seen when they make a math drawing like the one above.

Children may use any method that they understand, can explain, and can do fairly quickly. They should use hundreds, tens, and ones language to explain. This shows that they understand that they are adding 4 hundreds and 2 hundreds and not 4 and 2.

Please call if you have questions or comments.

Sincerely,
Your child's teacher



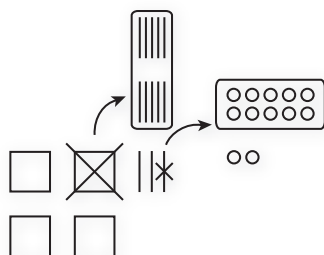
Unit 6 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, Number and Operations in Base Ten 2.NBT.1, 2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.5, 2.NBT.7, 2.NBT.8, 2.NBT.9, Measurement and Data 2.MD.8, and all Mathematical Practices.



Dear Family:

Your child is now learning how to subtract 3-digit numbers. The most important part is understanding and being able to explain a method. Children may use any method that they understand, can explain, and can perform fairly quickly.

Expanded Method		Ungroup First Method
<p style="text-align: center;">Step 1</p> $\begin{array}{r} 432 \\ - 273 \\ \hline \end{array}$ <p style="text-align: center;">Step 2</p> $\begin{array}{r} 120 \\ 300 \quad 20 \quad 12 \\ 432 = 400 + 30 + 2 = \cancel{400} + \cancel{30} + \cancel{2} \\ - 273 = 200 + 70 + 3 = \underline{200 + 70 + 3} \\ \hline \end{array}$ <p style="text-align: center;">Step 3 { $100 + 50 + 9 = 159$</p> <p>Step 1 "Expand" each number to show that it is made up of hundreds, tens, and ones.</p> <p>Step 2 Check to see if there are enough ones to subtract from. If not, ungroup a ten into 10 ones and add it to the existing ones. Check to see if there are enough tens to subtract from. If not, ungroup a hundred into 10 tens and add it to the existing tens. Children may also ungroup from the left.</p> <p>Step 3 Subtract to find the answer. Children may subtract from left to right or right to left.</p>	<p>Step 1 Check to see if there are enough ones and tens to subtract from. Ungroup where needed.</p> <p>Look inside 432. Ungroup 432 and rename it as 3 hundreds, 12 tens, and 12 ones.</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>Ungroup from the left:</p> </div> <div style="text-align: center;"> <p>Ungroup from the right:</p> </div> </div> <p>Step 2 Subtract to find the answer. Children may subtract from the left or from the right.</p> <div style="text-align: center; margin-top: 20px;"> </div>	



In explaining any method they use, children are expected to use "hundreds, tens, and ones" language and drawings to show that they understand place value.

Please call if you have questions or comments.

Sincerely,
Your child's teacher

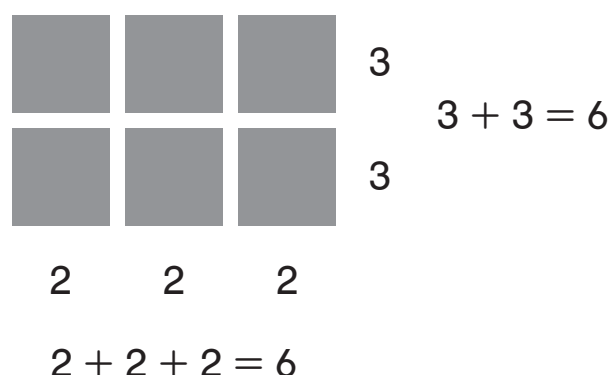


Unit 6 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, Number and Operations in Base Ten 2.NBT.1, 2.NBT.1a, 2.NBT.1b, 2.NBT.2, 2.NBT.3, 2.NBT.4, 2.NBT.7, 2.NBT.8, 2.NBT.9, Measurement and Data 2.MD.8, and all Mathematical Practices.



Dear Family:

In this unit, your child will learn about rectangular arrays and how to use addition to count the number of objects in an array. The array below has 2 rows and 3 columns. It can be described as 2 rows with 3 tiles in each row or 3 columns with 2 tiles in each column.



You can help your child by working with him or her to practice using the words *array*, *rows*, and *columns*. For example, ask your child to use pennies or other small objects to make an array that has 4 rows with 5 objects in each row. Ask your child to write the addition equations that show the total number of objects in the array. ($5 + 5 + 5 + 5 = 20$ and $4 + 4 + 4 + 4 + 4 = 20$)

Your child will also be learning about equal parts of circles and rectangles: 2 *halves*, 3 *thirds*, and 4 *fourths*. You can practice using this vocabulary at home. For example, "I am cutting this pizza into 4 fourths."

Please call if you have any questions or concerns.

Sincerely,
Your child's teacher



Unit 7 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 2.OA.1, 2.OA.3, 2.OA.4, Geometry 2.G.1, 2.G.2, 2.G.3, Measurement and Data 2.MD.5, 2.MD.6, and all Mathematical Practices.