Dear Family:

Your child is learning math in an innovative program that interweaves abstract mathematical concepts with the everyday experiences of children. This helps children to understand math better.

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

- working with objects and making drawings of math situations;
- working with other children and sharing problem solving strategies with them;
- 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—you, an older brother or sister (or other family member), a neighbor, or a friend. Make a specific time for homework and provide your child with a quiet place to work (for example, no TV). 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.

Thank you. You are vital to your child's learning.

Sincerely,
Your child's teacher

COMMON CORE

Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.3, 1.OA.5, 1.OA.6, 1.OA.8 and all Mathematical Practices.

Please fill out the following information and return this form to the teacher.

My child _____ will have _____
(child's name) (Homework Helper's name)

as his or her Homework Helper. This person is my

child's _____.
(relationship to child)

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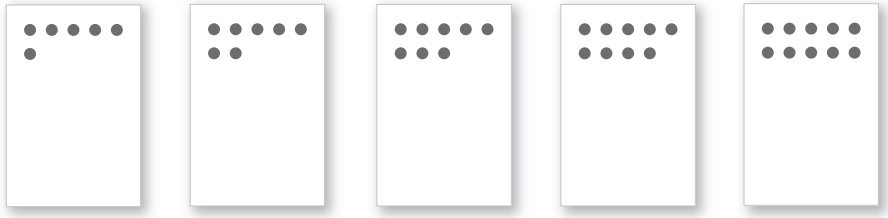
Family Letter

Dear Family:

Your child is learning to see numbers as a group of 5 and extra ones. Making mental pictures by grouping units in this way will later help your child add and subtract quickly. Children benefit greatly from learning to "see" numbers without counting every unit.

Children start exploring these 5-groups by looking at dots arranged in a row of 5 plus some extra ones. Below are samples that show the numbers from 6 through 10.



5 + 1 5 + 2 5 + 3 5 + 4 5 + 5

The teacher gives the children a number and asks them to say it as a 5 plus extra ones. Children say the numbers in order at first. Later they can "see" the quantities even when the numbers are shown randomly.

Teacher: What is 6?

Class: 5 + 1

Teacher: What is 7?

Class: 5 + 2

On some homework pages, you will find instructions that ask children to "see the 5." Your child is being encouraged to make a mental picture of a number that contains a 5-group. Later, the children will be asked to see groups of 10 by combining two 5-groups. This will help them learn place value.

It takes repeated exposure to such groups for children to see the numbers quickly. Many of the visual aids in your child's classroom include 5-groups. Children tend to absorb these visual patterns without realizing it.

If you have any questions or problems, please contact me.

Sincerely,
Your child's teacher

COMMON CORE

Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.3, 1.OA.5, 1.OA.6, 1.OA.8 and all Mathematical Practices.

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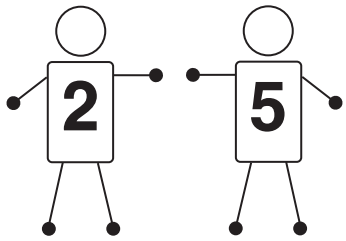
Family Letter

Dear Family:

Your child is learning to find the smaller numbers that are "hiding" inside a larger number. He or she will be participating in activities that will help him or her master addition, subtraction, and equation building.

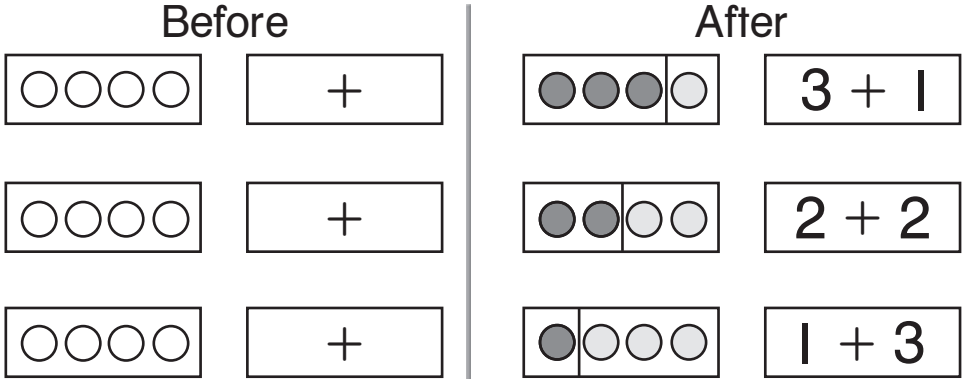
To make the concepts clear, this program uses some special vocabulary and materials that we would like to share. Below are two important terms that your child is learning:

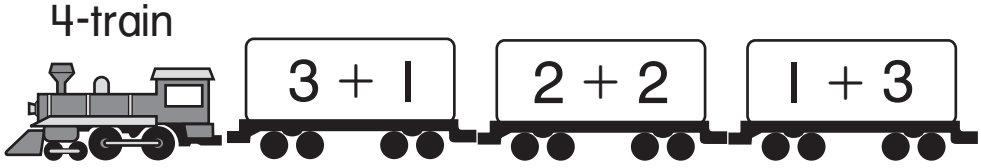
- **Partners:** Partners are two numbers that can be put together to make a larger number. For example, 2 and 5 are partners that go together to make the number 7.
- **Break Apart:** Children can "break apart" a larger number to form two smaller numbers. Your child is using objects and drawings to explore ways of "breaking apart" numbers of ten or less.



Partners of 7

Children can discover the break-aparts of a number with circle drawings. They first draw the "Break-Apart Stick" and then color the circles to show the different partners, as shown below. Sometimes they also write the partners on a special partner train, which is also shown below.





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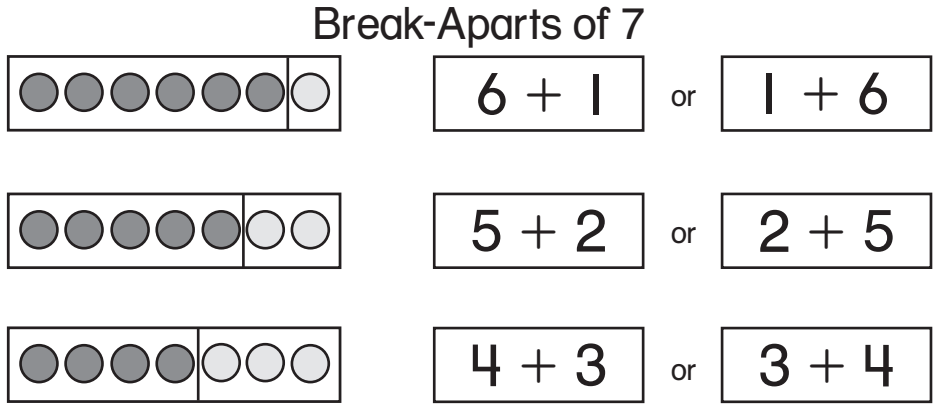
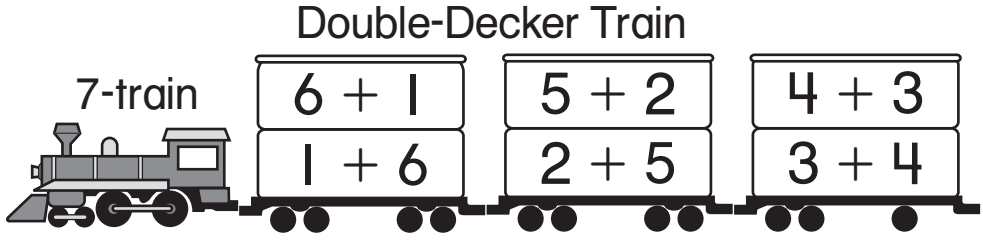
Later, children will discover that partners can change places without changing the total. This concept is called "switch the partners." Once children understand switching partners, they can find the break-aparts of a number more quickly. They simply switch each pair of partners as they discover them.

Shown below are the break-aparts and switched partners of the number 7. Sometimes children also write this information on a double-decker train.





You will see the circle drawings and the partner trains on your child's math homework. Be ready to offer help if it is needed. Children are doing these activities in class, but they may still need help at home.

If you have any questions or problems, please talk to me.

Sincerely,
Your child's teacher

COMMON CORE

Unit 1 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.3, 1.OA.5, 1.OA.6, 1.OA.8 and all Mathematical Practices.

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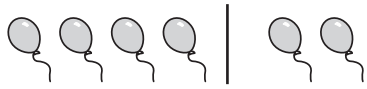
Family Letter

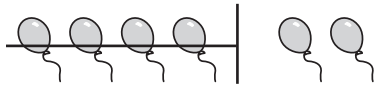
Dear Family:

Your child has started a new unit on addition, subtraction, and equations. These concepts are introduced with stories that capture children's interest and help them to see adding and subtracting as real-life processes.

At the beginning of the unit, children show a story problem by drawing a picture of the objects. If they are adding 4 balloons and 2 balloons, for example, their pictures might look like the top one shown here. If they are subtracting, their pictures might look like the bottom one.

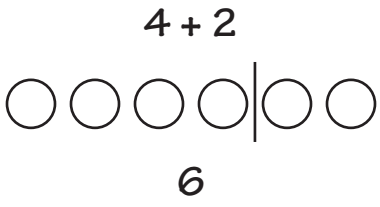


Addition

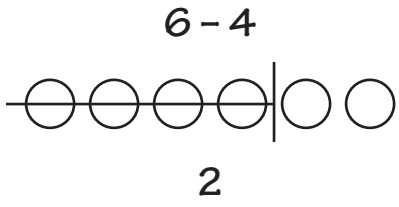


Subtraction

In a short time, children will show objects quickly with circles rather than pictures. This is a major conceptual advance because it requires the use of symbols. Children are asked to show the partners ($4 + 2$) as well as give the total (6). From here, children are just a small step away from writing standard equations, such as $4 + 2 = 6$ and $6 - 4 = 2$.



Addition Problem



Subtraction Problem

To keep them focused on the actual problem, children are often asked to give a "complete answer" in class. This means that they should name the objects as well as give the number. Right now, complete answers are not required for homework. Even so, it would be helpful for you to ask your child to say the complete answer when working with you at home. Example: "You said the answer is 6. Is it 6 dinosaurs? No? Then 6 what? . . . Oh! 6 balloons!"

Sincerely,
Your child's teacher

COMMON CORE

Unit 2 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, OA.1, OA.3, OA.5, OA.6, OA.7, OA.8 and all Mathematical Practices.

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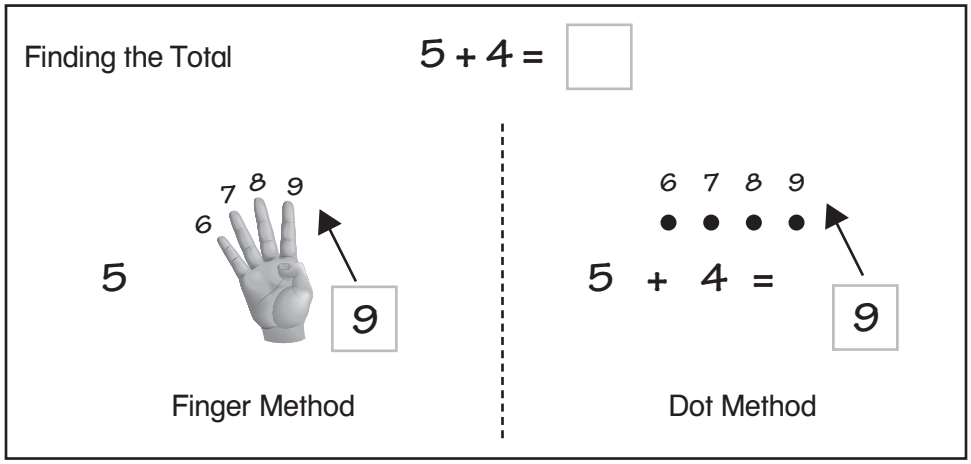
Family Letter

Dear Family:

Earlier in the unit, your child solved addition problems by making math drawings and counting every object. This is called *counting all*. Now your child is learning a faster strategy that allows them to work directly with numbers. The method they are learning is called *counting on*. It is explained below.

In an addition problem such as 5 + 4, children say (or "think") the first number as if they had already counted it. Then they count on from there. The last number they say is the total. Children can keep track by raising a finger or making a dot for each number as they count on. The diagram below shows both the finger method and the dot method.



Counting on requires repeated practice. This is provided in class activities and homework assignments. Right now, your child is learning how to find unknown totals. In the next unit, he or she will learn to use the Counting On strategy to subtract.

Counting on is a temporary method to help children build fluency with addition and subtraction within 10. The goal by the end of the grade is for children to automatically know the answer when the total is 10 or less.

Sincerely,
Your child's teacher

COMMON CORE

Unit 2 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, OA.1, OA.3, OA.5, OA.6, OA.7, OA.8 and all Mathematical Practices.

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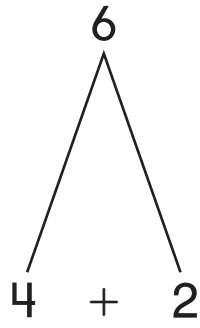
Family Letter

Dear Family:

Your child has started a new unit on story problems. Because most children this age are learning to read, your child may need help reading the story problems. Offer help when it is needed, but do not give the answer.

To solve story problems, children first need to know which number is unknown. Is it the total or one of the parts? This program helps children focus on this important issue by using "Math Mountains." In a Math Mountain, the total sits at the top and the parts (or partners) sit at the bottom of the mountain. Children can quickly see the relationship between the partners and the total when they look at the mountain.

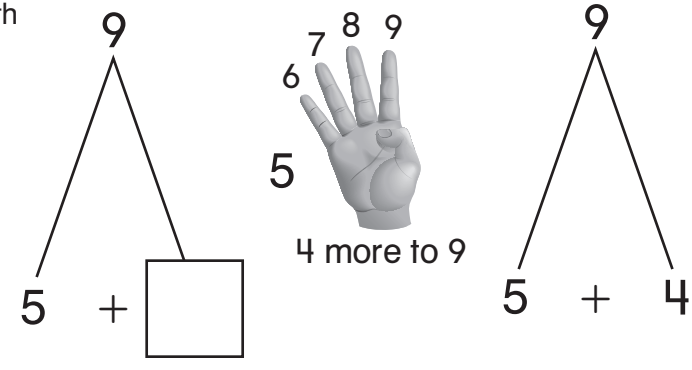


Math Mountain

Math Mountains are especially helpful in showing children how to find an unknown partner, as in the following problem: *I see 9 horses. 5 are black, and the others are white. How many horses are white?*

Children can find the answer by drawing the mountain to see which number is unknown. Then they count on from the partner they know to the total. In this way, they can find the partner they don't know.

Math Mountain with Unknown Partner



If you have any questions, please contact me.

Sincerely,
Your child's teacher

COMMON CORE

This unit includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking, 1.OA.1, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.8 and all Mathematical Practices.

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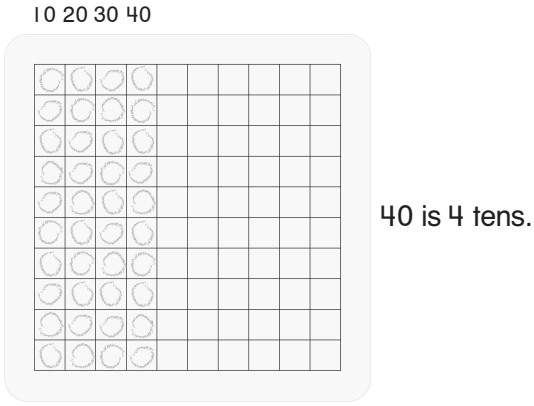
Family Letter

Dear Family:

Your child is learning about place value and numbers to 100. In this program, children begin by counting tens: 10, 20, 30, 40, and so on. They use a 10 × 10 Grid to help them "see" the relationship between the tens digit in a decade number and the number of tens it has.



Soon, children will link 2-digit numbers to tens and extra ones. They will learn that a 2-digit number, such as 46, is made up of tens and ones, such as 40 and 6. Next, children will use what they know about adding 1-digit numbers to add 2-digit numbers.

$3 + 4 = 7$, so $30 + 40 = 70$.

Finally, they will learn to regroup and count on to find a total. For example:

$19 + 5 =$ 24

Right now, your child may enjoy counting by tens for you. He or she may also enjoy using household items to make groups of ten and extra ones, and then telling you the total number.

Sincerely,
Your child's teacher

COMMON CORE

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

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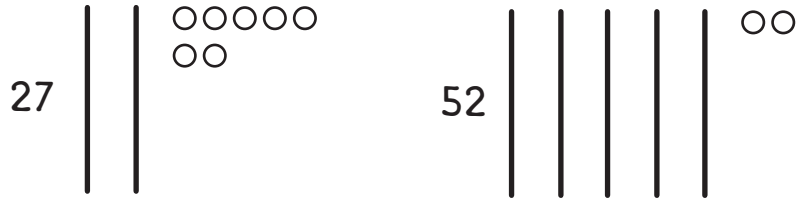
Family Letter

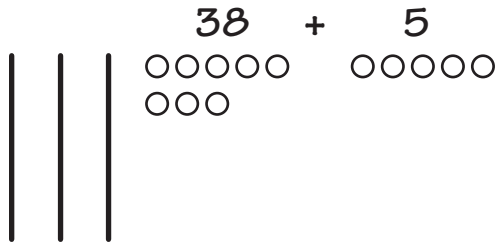
Dear Family:

To help children "see" the tens and ones in 2-digit numbers, the *Math Expressions* program uses special drawings of 10-sticks to show tens, and circles to show ones. These images help children learn place value. Below are the numbers 27 and 52 shown with 10-sticks and circles:

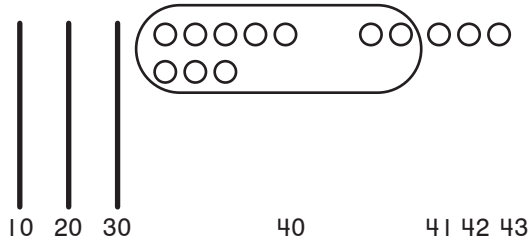


10-sticks and circles will also be used later to help children solve addition problems that require regrouping (sometimes called "carrying"). When there are enough circles to make a new ten, they are circled and then added like a 10-stick. The problem below shows 38 + 5:

Step 1: Show the two numbers with 10-sticks and circles.



Step 2: Group the ones to make a new ten. Count by tens and ones.



Right now, your child is just beginning to show teen numbers with 10-sticks and circles. Soon your child will be able to draw 10-sticks and circles for any 2-digit number.

Sincerely,
Your child's teacher

COMMON CORE

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

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Family Letter

Dear Family:

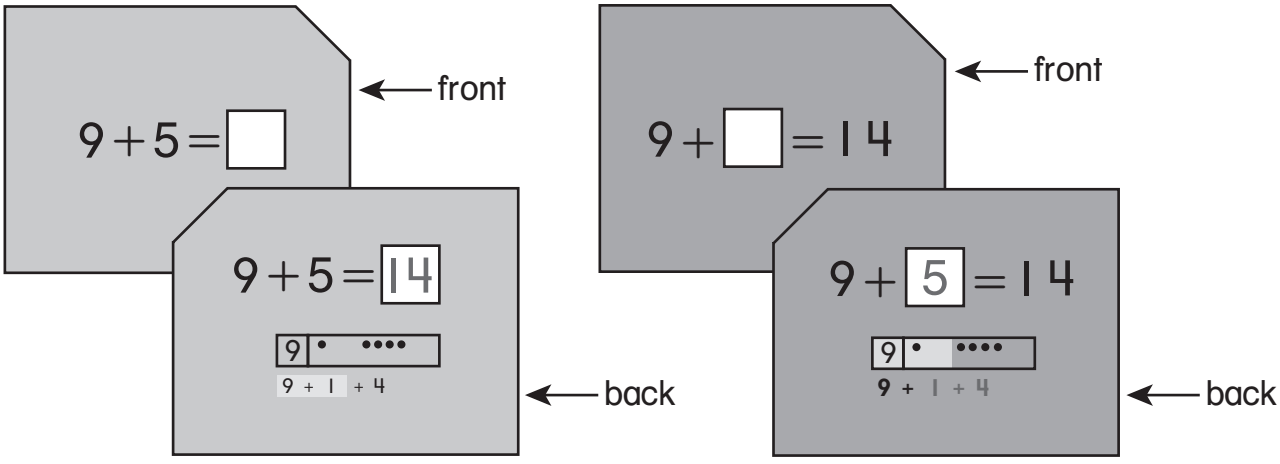
In the previous unit, your child learned the Make a Ten strategy to find teen totals. Now, your child builds on previous knowledge to use make a ten to find an unknown partner. The Make a Ten strategy is explained below.

In a teen addition problem such as 9 + 5, children break apart the lesser number to make a ten with the greater number. Because 9 + 1 = 10, they break apart 5 into 1 + 4. Then they add the extra 4 onto 10 to find the total. A similar method is used to find unknown partners with teen totals. Children look for ways to make a ten because it is easier to add onto 10.

In the *Math Expressions* program, Make-a-Ten Cards help children use this method. Each card has a problem on the front. The back shows the answer and illustrates the Make a Ten strategy using pictures of dots. Below the pictures are corresponding numbers to help children understand how to make a ten. Practice the method with your child. As you continue to practice the Make a Ten strategy with your child, your child will become more adept at using mental math.

If you have any question about the Make a Ten strategy, please contact me.

Sincerely,
Your child's teacher



Make-a-Ten Cards

COMMON CORE

Unit 5 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.8; Number and Operations in Base Ten, 1.NBT.1, 1.NBT.2, 1.NBT.2c, 1.NBT.4, 1.NBT.5, 1.NBT.6 and all Mathematical Practices.

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Dear Family:

The next several lessons of this unit build upon what the class learned previously about tens and ones. The Hundred Grid is a tool that allows children to see 10-based patterns in sequence. Seeing numbers in the ordered rows and columns of the Hundred Grid helps children better understand number relationships as they:

- continue to practice with 10-groups, adding tens to any 2-digit number, with totals to 100;
- explore 2-digit subtraction, subtracting tens from decade numbers;
- connect what they know about 10-partners to now find 100-partners.

1	11	21	31	41	51	61	71	81	91
2	12	22	32	42	52	62	72	82	92
3	13	23	33	43	53	63	73	83	93
4	14	24	34	44	54	64	74	84	94
5	15	25	35	45	55	65	75	85	95
6	16	26	36	46	56	66	76	86	96
7	17	27	37	47	57	67	77	87	97
8	18	28	38	48	58	68	78	88	98
9	19	29	39	49	59	69	79	89	99
10	20	30	40	50	60	70	80	90	100

3 ○○○

13 | ○○○

23 || ○○○

33 ||| ○○○

43 |||| ○○○

53 ||||| ○○○

63 ||||| | ○○○

73 ||||| || ○○○

83 ||||| ||| ○○○

93 ||||| |||| ○○○

If you have any questions or problems, please contact me.

Sincerely,
Your child's teacher

COMMON CORE

Unit 5 includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.8; Number and Operations in Base Ten, 1.NBT.1, 1.NBT.2, 1.NBT.2c, 1.NBT.4, 1.NBT.5, 1.NBT.6 and all Mathematical Practices.

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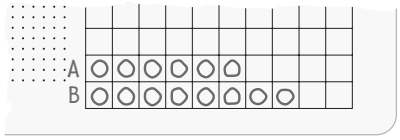
Family Letter

Dear Family:

Children begin this unit by learning to organize, represent, and interpret data with two and three categories.

In the example below, children sort apples and bananas and represent the data using circles. They ask and answer questions about the data and learn to express comparative statements completely.

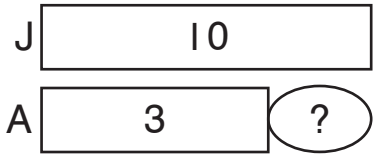


There are 2 more bananas than apples.

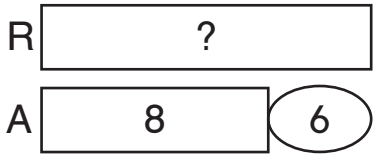
There are 2 fewer apples than bananas.

Later in the unit, children solve *Compare* story problems using comparison bars. Two examples are given below.

Jeremy has 10 crayons.
Amanda has 3 crayons.
How many more crayons does Jeremy have than Amanda?



Abby has 8 erasers.
Ramon has 6 more erasers than Abby has. How many erasers does Ramon have?



While working on homework, ask your child to explain to you how to use comparison bars to solve these types of story problems.

If you have any questions, please do not hesitate to contact me.

Sincerely,
Your child's teacher

COMMON CORE

This unit includes the Common Core Standards for Mathematical Content for Operations and Algebraic Thinking 1.OA.1, 1.OA.2; Measurement and Data 1.MD.4 and all Mathematical Practices.

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Family Letter

Dear Family:

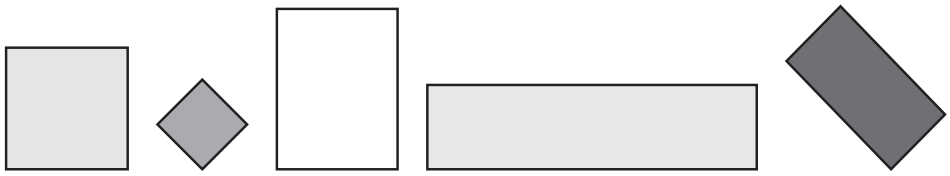
Your child has begun a unit that focuses on measurement and geometry. Children will begin the unit by learning to tell and write time in hours and half-hours on an analog and digital clock.

2:00

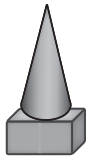
hour : minute

Later in the unit, children will work with both 2-dimensional and 3-dimensional shapes.

They will learn to distinguish between defining and non-defining attributes of shapes. For example, rectangles have four sides and four square corners. A square is a special kind of rectangle with all sides the same length. The shapes below are different sizes, colors, and orientations, but they are all rectangles.

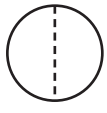


Later in the unit, children will compose shapes to create new shapes.

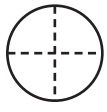


A cone and a rectangular prism were used to make this new shape.

Children will also learn to partition circles and rectangles into two and four equal shares. They describe the shares using the words *halves*, *fourths*, and *quarters*.



This circle is partitioned into halves.



This circle is partitioned into fourths or quarters.

Children generalize that partitioning a shape into more equal shares creates smaller shares: one fourth of the circle above is smaller than one half of the circle.

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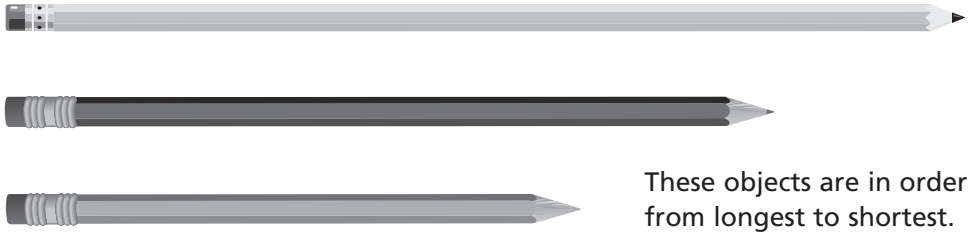
Family Letter

Another concept in this unit is length measurement. Children order three objects by length.



These objects are in order from longest to shortest.

They also use same-size length units such as paper clips to measure the length of an object.

This ribbon is 4 paper clips long.

You can help your child practice these new skills at home. If you have any questions, please contact me.

Sincerely,
Your child's teacher

COMMON CORE

This unit includes the Common Core Standards for Mathematical Content for Measurement and Data 1.MD.1, 1.MD.2, 1.MD.3; Geometry 1.G.1, 1.G.2, 1.G.3 and all Mathematical Practices.

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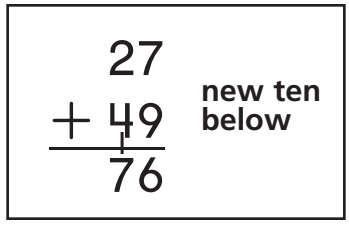
Family Letter

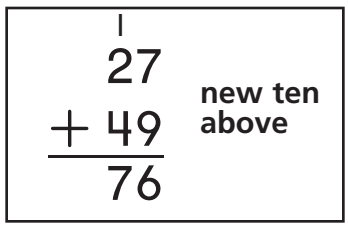
Dear Family:

Your child will be using special drawings of 10-sticks and circles to add greater numbers. The sticks show the number of tens, and the circles show the number of ones. When a new group of ten is made, a ring is drawn around it.

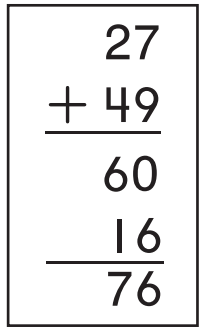
There are several ways for children to show the new group of ten when they add 2-digit numbers.

- Children can do the addition with a single total. The 1 for the new ten can be written either below the tens column or above it. Writing it below makes addition easier because the 1 new ten is added after children have added the two numbers that are already there. Also, children can see the 16 they made from 7 and 9 because the 1 and 6 are closer together than they were when the new ten was written above.

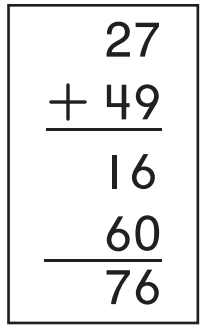




- Children can make separate totals for tens and ones. Many first-graders prefer to work from left to right because that is how they read. They add the tens (20 + 40 = 60) and then the ones (7 + 9 = 16). The last step is to add the two totals together (60 + 16 = 76).



left to right



right to left

You may notice your child using one of these methods as he or she completes homework.

Sincerely,
Your child's teacher

COMMON CORE

Unit 8 includes the Common Core Standards for Mathematical Content for Number and Operations in Base Ten 1.NBT.4 and all Mathematical Practices.

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