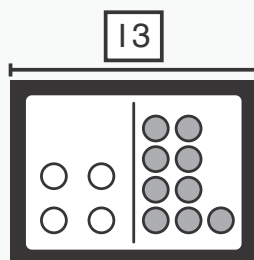


Name _____

Fluently Add and Subtract Within 20

Dear Family,

Your child is learning about addition and subtraction within 20. In this topic, he or she will learn several strategies for finding sums and differences. Some of the strategies include counting on, counting back, making ten, using doubles and near doubles, and using the relationship between addition and subtraction. The model below can be used to represent related addition and subtraction equations. It shows addition when both parts (counters) are given and the total is unknown. It shows subtraction when the total and one of the parts are given and the other part is unknown.



This bar diagram shows these equations:

$$4 + 9 = 13$$

$$13 - 9 = 4$$

$$9 + 4 = 13$$

$$13 - 4 = 9$$

Writing Addition and Subtraction Equations

Materials 15 small objects, paper, pencil

Separate 12 objects, such as paper clips or buttons, into two groups. Have your child write two addition equations and two subtraction equations to model the objects. Then allow your child to separate the objects into two different groups. Write two addition equations and two subtraction equations to model the objects. Have your child help you decide if they are correct. Repeat the activity with 6 and 9 objects.

Observe Your Child

After you and your child decide if the equations are correct, ask him or her to explain how the objects represent the numbers in the equations.

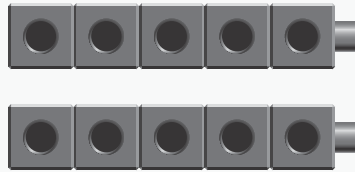
Work with Equal Groups

Dear Family,

Your child is learning about equal groups of numbers and how to use arrays to find sums. In this topic, your child will also identify even and odd numbers, and show whether or not they can be divided into two equal parts. Below are numbers that can and cannot be shown as two equal parts.

Identifying Even and Odd Numbers

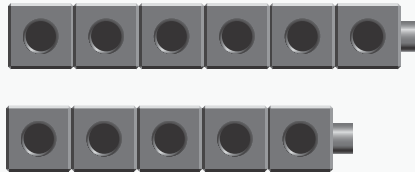
An even number can be shown as two equal parts using cubes.



10 is even.

$$5 + 5 = 10$$

An odd number cannot be shown as two equal parts using cubes.



11 is odd.

$$6 + 5 = 11$$

Writing Equations for Even and Odd Numbers

Materials 20 pennies or buttons

Explain to your child that an array is a group of objects set in equal rows and columns. Write a number between 2 and 20 on a piece of paper. Give your child the same number of buttons. Have your child try to divide the buttons into two equal rows. If he or she can do this, the number is even. Ask your child if any buttons are left over. If so, the number is odd.

Practice writing an addition equation for each number. For example, the equation for the number 14 is $7 + 7 = 14$. For 13, the equation is $7 + 6 = 13$.

Observe Your Child

Transition from using small objects to drawing pictures. For each number you write, have your child try to draw a picture of equal parts in two rows. A tool such as grid paper can be used to help your child with his or her drawings.

Add Within 100 Using Strategies

Dear Family,

Your child is learning to add within 100 using various strategies. In this topic, he or she will learn to add two-digit numbers using place-value strategies on a hundred chart. Start at a number on the chart. As you move down from the number, the number increases by 10 for each square. As you move to the right from the number, the number increases by 1 for each square.

Adding Two-Digit Numbers on a Hundred Chart

Find $42 + 17$.

1. Start at 42.
2. Move down 1 row to add the tens in 17.
3. Move 7 squares to the right to add the ones in 17.
4. You stop at 59.

So, $42 + 17 = 59$.

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

Finding Sums on a Hundred Chart

Materials Hundred Chart from above, 10 index cards, pencil

Write a two-digit number that is less than 50 on each of the index cards. Have your child select two cards at random. Then have your child demonstrate how to find the sum of the numbers using the hundred chart. Repeat by selecting new cards.

Observe Your Child

Have him or her explain to a family member how to add two-digit numbers using a hundred chart. As an alternative, have your child create a how-to video. Encourage your child to use math terms such as *add*, *sum*, *equals*, *row*, *column*, and *hundred chart* in his or her explanation.

Fluently Add Within 100

Dear Family,

Your child is learning to fluently add within 100 using strategies based on place value, properties of operations, and the relationship between addition and subtraction. In this topic, he or she will learn to add using various strategies such as partial sums and regrouping. The model below shows the use of the partial sums strategy to find $23 + 48$.

Understanding Partial Sums

Find $23 + 48$. Draw place-value blocks and use partial sums.



Step 1: Add the tens.

Step 2: Add the ones.

Step 3: Add the partial sums:

$$60 + 11 = 71.$$

$$\text{So, } 23 + 48 = 71.$$

	Tens	Ones
	2	3
+	4	8
$20 + 40 =$	6	0
$3 + 8 =$	1	1
Sum =	7	1

Adding Using Partial Sums

Materials 10 index cards, pencil, paper

Write a different 2-digit number, from 0–50, on each of the index cards. Have your child select two cards at random. Have him or her write an addition problem with the numbers from the index cards. Have your child solve the problem using the partial sums strategy. Repeat the activity with two new chosen numbers.

Observe Your Child

Discuss the use of equivalent representations of numbers. Ask him or her why $23 + 48$ can be written as $20 + 40 + 3 + 8$.

Name _____

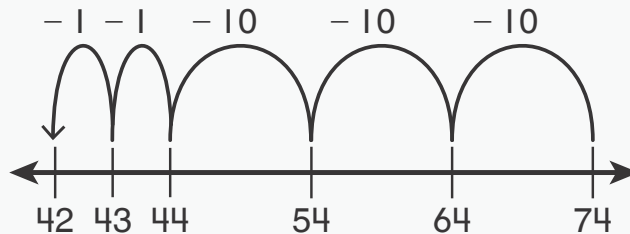
Subtract Within 100 Using Strategies

Dear Family,

Your child is learning to subtract within 100 using various strategies. These include breaking apart numbers, using compensation, using a hundred chart, and using an open number line. In this topic, your child will also analyze information to model and solve one- and two-step word problems.

This picture shows how to find $74 - 32$ using an open number line.

32 is 3 tens and 2 ones.
So, count back 3 tens from 74.
Then count back 2 ones.
You land on 42.
So, $74 - 32 = 42$.



Subtracting on an Open Number Line

Materials Paper and pencil

Have your child find $80 - 30$ using an open number line. Explain that only numbers that are needed to solve the problem will be written on the line. Have your child draw the line. Then have him or her place 80 at the far right side of the line and count back 3 tens until landing on 50. Repeat the activity by counting back 1 ten and 3 ones to find $45 - 13$.

Observe Your Child

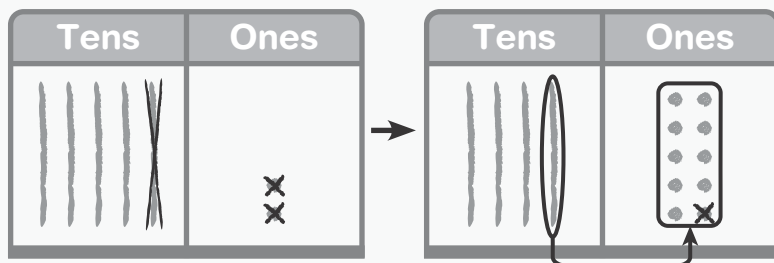
Have your child explain the steps he or she used to find $80 - 30$ on an open number line. Make sure his or her explanation includes how to use number labels, tick marks, and jumps properly. Stress how discussing the steps will help ensure the precision of his or her work.

Fluently Subtract Within 100

Dear Family,

Your child is learning how to subtract 2-digit numbers. In this topic, he or she will learn important subtraction skills, such as regrouping and using or drawing place-value blocks to subtract. He or she also will learn how to break apart numbers to subtract and solve problems that require two steps to find the solution. Below is an example of subtraction with regrouping using drawings of place-value blocks:

Find $52 - 13$.



So, $52 - 13 = 39$.

Practicing Regrouping 1 Ten as 10 Ones

Materials Checkers or game pieces in two colors

Let one color equal tens and the other color equal ones. Model a number, such as 33, with 3 tens pieces and 3 ones pieces. Then ask your child to replace one of the tens with ones to show 2 tens pieces and 13 ones pieces.

Observe Your Child

Have your child draw place-value blocks to model $33 - 15 = 18$. If needed, assist your child in showing the regrouping of 1 ten as 10 ones in his or her drawing.

Name _____

More Solving Problems Involving Addition and Subtraction

Dear Family,

Your child is continuing to practice solving addition and subtraction word problems with a symbol for the unknown number in all positions. In this topic, your child will learn and practice how to use models, drawings, and equations to solve one- and two-step word problems.

Solving Two-Step Word Problems

On Friday, Michelle found 16 shells at the beach.

On Saturday, she found 9 more shells.

Michelle uses 7 of the shells to decorate a picture frame.

How many shells does she have left?

Step 1 Add to find out how many shells she found in all. $16 + 9 = 25$

Step 2 Subtract to find how many shells are left. $25 - 7 = 18$

Michelle has 18 shells left.

Practice Solving Two-Step Word Problems

Materials Paper, pencil, 30 small objects

Write a two-step problem like the one above. Have your child use the small objects to model each step of the problem. Then have him or her write equations to represent and solve the steps. Present another two-step word problem with steps that involve different operations than the first problem.

Observe Your Child

After solving a two-step word problem, have your child explain his or her reasoning for writing the equation needed for each step.

Name _____

Work with Time and Money

Dear Family,

In this topic, your child is learning to write and tell time to the nearest 5 minutes using a.m. and p.m. He or she is also identifying the value of coins and bills and finding the total value of a collection of coins or bills. Here is an example of one of these skills:

Counting Coin Collections

Start with the coin of greatest value and count on to the coin of least value.



25¢, 35¢, 45¢, 50¢

This coin collection has a total value of 50¢.

Practicing Counting Coins

Materials Collection of 10 different coins

Ask your child to show a certain amount of money using a certain number of coins. For example, say: *Show 27¢ using 3 coins.* Your child should show 1 quarter and 2 pennies. Repeat with other money amounts and coin combinations.

Observe Your Child

Have your child explain what the times 5:30, 8:30, and 10:30 have in common. He or she should notice that the number of minutes after the hour are the same. Your child will use repeated reasoning when telling and writing times on an analog or a digital clock face.

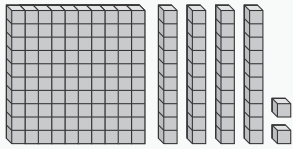
Name _____

Numbers to 1,000

Dear Family,

In this topic, your child is learning to read and write numbers to 1,000. Your child will use place value, or the value of each digit in a number, to identify and record 3-digit numbers in expanded, standard, and word form. Your child will also learn how to skip count by 5s, 10s, and 100s on a number line, and compare numbers using place value and a number line. He or she will also be using mathematical reasoning involving place value to solve problems. Below is an example of writing a number in different ways:

Expanded, Standard, and Word Forms



Expanded form : $100 + 40 + 2$

Standard form : 142

Word form : One hundred forty-two

Expanded, Standard, and Word Forms of Numbers

Materials Newspapers or magazines, scissors, glue, paper, pencil

Have your child cut out 4 three-digit headline-sized numbers from magazines or newspapers. Have your child glue each number to the top of a half sheet of paper. Then ask him or her to write each number in expanded form and word form. Have your child read each number to you using the different forms.

Observe Your Child

On the left side of a piece of paper, write four numbers from 0 to 1,000 in word form. On the right side of the paper, write the same four numbers in standard form, but in a different order. Ask your child to match the forms of the numbers and explain why each answer makes sense. If your child is having difficulty, encourage him or her to persevere.

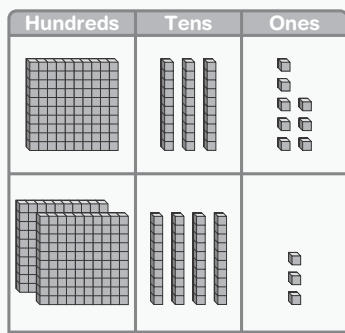
Name _____

Add Within 1,000 Using Models and Strategies

Dear Family,

Your child is learning about models and strategies to add numbers within 1,000. He or she will model addition with place-value blocks and represent addition on an open number line. Your child will also learn how to model addition problems with drawings of blocks and use the partial sums strategy to add. One way to add using partial sums is to first add the hundreds, then add the tens, and then add the ones. Then add the three partial sums.

$138 + 243$ is modeled using place-value blocks below. The problem can be solved using partial sums as shown.



	Hundreds	Tens	Ones
	1	3	8
+	2	4	3
Hundreds:	3	0	0
Tens:		7	0
Ones:		1	1
Sum =	3	8	1

Adding with Partial Sums

Materials 6 index cards, paper, pencil

Write a three-digit number that is less than 500 on each of the index cards. Place the cards facedown and have your child choose two cards. Ask your child to add the numbers on the cards using the partial sums strategy. Repeat by choosing a new pair of numbers to add.

Observe Your Child

Ask your child to model the numbers in the activity above with drawings of place-value blocks. This will demonstrate his or her ability to reason quantitatively. Then have your child add using partial sums and illustrate each step of the process by combining and, if needed, regrouping the appropriate blocks.

Subtract Within 1,000 Using Models and Strategies

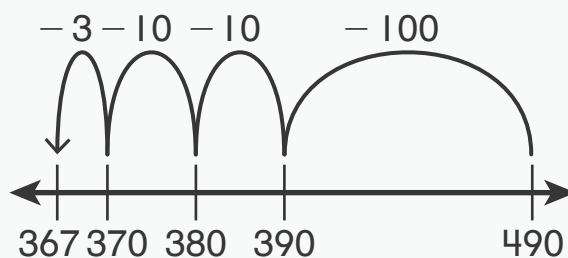
Dear Family,

In this topic, your child is learning about strategies to subtract numbers within 1,000. These strategies include counting back and adding up on an open number line, and subtracting mentally. Your child will explain why a particular subtraction strategy works. He or she will also learn to model three-digit subtraction using tools.

Counting Back to Subtract on an Open Number Line

Find $490 - 123$.

Count back 1 hundred, 2 tens, and 3 ones on an open number line.



So, $490 - 123 = 367$.

Subtracting Three-Digit Numbers

Materials Number cube, paper, pencil

Have your child toss a number cube to generate 2 three-digit numbers. Ask him or her to show you how to use an open number line to subtract the lesser number from the greater number.

Observe Your Child

Ask your child to subtract using different ways on an open number line. Your child might find $490 - 123$ by counting back with jumps of 100, 10, 10, 1, 1, and 1 or with larger jumps of 100, 20, and 3.

Measuring Length

Dear Family,

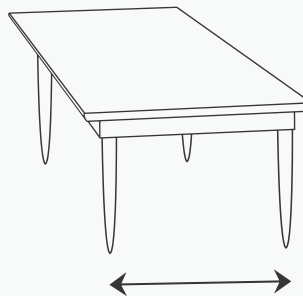
Your child is learning different ways to measure length. This topic focuses on estimating and measuring the length of objects to the nearest inch, foot, and yard, as well as to the nearest centimeter and meter. Examples of measuring objects using metric units are below.

Centimeters and Meters

You can use centimeters and meters to measure the lengths of different objects.



The bean is about 1 centimeter long.



The table is about 1 meter wide.

Inches, Feet, and Yards

Materials Ruler or measuring tape, 3 objects that are about 1 inch, 1 foot, and 1 yard in length. (Items could be a paper clip, a book, and a baseball bat.)

Have your child measure the length of each object. Then ask your child to find 3 different objects that are about 1 inch, 1 foot, and 1 yard in length.

Observe Your Child

Ask your child to explain how to measure an object to the nearest inch. Discuss with your child how to measure precisely. Encourage him or her to describe the process clearly and completely.

Name _____

Shapes and Their Attributes

Dear Family,

Your child is learning to identify and draw two-dimensional shapes and three-dimensional cubes. He or she will use vocabulary associated with these shapes. Your child will also partition a rectangle into rows and columns of equal-sized squares and count to find the total number of squares, as shown below. This is an important foundation skill and used when finding the area of rectangles.

You can count and add the number of squares that cover this rectangle in different ways.

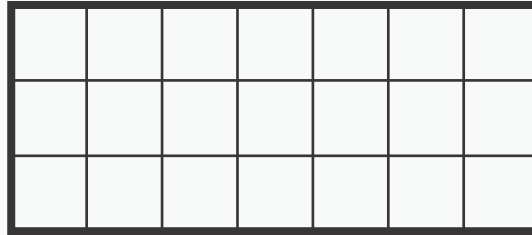
Add by rows: $7 + 7 + 7 = 21$

21 squares

Add by columns:

$3 + 3 + 3 + 3 + 3 + 3 + 3 = 21$

21 squares



Counting Squares

Materials Grid paper, scissors

Have your child cut out a small rectangle like the one above from a piece of grid paper. Then ask your child to count the number of squares by rows and by columns. Help your child see that the total number of squares is the same using either way. Repeat the process several times after having your child cut out rectangles of different shapes and sizes. Challenge him or her to write addition equations that show the number of squares by rows and by columns.

Observe Your Child

Ask your child to explain how counting squares by rows or by columns repeatedly is a shortcut for counting them individually.

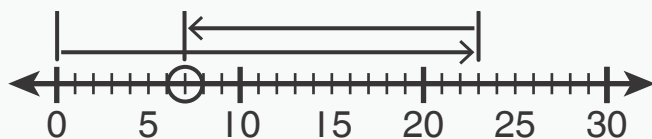
Name _____

More Addition, Subtraction, and Length

Dear Family,

Your child is learning to add and subtract with measurements. He or she will also learn to solve problems by drawing pictures and writing equations to find unknown measurements. Your child will also represent whole number sums and differences on a number line, as shown below.

You can use a number line to find differences in lengths. To subtract 16 feet from 23 feet, first move 23 spaces to the right from 0. Then move 16 spaces to the left from 23. The difference is 7.



$$23 \text{ feet} - 16 \text{ feet} = 7 \text{ feet}$$

Adding and Subtracting Lengths

Materials Paper, pencil

Work with your child to make a list of 5 or 6 household items. Write the approximate length of each item in inches. Then make up addition and subtraction problems for your child to solve; for example, “What is the total length of the book and the stapler?” Ask your child to show you how to solve each problem by adding or subtracting on a number line.

Observe Your Child

Have your child write an equation to represent each addition or subtraction measurement problem in the above activity. Ask him or her what each number in the equation represents and how the numbers relate to work shown on the number line.

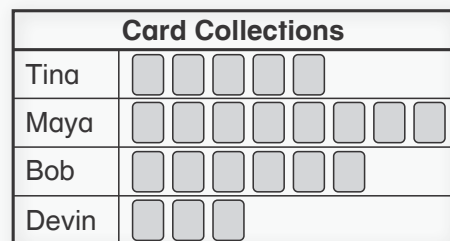
Graphs and Data

Dear Family,

Your child is learning about graphs and organizing data. In this topic, he or she will learn about bar graphs, line plots, and picture graphs, and how to draw conclusions, make predictions, and solve problems. Below is an example of one of these skills.

Using Graphs to Draw Conclusions

You can use graphs to draw conclusions.



Each  = 1 card.

By using the data in the graph, you know that Maya has the greatest number of cards and that Bob has 3 more cards than Devin.

Collecting, Displaying, and Analyzing Data

Materials Paper and pencil

Work with your child to collect data on household objects, such as the number of pencils, pens, and markers in a desk drawer. Then ask your child to make a bar graph to display the data. Have him or her analyze the graph to draw a few conclusions. Pose several questions about the bar graph that your child can answer.

Observe Your Child

Give your child an incorrect statement about his or her graph, such as “There are 3 more pens than pencils.” Have your child provide a correct statement and explain why your statement is incorrect.