Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

# Addition Stories

## What You Need

- Paper
- Pencils

## What to Do

1. Select up to five students to act out an addition story.
2. Say the addition story out loud as the group acts it out. For example, "Three horses walked into the barn. Two more horses walked in. How many horses altogether?"
3. Show students how to write the addition problem to go with the story.
4. Have the rest of students write down the addition problem on their papers.
5. Repeat the activity until all students have had a chance to act out an addition story.

## Teaching Variation

Use number cubes to model the number sentences.

## Problem Solving

When would you use addition? (Counting points in a game, going shopping, etc.)

# Act It Out Stories

## What You Need

A variety of real or make-believe number stories to act out

## What to Do

1. Tell a story while students act it out. For example, "Ben, Susi, and Avi were playing on the slide. John and Carlos join in the fun."
2. After students have acted out several stories, have students describe what is happening in their own words.
3. When students are ready, record the problem on the board as the story is acted out. Model them in both horizontal and vertical form.
4. After plenty of practice, let students write their own problem on paper while the stories are being acted out.

## Teaching Variations

- Do the same with subtraction stories when students learn subtraction.
- Make sure that students understand the operation before recording the problem.
- Let students think of some number stories to tell the others.

## Problem Solving

How does acting out an addition problem help you solve it? (You have objects or items to count.)

# Manipulative Stories

## What You Need

- Story mat for addition (p. 8 of this document)
- Manipulative objects such as beans, buttons, counters, money, or shells

## What to Do

1. Give each student a story mat.
2. Tell an addition number story to the class.
3. Have each student model the story using the small counters.
4. When students know the answer, have them raise their hands to respond.

## Teaching Variations

- Use small crackers or cereal to act out stories. Afterwards, students can eat their manipulatives.
- Let students think of some number stories to tell the others.

## Problem Solving

Does it make it easier to use objects when solving a number story? Why? (There are things to count.)

# Edible Stories

## What You Need

- Story mats for subtraction (p. 9 of this document)
- Edible objects such as cereal, fruits, vegetables, or crackers (be aware of food allergies)

## What to Do

1. Give each student several edible objects and a subtraction story mat.
2. Start with a number story, asking students to act it out while putting objects on the story mat as you go.
3. Have them take away or eat the edible objects according to the story.
4. Ask how many are left.
5. Write the problems on the board verbalizing the equations. Be sure to use both horizontal and vertical forms.

## Teaching Variations

- Model a variety of number stories first adding objects together then taking away.
- Let students think of some addition and subtraction stories to tell each other.

## Problem Solving

How can you tell how many are left after you take something away? (You count what is left.)

# One, Two, Three, Show

## What You Need

- Story mats for subtraction (p. 9 of this document)
- Objects such as beans, buttons, etc.
- Equation cards such as 5 – 2 = 3 and 7 – 1 = 6 (pp. 10–15 of this document)

## What To Do

1. Give each student up to 10 objects and a subtraction story mat.
2. Show an equation card and read the equation.
3. Have students place objects on the mat while verbalizing the equation.
4. After students remove the appropriate amount of objects, have them cover up the remaining objects left on the mat (if any).
5. Say: “One, two, three, show.”
6. Have students remove their hands, showing the remaining objects.
7. Check students for accuracy.
8. Continue with more problems, having students verbalize the equation and checking for accuracy.

## Teaching Variations

- Use edible objects such as cereal or crackers.
- Have students model first with addition equation cards, then have them reverse and take away objects to show subtraction.

## Problem Solving

What happens when you have so many objects on the mat and you take all of them away? (There is nothing left or you have zero objects.)

# Circus Subtraction

## What to Do

1. Have the class sit in a large circle to represent a circus ring.
2. Invite fewer than five students into the center of the ring.
3. Have them pretend to be circus animals such as elephants or monkeys.
4. Have the class count the whole group together. For example, "Four elephants are in the ring, then two go away. How many are left?"
5. Continue telling circus stories while students act them out.

## Teaching Variations

- Let students make up their own circus stories.
- Use higher numbers.
- Revise the stories to be addition stories.
- Vary the problems by saying, "Three elephants stand up and two kneel down. How many are standing?"

## Problem Solving

If you were to write a number problem to go with the story, where would the take-away sign (–) go? (Between the two numbers.) Where would the equal sign (=) go? (After the last number.)

# Partner Subtraction

## What You Need

- Paper sack for every pair of students
- Small objects for counting
- Paper or dry erase board
- Pencils or dry erase markers

## What to Do

1. Put up to five small objects into each sack.
2. Organize the class into pairs.
3. Have one student count the total number of objects in the sack and write the number with a minus sign after it on a piece of paper or dry erase board.
4. Have them put the objects back into the sack.
5. Then have the second student pull some objects out of the bag, count them, and write that number followed by an equal sign.
6. Have both students guess how many are left in the bag.
7. The second student should count the number of objects remaining in the bag and then complete the subtraction sentence.
8. Have students take turns pulling objects from the bag and counting them.

## Problem Solving

If you have five objects in the bag, can you take away seven? (No, because there are only five to take away from.)

# Farmer's Market

## What You Need

- Fruit and vegetables, they can be paper or plastic
- Brown paper bags

## What to Do

1. Organize the class into small groups.
2. Ask one student to be the farmer and stand behind a desk.
3. Let one group select up to six fruits and vegetables.
4. Have the farmer put a few of the items into a bag.
5. Then have the farmer ask the customers how many are left out of the bag.
6. Repeat until all of the students have had a chance to participate.

## Teaching Variations

- Have the customers write an addition problem to check the total amount of items. Write them in both horizontal and vertical form.
- Have the customers write a subtraction problem using the total amount of items to represent the first number.

## Problem Solving

What happened to the larger group of fruits and vegetables after you put some in the bag? (It got smaller.)

# Green and Speckled Frogs

## What You Need

- Chart paper
- Markers

## What to Do

1. Write the song on chart paper.
2. Then teach students the song "Green and Speckled Frogs." Use the traditional tune or make up a tune.
   ___ little speckled frogs
   Sitting on a speckled log
   Eating some most delicious bugs—
   Yum Yum!
   ____ jumped into the pool
   Where it was nice and cool
   Now there are ____ speckled frogs.
3. Have different students call out a number between one and nine to go in the first blank and you decide how many jump in the pool. Write the subtraction problem on the board to help students figure out how many frogs are left.
4. Repeat the song with different numbers.

## Teaching Variation

Repeat the activity with other songs such as "The Farmer in the Dell."

## Problem Solving

In which ways are subtraction problems going down the same as subtraction problems going across? (The way you subtract the second number from the first number is the same.) Different? (One has a take-away sign [–] and an equal sign [=]. The other has a line.)

# Cars and Trucks Subtraction

## What You Need

- Plastic toy cars
- Plastic toy trucks
- Paper
- White board or chalk board for every two students
- Paper tunnel

## What to Do

1. Show students a group of five toy cars and trucks.
2. Have students count the toys and tell you how many they see in all.
3. Write the first number on the board.
4. Move some of the toys under the tunnel.
5. Ask students how many disappeared into the tunnel, writing the number problem on the board as you tell the story.
6. Write a minus sign followed by the number.
7. Write the number story to go with the problem.
8. After they answer, ask them how many are left.
9. Continue having different sets of toys disappear into the tunnel. Remember to reinforce the idea that when you separate one group of objects from a larger group, the group you take away from gets smaller.

## Teaching Variation

Give groups of students toy cars, trucks, and a tunnel to practice subtracting groups.

## Problem Solving

Is there always something left when they take away? Why not? (If you take away all of the objects, there will be nothing left.)

# Yummy Subtraction

## What You Need

- Healthy food such as popcorn, fruit, or cereal
- Paper cups

## What to Do

1. Give each student a cup with ten pieces of the snack.
2. Have students count aloud how many pieces are in their cups.
3. Tell students to eat one of their snacks. How many are left?
4. Show students how to write a subtraction problem explaining that the minus sign also means to take away and the equal sign tells them to count how many are left.
5. Continue having them eat one or two snacks and counting how many are left.
6. Continue counting and writing answers on the board.
7. Reinforce again that the group is getting smaller as the snacks are being eaten.

## Teaching Variations

- Have students write their own subtraction problem while eating their snacks.
- Have them work with a partner. One student eats the snack while the other writes the problem. Have them take turns writing and eating.

## Problem Solving

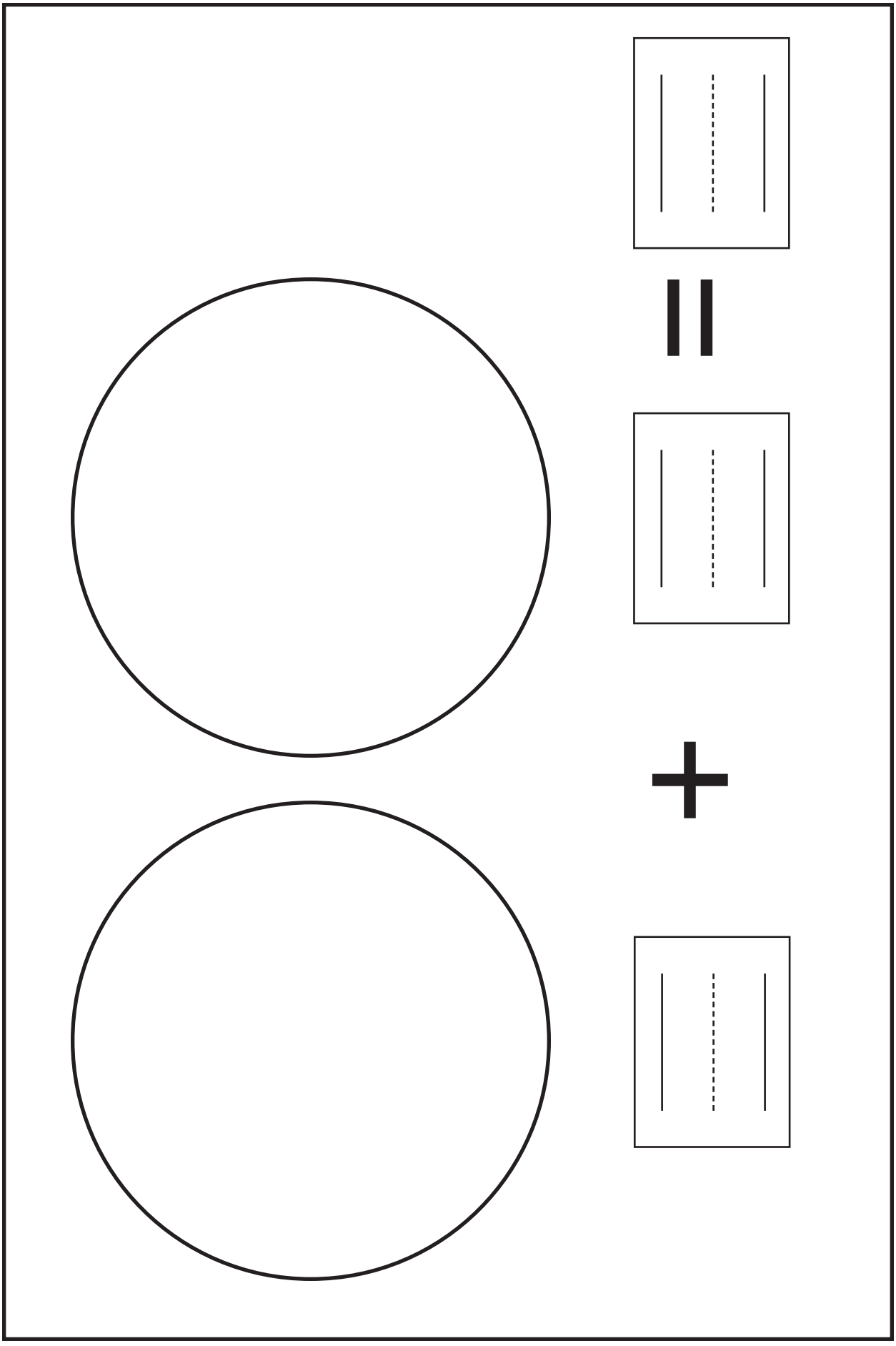
What is the difference between addition and subtraction? (Addition is counting items together. Subtraction is taking items away.)

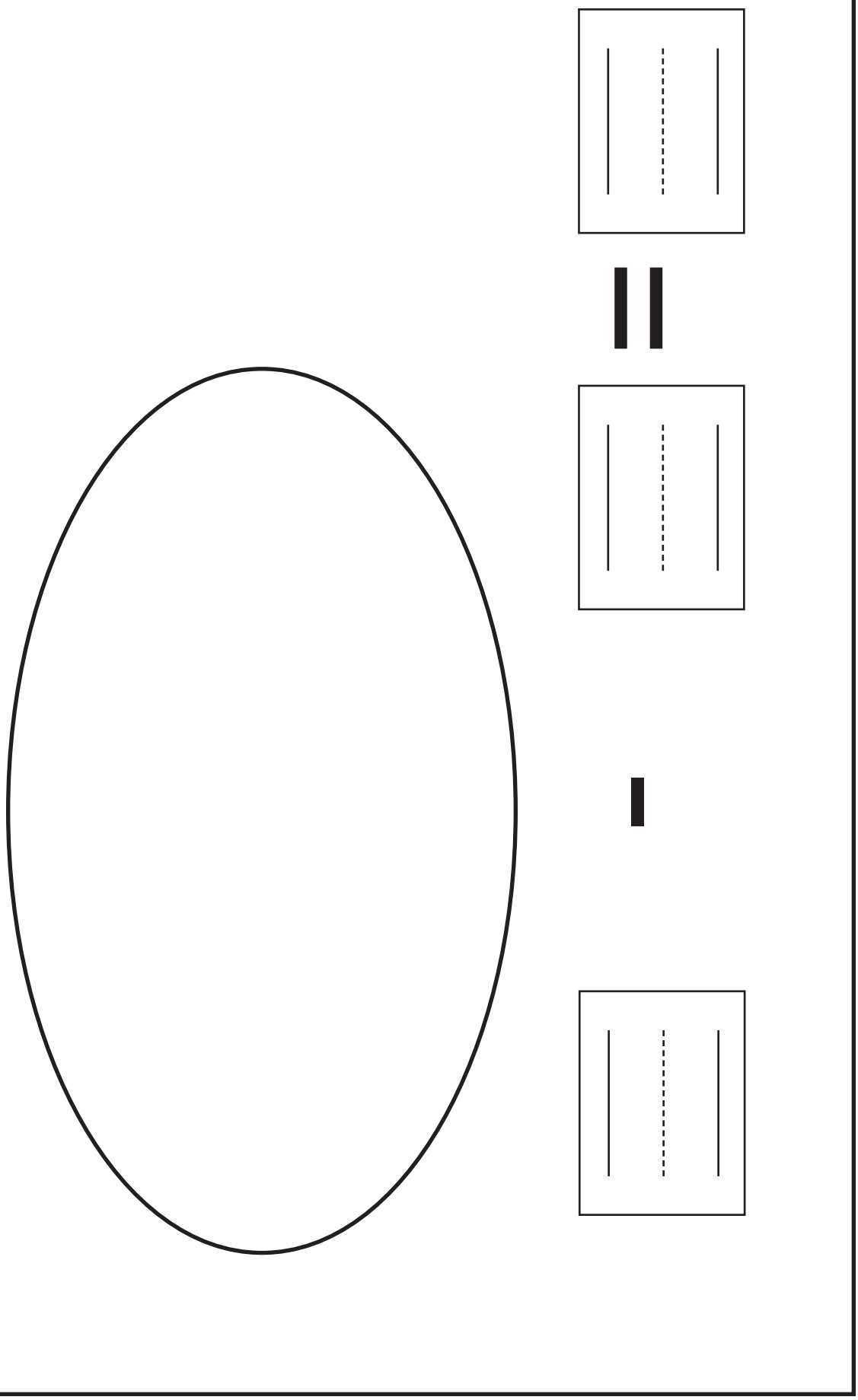
NAME _____

# Act Out Addition

❶ Draw a picture to act out the story.
❷ Write the numbers to complete the number sentence.

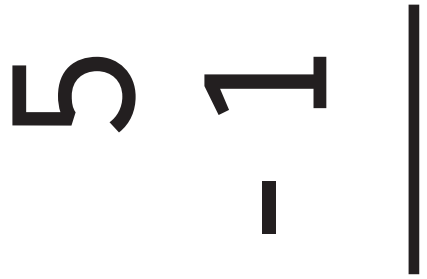
3 balls  .
2 more balls  .
How many balls  in all?



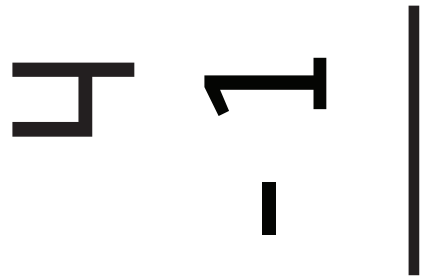


| | | | |
|---|---|---|---|
| 0 | 1 | 2 | 3 |
| - 0 | - 0 | - 0 | - 0 |
| ____ | ____ | ____ | ____ |
| 4 | 5 | 1 | 2 |
| - 0 | - 0 | - 1 | - 1 |
| ____ | ____ | ____ | ____ |

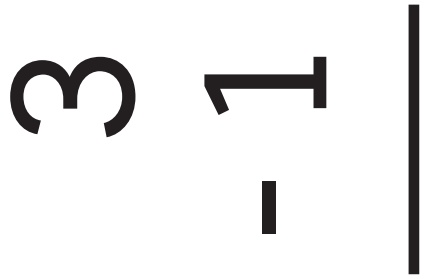













5 - 4 =

4 - 4 =

5 - 3 =

4 - 3 =

5 - 5 =

0-0=

1-0=

2-0=

3-0=

4-0=

5-0=

1-1=

2-1=

3-1=

3-2=

4-1=

4-2=

5-1=

5-2=

2-2=

3-3=

4-3=

5-5=

5-3=

4-4=

5-4=

NAME _____

# Act Out Subtraction

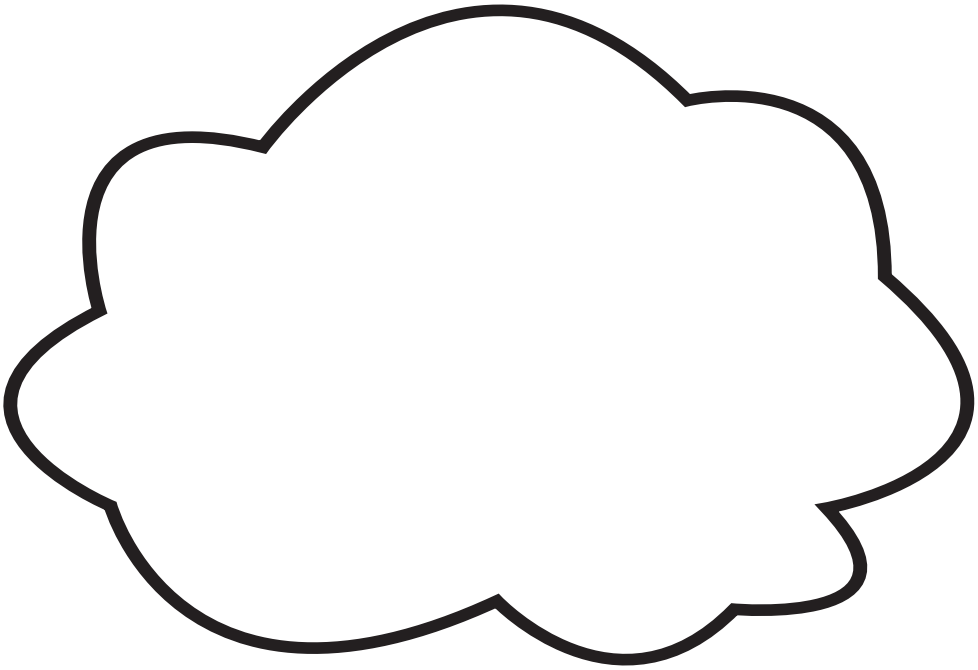
❶ Draw a picture to act out the story.

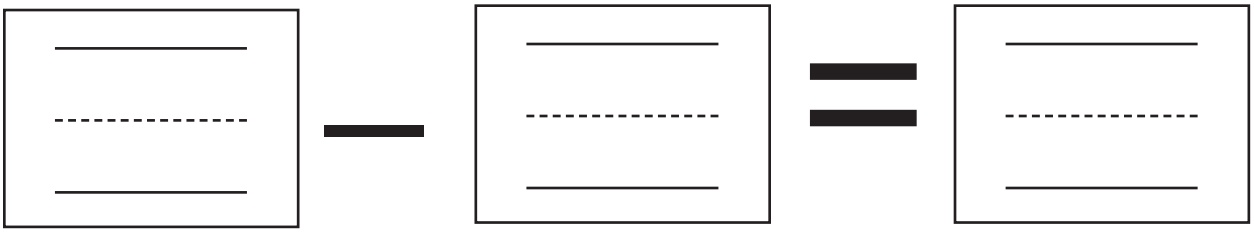
❷ Write the numbers to complete the number sentence.

4 balloons .

1 balloon pops.

How many balloons are left?





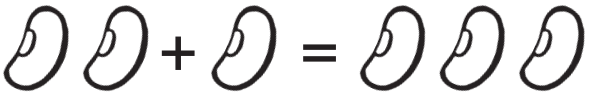
# MATH NEWSLETTER

## ADDITION

*You can use addition to answer questions such as, "How many in all?" or "How many altogether?" Your child will be learning to add numbers and groups for sums to 5 and later for sums to 10.*

### ADDING SETS OR GROUPS

Use everyday situations to play games with addition. Set up groups of dried beans, toothpicks, or other small items. Ask questions, such as, "You have two beans, and I have 1 bean. How many beans do we have altogether?" Point out that we join sets to find out how many in all.



2 + 1 = 3

### PAIRS OF TEN GAME

First, cut out 22 small squares of paper. Ask your child to write one number on each square, using each number 0 to 10 two times. Use pencil so you cannot see the number through the back of the paper. If your child is only working with sums to 5, take out the larger numbers.

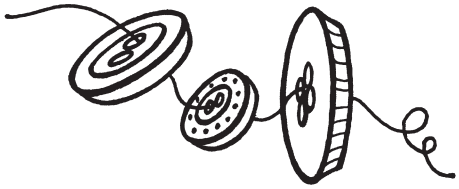
Next, turn the squares face down on a table and mix them around. Select one square. The number on that square will be your goal number. Put it back face down in the pile.

Take turns choosing two squares to turn over. Each time the two numbers add up to your goal number, remove that pair and score a point. If the sum of the two numbers is not the chosen sum, turn the squares back over and let the next person take a turn. The game is over when all of the squares have been picked. The person with the most pairs wins the round.

### COUNTING BUTTONS

Gather a handful of buttons and a large threaded needle or a shoe string. Have your child string buttons on the thread or shoe string. Ask, "How many are in the set?" Add more and ask, "How many buttons are there now?" Write the equations. Continue adding with different number combinations.

A variation of this activity is to thread 5 or 10 buttons and then move the buttons along the string to see different combinations of sets that equal 5 or 10.



### LIBRARY

Take a trip to the library. Find books about addition that you can read together. Your child might want to illustrate a favorite part of the story and then show the addition sentence in the picture. Here are some books you might want to check out:

*Rooster's Off to See the World*, Eric Carle

*Fish Eyes: A Book You Can Count On*, Lois Ehlert

*My First Number Book*, Marie Heinst

# MATH NEWSLETTER

## SUBTRACTION

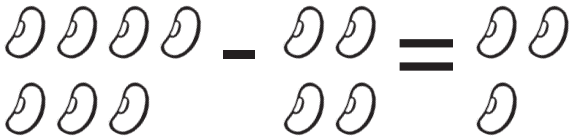
*Your child will be learning subtraction by taking away one set from another set. Use vocabulary such as "subtract" and "take away," and ask, "How many are left?" Make learning fun by using a variety of short, relaxed activities that you both enjoy.*

### HOW MANY ARE LEFT?

Help your child understand subtraction by pointing out how many items are left or how many are taken away. If you have eight towels to put away, give your child three to put away and ask, "How many more do we need to put away?" You can also use small objects to do the same thing.

### SUBTRACTING SETS

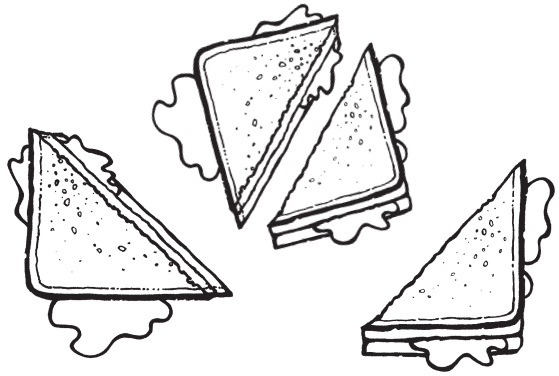
Use dried beans, toothpicks, or other small items to show subtraction. Ask questions such as, "If you have 7 beans and you take away 4 beans, how many beans do you have left?"



7 - 4 = 3

### DAILY SUBTRACTION

Use subtraction in your daily activities. For example, when eating lunch say, "There are 4 sandwiches. If you eat 2, how many are left?"



### LIBRARY

Take a trip to the library. Find books about subtraction that you can read together. Your child might want to illustrate a favorite part of the story and then write the subtraction equations that are shown. Here are some books you might want to check out:

*Number One Number Fun,* Kay Choraoi

*Elevator Magic,* Stuart J. Murphy

*Roll Over: A Counting Song,* Merle Peek

### CLASSROOM BOOKS

The following *Pre-Math* book is available through your child's classroom:

*Five Delicious Muffins,* Cheryl Blinston