

Common Core State Standards

1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Objective

Solve word problems within 20 involving adding-to and taking-from.

14 birds sit on a roof. 8 fly away.
How many are left?

Solve Add-To and Take-From Word Problems

Children build on kindergarten experience solving problems involving “how many.” Children use direct modeling by counting all of the items or taking away from a total amount. This strategy helps children understand the concept of addition and subtraction so they can later use methods such as counting on. These strategies will eventually lead children to convert problems into easier numbers by decomposing or composing numbers into compatible addends.

Vocabulary

Draw 12 counters and write the number sentence $7 + \underline{\quad} = 12$.

■ **Say:** *This is a number sentence. How do the counters show the total?*

Elicit from children that the total is 12 and there are 12 counters.

■ **Say:** *The number sentence shows that 7 plus an unknown equals 12.*

■ **Say:** *Let's circle a group of 7 counters.*

Reread the number sentence and elicit from children that they need to count the remaining counters.

■ **Say:** *5 is the unknown. So, $7 + 5 = 12$.*

■ A **total** is the amount in all. Here it is 12 counters.

■ The **unknown** is the part of a number sentence that needs to be found.



Set the Stage

Engage WHOLE CLASS

Distribute Two-Color Counters.

- **Say:** *I am going to count out 10 counters. Show me different ways you can arrange the 10 counters into 2 groups.*

Each time children make 2 groups, elicit that the number of counters in each group has changed, but the 2 groups still equal 10.

Point to one of the representations made by children and have children count the counters in each group.

- **Ask:** *How many counters are in this group?*
- **Ask:** *How many counters are in the other group?*
- **Ask:** *If I added one group of counters to the other group of counters, how many do I have in all?*

Have children predict the total, and then put the groups of counters together and count to check childrens' thinking.



Warm-Up

Use this short thinking exercise to jump-start the instructional session.

Name Answer Key

1
Susan is covering 5 beans with her hand.

Look at the number of beans left.

How many beans are there in all?

Explain your answer.



ANSWER: 9

COMMENTS & EXTENSIONS: Ask students to draw the hidden counters and explain their answer. Then pose a parallel question and see if they can visualize the answer without drawing.

Make up your own problem like Susan's. Exchange the problem with a partner.



Foundation Skill Practice

Use this VersaTiles® activity to help children activate their prior knowledge.

Plus and Minus

Find the sum or difference.

- | | | | |
|----|----------|----|----------|
| 1 | $4 + 3$ | 2 | $9 - 4$ |
| 3 | $10 + 6$ | 4 | $3 + 5$ |
| 5 | $8 - 2$ | 6 | $4 - 3$ |
| 7 | $10 + 1$ | 8 | $5 - 2$ |
| 9 | $8 - 4$ | 10 | $10 + 2$ |
| 11 | $6 - 4$ | 12 | $2 + 7$ |

Answer Box

A	B	C	D	E	F
12	11	3	9	2	6
G	H	I	J	K	L
8	7	5	1	16	4





Introduce the Concept

Explore WHOLE CLASS

Distribute Two-Color Counters. Present the problem— Write the number sentence $13 - 4 = \underline{\quad}$. Point to each number and symbol as you read aloud: *There are 13 children on the school bus. Four children get off the bus. How many children are still on the bus?*

Have children use counters to show the total number of children on the bus.

- **Ask:** *How can you show that 4 children got off the bus?* [Sample: I can take 4 counters away and place them in a group.]
- **Ask:** *How do you know how many children are still on the bus?* [Sample: I could count the remaining counters.]
- **Ask:** *How many children are now on the bus?* [9] Where should we write this in the number sentence?

As children share, complete the number sentence:
 $13 - 4 = 9$

- **Say:** *Nine children are on the bus. Four children get back on. Now how many are on the bus? Show me using counters.*

- **Ask:** *Did you “add-to” the counters or “take-from”?*

Children might say that they joined the groups together again; that they added.

- **Say:** *Let’s write this as addition. $9 + 4 = \underline{\quad}$.*

Stack both number sentences to show the relationship between addition and subtraction.

Explore & Explain SMALL GROUPS

Prepare ahead Children will need Two-Color Counters.

Children build models, make drawings, and find unknowns in number sentences to solve add-to and take-from situations where the total, difference, and change in number sentences is unknown. These real-world problems help children understand how to approach a situation where it is not clear if addition or subtraction is required to solve. The activity also helps children begin to see the relationship between addition and subtraction.

Materials

- Two-Color Counters



Explore & Explain



Solve Add-To and Take-From Word Problems

Name _____ *Answer Key*

Try This

7 swimmers are in the lake. 9 more join them. How many swimmers are in the lake now?



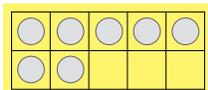
Write the sentence and solve.

$$7 + 9 = \underline{16}$$

16 swimmers are now in the lake

- I. Draw a model. Complete the sentence and solve.

Mrs. Lee has 3 pencils. Jake gives her more pencils. Mrs. Lee now has 10 pencils. How many pencils did Jake give Mrs. Lee?



$$3 + \underline{7} = 10$$

Jake gave Mrs. Lee 7 pencils.



Understanding Addition and Subtraction ■ Lesson 1

continued on the next page
Hands-On Standards® Number & Operations

Online resources available at hand2mind.com/hosnumbergr1

Reinforce the Concept

Explain & Elaborate WHOLE CLASS

- **Ask:** What tool or method did you use to solve question 3? [Answers may include using counters, drawing a picture, or counting on to help solve.]
- **Ask:** How would you describe question 2 in your own words? What information is given to you in question 1? [Example: Paige has 14 pens and gives away 6. How many are left?]

Evaluate WHOLE CLASS

- **Say:** I am going to read you a problem. Model with counters or draw a picture to show how you could solve the problem.
Nine campers are in the park. More campers arrived. Now 16 campers are the park. How many campers joined them?
- **Say:** How did you solve this problem? Show how you know that your solution is correct.



Independent Practice

Use this VersaTiles® activity to give children more practice with the skills they learned in the lesson.

Using a Number Sentence

Find the addition or subtraction sentence to solve the problem.

- | | |
|---|---|
| <p>1 2 more come.
How many in all?</p> | <p>2 4 more come.
How many in all?</p> |
| <p>3 There are 19 .
Ana picks 6.
How many are left?</p> | <p>4 1 more comes.
How many in all?</p> |
| <p>5 Al sees 3 more.
How many in all?</p> | <p>6 17 . You lose 14.
How many are left?</p> |

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VersaTiles® student book, pages 2–3



Re-Engage

Use this page to give children additional concrete-to-representational-to-abstract practice.



Solve Add-To and Take-From Word Problems

Name Answer Key

1. Alana has 8 stickers.

Raul gives her 3 more. How many stickers does Alana have now?

Use counters to build the model and solve the problem.



Count all the counters to find how many total stickers.

Complete: $8 + 3 = \underline{11}$

11 stickers

2. Alana has 11 stickers. She gives away 3. How many stickers does Alana have left?

Cross out all the stickers Alana gave away.



Complete: $11 - 3 = \underline{8}$

Online resources available at hand2mind.com/hosnumbergr1



Daily Routine

Listening to Word Problems

During transition time, the teacher recites or reads a word problem to children. Children decide whether this problem is an add-to or a take-from problem. Children indicate their choice using hand signals: 2 cupped hands to show add-to; 1 cupped hand to show take-from.