Written by Lynn Fuchs, Kim Paulsen, & Douglas Fuchs

The development of these materials was supported in part by Grant #H324U010004 from the U.S. Department of Education, Office of Special Education Programs, and Core Grant #HD15052 from the National Institute of Child Health and Human Development to Vanderbilt University. Statements do not reflect the position or policy of these agencies, and no official endorsement by them should be inferred.

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Dear Educator,

Thank you for your interest in the Number Rockets intervention program for first grade. Number Rockets is a small group tutoring program developed at and sole sourced by Vanderbilt University. We are pleased to offer you this excerpt to review.

These pages from the Number Rockets manual are provided as a courtesy to allow you to preview a representative sampling of the Number Rockets program. This excerpt includes the following:

1. Table of Contents
2. Introduction
3. Topic 1 – Identifying and writing numbers
4. Topic 9 – Writing addition and subtraction sentences
5. Top 12 – Subtraction facts

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If you would like to place an order for Number Rockets or you have questions, please contact Lynn Davies via e-mail at lynn.a.davies@vanderbilt.edu or call 615-343-4782. To place an order using a credit card, please visit our secure on-line portal at http://vkc.mc.vanderbilt.edu/palsorder/catpick?pay=1.

Thank you for your interest in Number Rockets.

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Number Rockets:
First-Grade Small-Group Tutoring

Book 1 – Scripts

Written by Lynn Fuchs, Kim Paulsen, and Douglas Fuchs

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Introduction

This Tutoring Manual in combination with the Materials Manual contain the information needed to implement First-Grade Small-Group Tutoring to Prevent Math Disability.

The Tutoring Manual is organized as follows:

Section 1: The sequence of the topics
Section 2: A script to introduce the point system used for tutoring
Section 3: Scripts for the tutoring lessons for the 17 topics
Section 4: Scripts for the daily flash card activity

With First-Grade Small-Group Tutoring to Prevent Math Disability, tutoring sessions take place 3 times per week. Each session lasts for 40 minutes. Each lesson is divided as follows:

First 30 minutes: Tutor conducts the lesson script for that day. The script is provided in this manual. You also need the accompanying materials, which are provided in the Materials Manual.

Last 10 minutes: Students work on a flash card activity designed to increase their fluency on addition and subtraction facts through 18. Scripts for the first 8 days of flash card practice and a daily laminated script for use after Day 8 are included in the last section of this manual. The flash cards are provided in the Materials Manual.

All of the lessons are presented in the form of scripts. These scripts were designed as guides to assist tutors in using this program. You should study the script, along with the materials, prior to the day you conduct that lesson. However, you should not read the script.
Topic 1

Identifying and Writing Numbers
Objectives

Students will:
- Count objects up to 19.
- Identify numbers up to 19.
- Write numbers up to 99.

Materials
- Bags of Beans – with 19 beans in each bag
- Topic 1 Day 1 Tutoring Sheet 1
- Topic 1 Day 1 Tutoring Sheets 2-5 (one set cut apart for each student)
- Topic 1 Day 1 Tutoring Sheet 6
- Topic 1 Day 1 Tutoring Sheet 7 (one set cut apart for each student)
- Topic 1 Day 1 Tutoring Sheet 8
- Paper
- Pencil
- Point Sheet

Note to Tutors: Day 1 consists of four activities (counting concrete objects, counting objects on paper, identifying numbers, and writing numbers). You should get through all four activities in one session. If your students are having difficulty with one of the areas, you will focus more on that in Days 2 and 3. If all students meet the mastery criteria, skip Days 2 and 3 and move to Topic 2.

Mastery Criteria:
- Counting concrete objects: 9/10
- Topic 1 Day 1 Tutoring Sheets 2 & 3: 18/20
- Topic 1 Day 1 Tutoring Sheet 4: 18/20
- Writing numbers: 18/20

Tutor: You and I will be working on math together three times a week. We’ll be doing activities that’ll help you be better in math.

To get better at math, you must listen carefully, work hard, and follow directions. When you listen carefully, work hard, and follow directions, you are “on task.” To be on task, what must you do?

Students: Listen carefully, work hard, and follow directions.

Tutor: That’s right. You’re on task if you listen carefully, work hard, and follow directions. If you stay on task, you’ll get better at math. You’ll also earn points.
Take out the point sheet.

Look at these point sheets. Each of you has your own point sheet. Your point sheet will help you keep track of how well you’re doing in math. I like the way everyone is on task right now. Everyone is paying attention and working hard. So, everyone earns a point. When you earn a point, I mark it on your point sheet.

Show point sheets and mark a point for each student.

When your point sheet is all filled up, you can pick a reward out of my prize bag.

Show prize bag.

The point sheet can help you keep track of whether you’re on task and getting better at math.

Here’s how you earn points. This is my timer. Listen to it ring.

Make timer ring.

Whenever my timer rings, I’ll look to see if ALL of you are on task. What do you have to do to be on task?

Students: Listen carefully, work hard, and follow directions.

Tutor: That’s right, when my timer goes off, if everyone is on task, everyone gets a point. BUT, if you are not on task, I won’t give a point to anyone in the group. So, everyone must be on task or I give no points. What happens if any one person in the group is not on task?

Students: Nobody gets a point.

Tutor: So, make sure you’re not the person in the group who prevents others from getting their points. The timer will go off many times during the math lesson. So make sure you’re on task the whole time. What’s the first way you can earn points?

Students: Being on task.

Tutor: That’s right. Now, there’s a second way you can earn points: by doing math problems correctly on your worksheet. But I’ll explain that later when we get to the worksheets.
Today we’re going to review counting objects and identifying numbers.

When timer goes off at 5 minutes

Tutor: That was my timer. What does it mean when my timer goes off?

Students: We get points if everyone was on-task.

Tutor: Was everyone on-task?

If yes....

Students: Yes.

Tutor: Yes, everyone was on-task. So I mark one point for everybody. Good job working hard everyone! Let’s keep it up.

If no...

Tutor: No, ____ and ____ were off task because they were [insert off-task behavior here]. That means no one gets any points. ____ and ____ let’s work harder on staying on-task so we can earn points and get better at math

Counting Concrete Objects

Tutor: Now, let me tell you more about the second way you can earn points: by doing math problems correctly. During every lesson, we’ll do math problems. Depending on how many problems you answer correctly, you can get up to three points! What’s the second way you can earn points on your point sheet?

Students: By getting right answers to math problems.

Tutor: That’s right. You can earn up to 3 points every day for getting right answers. So, you must work hard on every problem to get the most possible points. Are there any questions?

Then, let’s get started with our worksheets.

Give each student a copy of Topic 1 Day 1 Tutoring Sheet 1 and 8 beans.

Let’s count how many beans are here. It’s important to touch each bean as we count so we make sure we’re counting all of them. Ready, let’s count together. 1,2,3,4,5,6,7,8.
Observe students, making sure they’re touching each bean as they count.

**How many beans?**

If the student gives an incorrect answer, **We have 8 beans. How many beans?**

**Students:** 8.

**Tutor:** **Great, we have 8 beans. Write 8 on your paper.**

If student has difficulty writing the number the tutor should provide a model by writing the number 8 and having the student copy the model. The tutor may also have to assist the student with writing the number.

**Students:** Write 8.

**Tutor:** **Let’s try a few more.**

Give students 17 beans.

**Let’s count how many beans are here. Remember, it’s important to touch each bean as we count. Ready, let’s count together. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17.**

**How many beans?**

If the student gives an incorrect answer, **We have 17 beans. How many beans?**

**Students:** 17.

**Tutor:** **Great, there are 17 beans. Write 17 on your paper.**

**Students:** Write 17.

**Tutor:** **If I don’t give you any beans, how many do you have?**

If student doesn’t respond or gives an incorrect answer, **If I don’t give you any beans, you have zero. How many beans?**

**Students:** None or zero.

**Tutor:** **Right, if I don’t give you any beans, you would have zero. Zero means none.**
Write zero on your sheet.

Students: Write zero.

Tutor: Put 14 beans in front of each student.

Count the beans silently to yourself. Remember to touch each bean as you count.

Observe individual students to ensure they are touching each bean as they count. Also note any difficulty students are having with counting and assist as needed.

Students: Students count the beans.

Tutor: How many beans?

Students: 14.

Tutor: Great, you have 14 beans. Write 14 on your paper.

If students are having difficulty, count with them. For students who are having a great deal of difficulty, it may be necessary to count with them using the hand-over-hand method, in which you use your hand to guide the student’s hand in counting.

Now I’m going to give you some beans. You’ll count the beans and write the number on your paper. Are there any questions?

Answer any questions.

Give students 4 beans.

Count the beans, making sure you touch each bean, and write the number.

Allow time for students to count beans and write the number.

Follow the same procedure for 4, 10, 13, 9, 18, 5, 12, 6, 17, and 3.

Check Mastery Criteria: Students must count and write 9/10 numbers without assistance to meet the mastery criteria.
**Counting Objects on Paper**

**Tutor:** Give each student a set of the picture cards (Topic 1 Day 1 Tutoring Sheets 2-3) and a set of the number cards (Topic 1 Day 1 Tutoring Sheets 4-5). Make sure the card with the hearts is on the top of each packet.

Now we're going to count objects on paper and match them to their numbers. Let's do one together.

Everyone look at the first card in your pile. It's the card with hearts on it. I want everyone to silently count the hearts. Remember to touch each heart as you count it.

Give students time to count the hearts.

**Students name, how many hearts did you count?**

Ask each student how many hearts they counted.

If students give an incorrect answer, **Let's count the hearts together. 1, 2,…15. There are 15 hearts. How many hearts are there?**

Students: 15.

**Tutor:** Great, there are 15 hearts. Find the number card that has 15 on it and place it on top of the heart card.

Allow students time to find the card, assisting them if needed.

If students are not able to identify 15, **15 has a 1 and a 5 like this** (write 15). **Find the card that looks like this.**

Now you're going to work on your own. Take your picture cards and count the number of objects on each card. Once you've counted the objects, find the number card that matches and put it on top of the picture card.

**Are there any questions?**

Answer any questions students have.

*Check Mastery Criteria: Students must count and match 18/20 of the cards without assistance to reach the mastery criteria.*
**Identifying Numbers to 19**

Tutor: Now we're going to match number words with numbers.

Give students Topic 1 Day 1 Tutoring Sheet 6.

This sheet has number words written on it. You're going to read the word and then find the number in this pile of cards.

Give each student a set of cut up cards from Topic 1 Day 1 Tutoring Sheet 7.

Let's do the first one together. The first word says "four." Find the card with the number 4 on it and place it on top of the word four.

Allow students time to find the card.

Great. Now I'm going to read the words and you’ll find the number card that matches.

*Check Mastery Criteria: Students must match 18/20 numbers without assistance to reach mastery criteria.*

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**Writing Numbers to 99**

Tutor: For our final activity I'm going to say a number and you're going to write it on the paper. The number will be any number from 0 to 99.

Give students Topic 1 Day 1 Tutoring Sheet 8.

The first number is 7. Write the number 7 on your sheet.

Allow time for students to write number.

Great. Now I'm going to say some numbers and I want you to write them on the paper. If you don't know how to write one of the numbers, put an X on your paper.

Ready.

10, 2, 5, 3, 0
12, 14, 18, 11, 20
32, 40, 28, 44, 39
75, 90, 84, 61, 87
Check Mastery Criteria: Students must write 18/20 of the numbers without assistance to reach the mastery criteria.

Tutor: Now it’s time to put your points on your point sheets. Remember, the number of points you get will depend on how many problems you answered correctly. So, I will look at each of your sheets and tell you how many points you can mark today.

3 points = most problems correct
2 points = some problems correct
1 point = few problems correct

Beginning with the first student… [Student 1], you answered ___ questions correctly, so you earned 3 points. Congratulations! To mark your points, cross-out one square for every point you earned. Don’t skip any squares.

Repeat this with all remaining students. Then…

Great job today everybody! If you earned all your on-task points, keep up the good work! If you didn’t earn all your on-task points, think about what to do so you can earn them the next time.

If you earned all your math points, congratulations! If you didn’t earn all your math points, keep working hard at math and maybe you can get all your points next time.

Proceed to Flash Card Activity for final 10 minutes of session.
Objectives
Students will:
- Count up to 19 objects.
- Identify numbers up to 19.
- Write numbers up to 99.

Materials
- Beans
- Topic 1 Day 2 Tutoring Sheet 1
- Topic 1 Day 2 Tutoring Sheet 2
- Topic 1 Day 2 Tutoring Sheet 3
- Topic 1 Day 2 Tutoring Sheet 4
- Paper
- Pencil
- Point Sheet

Note to Tutor: Students may need instruction in counting objects or reading/writing numbers, writing numbers higher than 20, or all three. A script for all areas follows. If mastery is met, move to Topic 2. If mastery is not met, continue with Day 3 activities.

If students need assistance with all three areas, start with counting objects.

Mastery Criteria: 
- Topic 1 Day 2 Tutoring Sheet 2: 10/12
- Topic 1 Day 2 Tutoring Sheet 34: 18/20
- Writing numbers to 99: 14/16

Counting Objects:

Tutor: Today we're going to continue working on counting objects.
Remember, you can earn points for working hard and for correctly answering the math problems.

If you feel your students need specific reminders about how they earn points, discuss staying on task and answering the problems correctly.

Give students Topic 1 Day 2 Tutoring Sheet 1.

You're going to count the number of objects in each square and then write the number. Let's do one together. The first square has bikes in it.
Let's count the number of bikes, remembering to touch each bike as we count. Ready. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13. We have 13 bikes. Now everyone write 13 on the line.

Allow students time to write the number.

Now I want you to count the objects in each box and write the number on the line.

Observe students to ensure they're completing the task correctly.

If students need assistance writing the number, The number thirteen has a 1 and a 3 in it, like this (write 13). Write this number.

Follow the same procedure for the rest of Topic 1 Day 2 Sheet 1.

Good work. Now you're going to complete this sheet on your own.

Give students Topic 1 Day 2 Tutoring Sheet 2.

You'll do the same thing we just did, count the number of objects and write the number. Are there any questions?

Answer any questions students have.

Check for Mastery Criteria: Students must complete 10/12 problems on Topic 1 Day 2 Tutoring Sheet 2 to reach the mastery criteria.

Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 10-12 correct problems
2 Points: 7-9 correct problems
1 Point: 4-6 correct problems

Reading Number Words and Writing Numbers

Tutor: Now we're going to work on reading number words and writing numbers.

Give students Topic 1 Day 2 Tutoring Sheet 3.

The first number word on this sheet is 19. Write the number 19 on the line.
Allow students time to write the number, providing a model if needed. Great. Now I'll read the number words and you'll write the number on the line. If you don't know how to write the number, put an X on the line.

Check for Mastery Criteria: Students must complete 18/20 problems on Topic 1 Day 2 Tutoring Sheet 3 to reach the mastery criteria.

Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 16-20 correct problems
2 Points: 12-15 correct problems
1 Point: 8-11 correct problems

---

Writing Numbers to 99

Tutor: Today we're going to work on writing numbers up to 99.

Give students Topic 1 Day 2 Tutoring Sheet 4.

Write the number 20.

This is the number 20. When I need to write a number that's in the 20s, I know I have to write 2 first. So, if I need to write the number 25 I would write a 2 and a 5.

Write 25.

Why did I put the 2 first?

Students: Because when you hear twenty, you write 2.

Tutor: Right. When I heard twenty-five, I knew that I would write two first and then five.

Write the number 30.

Students: Allow students time to write 30. If they need assistance, provide them with a model.

Tutor: Great. The first number in 30 is a three. So if I wanted to write the number 34, what would the first number be?

Students: 3.
Tutor: Yes, the first number would be a three.

What would the second number be?

Students: 4.

Tutor: Great, the second number would be 4.

Follow this same procedure for 40, 58, 60, 71, 85, and 99.

If students are having difficulty with this concept you may have to emphasize the similarities in '4 and 40', '5 and 50', '6 and 60', '7 and 70', '8 and 80', and '9 and 90' by underlining the first number.

Now I'm going to say a number, you write it on your worksheet.

Ready. 38.

Students: Write number.

Tutor: Great work. I'm going to read some more numbers, you write the number on your paper.

96, 54, 3, 27, 69, 80, 95, 44, 15, 7, 72, 9, 92, 26, 41.

Check for Mastery Criteria: Students must complete 18/20 problems on Topic 1 Day 2 Tutoring Sheet 3 to reach the mastery criteria.

Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 13-16 correct problems
2 Points: 10-12 correct problems
1 Point: 7-9 correct problems

Proceed to Flash Card Activity for final 10 minutes of session.
Objectives
Students will:
- Count up to 19 objects.
- Identify numbers up to 19.
- Write numbers up to 99.

Materials
Beans
Topic 1 Day 3 Tutoring Sheet 1
Topic 1 Day 3 Tutoring Sheet 2
Topic 1 Day 3 Tutoring Sheet 3
Paper
Pencil
Point Sheet

Note to Tutor: Students may need instruction in counting objects or reading/writing numbers, writing numbers higher than 20, or all three. A script for all areas follows. If mastery is met, move to Topic 2. If mastery is not met, continue with Day 3 activities.

If students need assistance with all three areas, start with counting objects.

Mastery Criteria: This is the last day of the topic, there’s no mastery criteria. You will move to Topic 2 the next time you meet, regardless of student’s mastery level.

Counting Objects:

Tutor: Today we're going to continue working on counting objects. Remember, you can earn points by staying on task or correctly completing your math problems.

Give students Topic 1 Day 3 Tutoring Sheet 1.

You're going to count the number of objects in each square and then write the number. The first square has bells in it. Count the number of bells, remembering to touch each bell as you count.

Allow students time to count the bells.

How many bells are there? If students give incorrect response say: We have 9 bells. Now everyone write 9 on the line.
Allow students time to write the number.

Now I want you to count the objects in each box and write the number on the line.

Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 10-12 correct problems
2 Points: 7-9 correct problems
1 Point: 4-6 correct problems

---

**Reading Number Words and Writing Numbers**

**Tutor:** Now we're going to work on reading number words and writing numbers.

Give students Topic 1 Day 3 Tutoring Sheet 2.

The first number word on this sheet is 13. Write the number 13 on the line.

Allow students time to write the number, providing a model if needed.

Great. Now I'll read the number words and you'll write the number on the line. If you don't know how to write the number, put an X on the line.

Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 16-20 correct problems
2 Points: 12-15 correct problems
1 Point: 8-11 correct problems

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**Writing Numbers to 99**

**Tutor:** Today we're going to continue working on writing numbers up to 99.

Give students a sheet of paper to write on.

Write the number 40.
This is the number 47. When I need to write a number that's in the 40s, I know I have to write 4 first. So, if I need to write the number 47 I would write a 4 and a 7.

Write 47.

Why did I put the 4 first?

Students: Because when you hear forty, you write 4.

Tutor: Right. When I heard forty-seven I knew that I would write 4 first and then 7.

Write the number 60.

Students: Allow students time to write 60. If they need assistance, provide them with a model.

Tutor: Great. The first number in 60 is a six. So if I wanted to write the number 68, what would the first number be?

Students: 6.

Tutor: Yes, the first number would be a six.

What would the second number be?

Students: 8.

Tutor: Great, the second number would be 8.

Now I'm going to say a number, you write it on your paper.

Ready. 43.

Students: Write number.

Tutor: Great work. I’m going to read some more numbers, you write the number on your paper.

69, 45, 8, 72, 96, 10, 59, 88, 51, 9, 27, 14, 29, 62, 94.
Good work. You've all worked hard today (or other feedback that may be needed), it's time to fill in our point sheets.

3 Points: 14-16 correct problems
2 Points: 11-13 correct problems
1 Point: 8 – 10 correct problems

Proceed to Flash Card Activity for final 10 minutes of session.
Topic 9

Writing Addition and Subtraction Sentences
Topic 9
Writing Addition and Subtraction Sentences
Day 1

Objectives
Students will:
Write addition and subtraction sentences.

Materials
Review Sheet 8
Topic 9 Day 1 Tutoring Sheets 1-9
Beans
Paper
Pencil
Point Sheet

Note to Tutors: Topic 9 requires students to add and subtract using pictures. All students will complete Days 1 & 2. If mastery is met on Day 1 Tutoring Sheet 2, move to Day 2 immediately. All students must complete Day 2, regardless of mastery level on Day 1.

Mastery Criteria: Any sheet 2-9: 5/6

Tutor: Give students Review Sheet 8.

First, we’re going to complete this review sheet. I’ll read the problems and you write the answers.

Read each problem and allow students time to complete.

Good work. Now we’re going to work on addition and subtraction some more. When we add, will we have more or less than we started with?

If students provide incorrect answer, When we add, we have more than we started with. For example, if I have 3 cookies (put down 3 beans) and I add 2 more (put down 2 beans), I have 5 cookies. Five is more than I started with. When we add, will we have more or less than we started with?

Students: More.

Tutor: Right, when we add we’ll have more than we started with. If we subtract, or take away, do we have more or less than what we started with?

If students provide incorrect answer, When we subtract, we have less than we started with. For example, if I have 6 cookies (show 6 beans) and I give 3 to my sister, I’ll have 3 left.
Three is less than I started with. If we subtract, or take away, will we have more or less than we started with?

Students: Less.

Tutor: Right, when we subtract we will have less than we started with.

If you feel students need more practice, continue using beans and making up stories until they feel comfortable.

If you feel students are ready, give them Topic 9 Day 1 Tutoring Sheet 1.

Point to the first box.

This says Add 7. Remember when we add we have more than what we started with. So we need to make 7 more rectangles. Everyone draw seven more rectangles in the box. (Draw 7 rectangles).

Make sure each student has drawn 7 rectangles.

Now let’s all silently count the rectangles we drew to make sure we have drawn seven.

Everyone counts. If you notice students have not drawn seven, provide individual assistance by counting with the student.

Great. Now that we’ve added 7, we need to count all of the rectangles and see how many we have. Everyone count the rectangles in the box. Allow time for counting.

How many rectangles do we have?

If students give an incorrect answer, We have 1, 2, 3, 4, 5, 6, 7, 8 rectangles (count out loud touching the rectangles). How many rectangles do we have?

Students: 8.

Tutor: Great, we have 8 rectangles.

Point to “How many?”

This says “How many?” We have 8 rectangles so we’ll write 8.

Everyone writes 8.

Let’s try the next one. First, let’s count the number of moons. Ready. 1,2…9. We have 9 moons and it says to subtract three. If we’re subtracting will we draw 3 more moons or cross out 3 moons?
If students respond incorrectly, **Remember, when we subtract we will have less than we started with.** So we’ll cross out three moons. Will we draw 3 moons or cross out 3 moons?

Students: Cross out 3 moons.

**Tutor:** Right, we’ll cross out 3 moons. Let’s do that now.

Everyone cross out three moons.

Now we have to write how many. Let’s count how many moons we have left. **Ready. 1,2,3,4,5,6** (touch each moon as you count). **We have 6 moons left. Everyone write 6 in the blank.**

Allow time for students to write.

Continue the same procedure for all problems on Tutoring Sheet 1.

Excellent work.

Give students Topic 9 Day 1 Tutoring Sheet 2.

Now you’re going to complete this sheet on your own. It’s like the sheet we just did. If you have any questions, please raise your hand.

If students complete the worksheet and need more instruction provide them with Topic 9 Day 1 Tutoring Sheets 3-9.

**You've all worked hard today** (or other feedback that may be needed), **it's now time to fill in our point sheets.**

- **3 Points:** 6 correct answers
- **2 Points:** 4-5 correct answers
- **1 Point:** 2-3 correct answers

Proceed to Flash Card Activity for final 10 minutes of session.
Objectives

Students will:

Write addition and subtraction sentences.

Materials

- Topic 9 Day 2 Tutoring Sheets 1-2
- Topic 9 Day 3 Tutoring Sheets 1-2
- Beans
- Paper
- Pencil
- Point Sheet

Note to Tutors: Days 2 & 3 require students to write sentences based on stories read and pictures. The script is the same for Days 2 & 3. The tutor should read all of the stories. Students are required to write the sentences without assistance to receive credit.

Mastery Criteria:

- Topic 9 Day 2 Tutoring Sheet 2: 5/6
- Topic 9 Day 3 Tutoring Sheet 2: 5/6

Tutor:

Give students Topic 9 Day 2 Tutoring Sheet 1.

Today we’re going to work on writing addition and subtraction sentences. I’m going to read a short story and you’re going to write a math sentence about the story. Let’s do some together so you can see what to do.

Look at the first square. The story says “Four pigs were walking. Two pigs joined them. Write the number sentence.”

The first thing we need to do is re-read the first sentence. It says “Four pigs were walking.” So for the first part of our number sentence we’ll write 4. Everyone write 4 (Demonstrate writing the number 4.)

The next thing we have to do is read the second sentence. It says, “Two pigs joined them.” If two pigs joined the other 4, will we add 2 or subtract 2?

If students give the incorrect answer, If two pigs joined the other 4, we’ll add 2. Will we add 2 or subtract 2?

Students: Add 2.
Tutor: Right, if something joins a group, we add them to the group. So we need to write $+ 2$. Everyone write $+ 2$ (write $+ 2$).

Our math sentence should say 4 plus 2. Make sure all students have written $4 + 2$ and provide assistance if needed. Next we need to add an equal sign. Everyone write an equal sign (write $=$).

Next, we need to solve the problem. Who knows what 4 plus 2 equals?

If students need assistance with getting the answer:

Let’s count how many we have all together. We know we started with 4 pigs and 2 pigs joined them.

A quick way to count the pigs is to say the number we started with and then count on the number that we add. Like this.

Point to the 4 pigs. Four… five, six (point to the two pigs, touching each one as you count). We have 6 pigs. Everyone write 6 as the answer to our problem. (write 6).

Count with the students to ensure they are counting correctly. If students need assistance, assist them in touching each of the pigs as they count.

How many pigs do we have?

Students: 6.

Tutor: Right, we have six pigs. The last thing we need to do is read our sentence. Let’s read it together. Ready, 4 plus 2 equals 6.

Great. Let’s try another one. Look at the box with the butterflies. It says “Five butterflies were flying. Two stopped for a rest. Write the number sentence.”

The first sentence says “Five butterflies were flying.” What would be the first number in our number sentence?

If students give incorrect response, Five butterflies were flying. The first number in our number sentence will be 5. What’s the first number in our number sentence?

Students: 5.
Tutor: **Right, 5 is our first number. Everyone write 5** (write 5). The next part says, “Two stopped for a rest.” If two **stopped** would we add 2 or subtract 2?

If students give incorrect response, **If two stopped we would subtract 2.**

**Right, we’ll subtract 2. Everyone write minus 2 next to the 5** (write – 2).

**Now our math sentence says 5 minus 2. Next we need to add an equal sign. Everyone write an equal sign** (write =).

**Now we need to solve the problem.**

*If students can answer the problem without counting:*

**Write the answer to your math problem 5 minus 2 equals blank.**

Allow students time to write the answer.

**What is the answer to our problem?**

Students: 3.

Tutor: **Good work. The last thing we need to do is read our problem. Let’s read it together. Ready, 5 minus 2 equals 3.**

*If students need assistance figuring out the answer:*

**Tutor:** **We started with 5 butterflies** (point to the 5 butterflies). Two **stopped for a rest. We know we have to subtract 2, so let’s cross out the two butterflies that stopped** (demonstrate). **Now we’ll count how many we have left. Ready, let’s count 1, 2, 3. Everyone write 3 as the answer to our problem** (write 3).

Count with the students to ensure they are counting correctly. If students need assistance, assist them in touching each of the butterflies as they count.

Continue the same process with the next 4 problems on the sheet. Be sure to emphasize the words that cue students to either add or subtract.

After the worksheet has been completed, give students Topic 9 Day 2 Tutoring Sheet 2.
This sheet is just like the one we just did together. I’ll read the stories and you write the number sentence. Remember, each sentence will either be an addition or subtraction sentence.

If there is time remaining, practice the same concept using beans.

You’ve all worked hard today (or other feedback that may be needed), it's now time to fill in our point sheets.

- 3 Points: 6 correct answers
- 2 Points: 4-5 correct answers
- 1 Point: 2-3 correct answers

If students did not master Worksheet 2 continue the next day with Day 3 worksheets. You will follow the same script, using the problems on Day 3.

Proceed to Flash Card Activity for final 10 minutes of session.
Topic 12
Subtraction Facts
Day 1

Objectives
Students will:
Compute subtraction facts through 18-9.

Materials
Review Sheet 11
Topic 12 Day 1 Tutoring Sheets 1-10
Paper
Pencil
Point Sheet

Note to Tutors: Day 1 should be used to assess student’s recall of basic subtraction facts. Topic 12 Day 1 Tutoring Sheets 1-10 should be used. Start with Tutoring Sheet 1 and continue will all 10 sheets.

Mastery Criteria: 100% on all 10 sheets.

If it becomes clear that all students are having difficulty on a specific sheet, stop and move to instruction.

If students don’t reach mastery, move to Topic 12 Days 2-3 activities.

If students reached mastery on all 10 sheets, move to Topic 12 Days 4-6. Every student should spend a minimum of 4 days in Topic 12.

Tutor: Give students Review Sheet 11.

The first thing we need to do today is complete this review sheet. I'll read the questions and you write the answers.

Read directions and allow time for students to answer.

Good work. Now we’re going to work on subtraction facts. I’m going to give you sheets with subtraction problems and you’ll answer them.

Give students Topic 12 Day 1 Tutoring Sheet 1.

The directions say to write the answer to each problem.

If you don’t know the answer, that’s OK, just put an X under the problem.
Give students 2-3 minutes to complete the sheet. Tutors should not assist the students. If students ask for help remind them to put an X if they don’t know the answer.

**Stop, even if you haven’t finished.**

Follow the same procedures for Topic 12 Day 1 Tutoring Sheets 2-10. Remind students to put an X below a problem if they don’t know the answer.

If there is time left, complete this activity:

**Tutor:** Place 15 beans in one pile and 9 beans in another pile.

*There are 1,2,3,4,5..15 (count beans aloud) here. If I take 9 away from the 15, how many will I have left?*

**Students:** 6

**Tutor:** Right, 6. Now you try one.

Give students beans and have them make up their own problems.

*You've all worked hard today* (or other feedback that may be needed), *it's now time to fill in our point sheets.*

*It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.*

*Proceed to Flash Card Activity for final 10 minutes of session.*
Objectives
Students will:
Compute subtraction facts through 18-9.

Materials
Beans
Topic 12 Day 2 Tutoring Sheets 1-9
Bean Circle Subtraction Sheet
Paper
Pencil
Point Sheet

Note to Tutors: Based on assessment results from Day 1 you need to decide where to start your instruction. All students should be working together as a group. The Tutoring Sheets cover the following:

Topic 12 Day 2 Tutoring Sheet 1: minus 0, 1, 2
Topic 12 Day 2 Tutoring Sheet 2: minus 1, 2, 3
Topic 12 Day 2 Tutoring Sheet 3: minus 2, 3, 4
Topic 12 Day 2 Tutoring Sheet 4: minus 3, 4, 5
Topic 12 Day 2 Tutoring Sheet 5: minus 4, 5, 6
Topic 12 Day 2 Tutoring Sheet 6: minus 5, 6, 7
Topic 12 Day 2 Tutoring Sheet 7: minus 6, 7, 8
Topic 12 Day 2 Tutoring Sheet 8: minus 7, 8, 9
Topic 12 Day 2 Tutoring Sheet 9: Review of all facts

Select a sheet that has some facts students will know. For example, if a majority of your students did well with minus 3s, had some difficulty with minus 4s and a lot of difficulty with minus 5s, you would start with Tutoring Sheet 5.

There are two activities to choose from:

1. Using Beans: If you feel your students would benefit from having concrete objects to count, follow the using beans script.

2. Using fingers to subtract: This activity requires students to count to find the answer to the problem.
Using Beans Script

Tutor: Give students at least 18 beans.

Give students Topic 12 Day 2 Tutoring Sheet 1 and Bean Circle Subtraction Sheet.

This script uses Topic 12 Day 2 Tutoring Sheet 1. You should use the appropriate sheet for your students.

The first problem on this page is 8 minus 2 equals blank. I’m going to put 8 beans in the first circle (count out 8 beans).

Now I’m going to subtract 2 beans by moving 2 beans to the second circle (count and move 2 beans).

Next, I’ll move the rest of the beans from the first circle to the last circle and count how many I have left, 1, 2, 3, 4, 5, 6.

Next, I need to read my problem. 8 minus 2 equals 6.

The next problem says 4 minus 2 equals blank. How many beans should I put in the first circle?

If students give incorrect answer, I put 4 beans in the first circle. How many beans do I put in the first circle?

Students: 4.

Tutor: Right! I put 4 beans in the first circle (count out 4 beans).

How many beans do I need to move to the second circle?

If students give incorrect answer, I move 2 beans in the second circle. How many beans do I move to the second circle?

Students: 2.

Tutor: Good. I move 2 beans to the second circle (move 2 beans).

Now I’m going to move the ones left in the first circle to the third circle and see how many I have left (move all beans to the third circle). I have 2 beans. I’ll write that for my answer and read the problem. 4 minus 2 equals 2.
Follow the same procedure for additional problems until students feel comfortable.

**Great work. Now you’re going to finish the rest of the page by yourself.** You can use the beans if they help you, but you don’t have to use them if you can answer the problems without them. Remember, you also can count up for subtraction.

Observe students to ensure they are completing the problems correctly. Provide individual assistance if needed.

**You've all worked hard today** (or other feedback that may be needed), it's now time to fill in our point sheets.

*It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.*

*If second activity, proceed to Flash Card Activity for final 10 minutes of session.*
**Using Fingers to Subtract Script**

**Tutor:** Give students Topic 12 Day 2 Tutoring Sheet 1.

*This script uses Topic 12 Day 2 Tutoring Sheet 1. You should use the appropriate sheet for your students.*

The first problem on this page is 8 minus 2. I use my fingers to subtract 2. 8 minus 2 tells me to start with 8: 1,2,3,4,5,6,7,8 (demonstrate, counting each finger as you put it up). **8** minus **2** tells me to take **2** away. So I use my fingers to show how I take **2** away: 1 (put finger down), 2 (put another finger down). **Now I only have 6** fingers up. That’s 8 minus 2. That’s like saying “8 minus 2 equals 6.”

So, I'll write 6 for my answer (write 6).

Next, I need to read my problem. 8 minus 2 equals 6.

Let’s do the next problem together. This says 4 minus 2 equals blank. What number do we start with?

**Students:** Respond.

**Tutor:** If students give incorrect answer: We start with 4. What number do we start with?

**Students:** Respond.

**Tutor:** Right, we start with 4. Do what I do. Start with 4: 1 (put finger up), 2 (put another finger up), 3 (put another finger up), 4 (put another finger up) **and** take away 2. Let’s use our fingers to show how to take 2 away: 1 (push one finger down), 2 (push another finger down).

No how many fingers do you have up?

**Students:** 2.

**Tutor:** Good, you have 2 fingers up so the answer is 2. 4 minus 2 equals 2. Let’s write 2 for our answer (write 2 and observe students).

Now let’s read the problem together. Ready, 4 minus 2 equals 2.

Follow the same procedure with additional problems until students feel comfortable.
Great work. Now you’re going to finish the rest of the page by yourself. You can use the beans if they help you, but you don’t have to use them if you can answer the problems without them. Remember, you also can count up for subtraction.

Observe students to ensure they are completing the problems correctly. Provide individual assistance if needed.

You've all worked hard today (or other feedback that may be needed), it's now time to fill in our point sheets.

*It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.*

*If second activity, proceed to Flash Card Activity for final 10 minutes of session.*
Objectives
Students will:
Subtract basic math facts

Materials
Selected Game Boards
Beans
Pencil
Point Sheet

Note to Tutor: There are 3 games/activities for this Topic. You may want to use all 3 or select just 1 or 2 your students will enjoy playing. Students should use the beans to solve the problems as long as needed. However, if they do not need them, encourage them not to use them.

Game 1: Bingo
Game 2: Concentration
Game 3: File Folders
Bingo Script

Objectives
Students will:
Complete subtraction problems.

Materials
Bingo Game Sheets
Beans
Pencil
Point Sheet

Tutor: Today we're going to continue practicing our subtraction facts by playing a game of Bingo. Each of you will have a Bingo card with subtraction problems on it. I'll read a card with a subtraction problem on it. You will see if you have that problem. If you have the problem and can answer it, you will be able to mark the box. You have to correctly answer the problem before you can mark it. Remember, you count up for subtraction. If you would like to use the beans, you may. The first one who covers all of their squares is the winner. Are there any questions?

Allow time for questions and answers.

Select a card, read it, make sure students have the correct answer.

You've all worked hard today (or other feedback that may be needed), it's now time to fill in our point sheets.

It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.

If second activity, proceed to Flash Card Activity for final 10 minutes of session.
**Concentration Script**

**Objectives**

Students will:

Answer subtraction problems.

**Materials**

Concentration Game Sheets

Beans

Pencil

Point Sheet

**Tutor:** Today we're going to continue practicing our subtraction facts by playing a game of Concentration.

Place the concentration cards face down on the table.

We’re going to play a game of concentration. You’ll select one card with a subtraction problem on it and another card with the answer on it. If the cards match, you’ll be able to keep the pair. If they don’t match you’ll turn them back over and the next person will take their turn. Are there any questions? Remember, you count up for subtraction.

Allow time for questions and answers.

You've all worked hard today (or other feedback that may be needed), it's now time to fill in our point sheets.

It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.

If second activity, proceed to Flash Card Activity for final 10 minutes of session.
**File Folders Script**

**Objectives**

Students will:

- Answer subtraction problems.

**Materials**

- File Folder Game Sheets
- Beans
- Pencil
- Point Sheet

**Tutor:**

Today we'll continue working on our subtraction facts by using these sheets.

Give Students Worksheets folded in half vertically.

Today I want you to answer these subtraction problems. You’ll write the answer next to the problem. Once you have answered all of the problems, you can open up the fold and check your answers. Remember, you count up for subtraction. Use the beans if you need to.

Are there any questions?

Answer any questions.

You've all worked hard today (or other feedback that may be needed), it's now time to fill in our point sheets.

*It will be difficult for you to determine the correct number of answers. If students are working hard and answering a majority of their problems correctly, they should receive 3 points.*

*If second activity, proceed to Flash Card Activity for final 10 minutes of session.*
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Number Rockets:
First-Grade Small-Group Tutoring
Book 2 – Supporting Materials

Written by Lynn Fuchs, Kim Paulsen, and Douglas Fuchs

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Introduction

This Materials Manual contains the student worksheets and materials for the 17 topics covered in the First-Grade Small-Group Tutoring to Prevent Math Disability.

The Materials Manual is organized as follows:
   - **Section 1**: The worksheets and materials needed for Topics 1-17.
   - **Section 2**: The review sheets for topics 2-17.
   - **Section 3**: Forms to keep track of student progress and behavior.
   - **Section 4**: Posters and materials for the daily flash card activity.

With First-Grade Small-Group Tutoring to Prevent Math Disability, tutoring sessions take place 3 times per week. Each session lasts for 40 minutes. Each lesson is divided as follows:
   - **First 30 minutes**: Tutor conducts the lesson script for that day. The script is provided in this manual. You also need the accompanying materials, which are provided in the Materials Manual.
   - **Last 10 minutes**: Students work on a flash card activity designed to increase their fluency on addition and subtraction facts through 18. Scripts for the first 8 days of flash card practice are included in the last section of this manual. The flash cards and a daily script to be laminated for use after Day 8 are provided in the Materials Manual.

All of the lessons are presented in the form of scripts. These scripts were designed as guides to assist tutors in using this program. You should study the script, along with the materials, prior to the day you conduct that lesson. However, you should not read the script.
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<td>How many? _________</td>
</tr>
<tr>
<td>Add 5.</td>
<td>Subtract 3.</td>
</tr>
<tr>
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<th>Subtract 8.</th>
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<tbody>
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<tr>
<td>Subtract 0.</td>
<td>Add 4.</td>
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<tr>
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<td>☐ ☐ ☐ ☐ ☐ ☐</td>
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<th>Subtract 0.</th>
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</thead>
<tbody>
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<td>How many?</td>
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<tr>
<td>→ → → → → → → →</td>
<td>→ → → → → → → →</td>
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<tr>
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<tr>
<td>🐦 🐦</td>
<td>3333</td>
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<td>3333</td>
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<td></td>
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<th>Subtract 0.</th>
</tr>
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<tbody>
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<td>How many?</td>
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<td>3333</td>
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<td>→ →</td>
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<td>78</td>
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<tr>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Add 0.</th>
<th>Subtract 8.</th>
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</thead>
<tbody>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
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<table>
<thead>
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<th>Add 9.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
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</tr>
<tr>
<td>How many?</td>
<td>How many?</td>
</tr>
<tr>
<td>☺ ☺ ☺ ☺</td>
<td>☺ ☺ ☺ ☺</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Add 7.</th>
<th>Subtract 8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many?</td>
<td>How many?</td>
</tr>
<tr>
<td>X X X X X</td>
<td>X X X X X X</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How many?</td>
<td>How many?</td>
</tr>
<tr>
<td>♦ ♦</td>
<td>♦ ♦ ♦ ♦ ♦ ♦</td>
</tr>
</tbody>
</table>

Subtract 4.
<table>
<thead>
<tr>
<th>Add 6.</th>
<th>Add 7.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
</tr>
</tbody>
</table>

<table>
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<th></th>
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</thead>
<tbody>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
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</tbody>
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<table>
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<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How many? _________</td>
<td>How many? _________</td>
</tr>
</tbody>
</table>
Four pigs were walking. Two pigs joined them. Write the number sentence.

<table>
<thead>
<tr>
<th>Four pigs</th>
<th>Two pigs</th>
</tr>
</thead>
</table>

Five butterflies were flying. Two stopped for a rest. Write the number sentence.

<table>
<thead>
<tr>
<th>Five butterflies</th>
<th>Two butterflies</th>
</tr>
</thead>
</table>

Six dogs were playing. Five dogs came to play with them. Write the number sentence.

<table>
<thead>
<tr>
<th>Six dogs</th>
<th>Five dogs</th>
</tr>
</thead>
</table>

Six ladybugs were sitting. Two crawled away. Write the number sentence.

<table>
<thead>
<tr>
<th>Six ladybugs</th>
<th>Two ladybugs</th>
</tr>
</thead>
</table>

Seven turtles were sitting in the sun. Three went swimming. Write the number sentence.

<table>
<thead>
<tr>
<th>Seven turtles</th>
<th>Three turtles</th>
</tr>
</thead>
</table>

Eight fish were swimming. Five fish joined them. Write the number sentence.

<p>| Eight fish | Five fish |</p>
<table>
<thead>
<tr>
<th>Four horses were galloping. Two horses joined them. Write the number sentence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine dogs were playing. Two walked away. Write the number sentence.</td>
</tr>
<tr>
<td>Eleven alligators were playing. Three went home. Write the number sentence.</td>
</tr>
<tr>
<td>Four cows were in the barn. Two cows joined them. Write the number sentence.</td>
</tr>
<tr>
<td>Ten frogs were sitting. Two went swimming. Write the number sentence.</td>
</tr>
<tr>
<td>Six cats were sitting. Four cats joined them. Write the number sentence.</td>
</tr>
<tr>
<td>Four butterflies were flying. One butterfly joined them. Write the number sentence.</td>
</tr>
<tr>
<td>Nine dogs were playing. Three stopped for a rest. Write the number sentence.</td>
</tr>
<tr>
<td>Twelve fish were in the water. Three jumped out. Write the number sentence.</td>
</tr>
<tr>
<td>Ten turtles were running. Four stopped running. Write the number sentence.</td>
</tr>
<tr>
<td>Nine penguins were playing. Nine penguins joined them. Write the number sentence.</td>
</tr>
<tr>
<td>Twelve cats were jumping. Three went home. Write the number sentence.</td>
</tr>
</tbody>
</table>
Five alligators were dancing. Two alligators joined them. Write the number sentence.

Eleven snakes were resting. Four slithered away. Write the number sentence.

I had eight flowers. My friend gave me five flowers. Write the number sentence.

There were six trees in the backyard. One tree blew over. Write the number sentence.

Five frogs were sitting. Two went swimming. Write the number sentence.

Four fish were swimming. Three fish joined them. Write the number sentence.
Write the answer to each problem.

\[
\begin{array}{cccccc}
9 & 5 & 0 & 2 & 7 \\
-0 & -0 & -0 & -0 & -0 \\
\end{array}
\]

\[
\begin{array}{cccccc}
8 & 1 & 3 & 6 & 4 \\
-0 & -0 & -0 & -0 & -0 \\
\end{array}
\]
Write the answer to each problem.

\[
\begin{array}{cccccc}
1 & 8 & 6 & 0 & 7 \\
-1 & -1 & -1 & -1 & -1 \\
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 4 & 3 & 2 & 5 \\
-1 & -1 & -1 & -1 & -1 \\
\end{array}
\]
Write the answer to each problem.

\[
\begin{array}{cccccc}
4 & 8 & 6 & 3 & 10 \\
\underline{-2} & \underline{-2} & \underline{-2} & \underline{-2} & \underline{-2}
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 5 & 2 & 7 & 11 \\
\underline{-2} & \underline{-2} & \underline{-2} & \underline{-2} & \underline{-2}
\end{array}
\]
Write the answer to each problem.

\[
\begin{array}{ccccc}
7 & 4 & 3 & 10 & 5 \\
-3 & -3 & -3 & -3 & -3 \\
\end{array}
\]

\[
\begin{array}{ccccc}
8 & 9 & 11 & 12 & 6 \\
-3 & -3 & -3 & -3 & -3 \\
\end{array}
\]
Write the answer to each problem.

\[
\begin{align*}
4 & \quad 8 & \quad 6 & \quad 13 & \quad 10 \\
-4 & \quad -4 & \quad -4 & \quad -4 & \quad -4
\end{align*}
\]

\[
\begin{align*}
9 & \quad 5 & \quad 12 & \quad 7 & \quad 11 \\
-4 & \quad -4 & \quad -4 & \quad -4 & \quad -4
\end{align*}
\]
Write the answer to each problem.

\[
\begin{align*}
7 & \quad 14 & \quad 13 & \quad 10 & \quad 5 \\
-5 & \quad -5 & \quad -5 & \quad -5 & \quad -5 \\
\end{align*}
\]

\[
\begin{align*}
8 & \quad 9 & \quad 11 & \quad 12 & \quad 6 \\
-5 & \quad -5 & \quad -5 & \quad -5 & \quad -5 \\
\end{align*}
\]
Write the answer to each problem.

\[
\begin{array}{cccccc}
14 & 8 & 6 & 13 & 10 \\
-6 & -6 & -6 & -6 & -6 \\
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 15 & 12 & 7 & 11 \\
-6 & -6 & -6 & -6 & -6 \\
\end{array}
\]
Write the answer to each problem.

7  14  13  10  15
-7  -7  -7  -7  -7

8  9  11  12  16
-7  -7  -7  -7  -7
Write the answer to each problem.

14 8 16 13 10
-8 -8 -8 -8 -8

9 15 12 17 11
-8 -8 -8 -8 -8
Write the answer to each problem.

17  14  13  10  15
- 9  - 9  - 9  - 9  - 9

18  9  11  12  16
- 9  - 9  - 9  - 9  - 9
8  4  9  1  5
-2 -2 -0 -1 -0

8  6  3  0  6
-1 -2 -2 -0 -1

2  0 10  9  7
-0 -1 -2 -2 -0

7  8  5  1  9
-1 -0 -2 -0 -1

2  4  3  7  3
-2 -1 -0 -2 -1

6 11  2  4  5
-0 -2 -1 -0 -1
Topic 12 Day 2 Tutoring Sheet 2
(Minus 1, 2, 3)

\[
\begin{array}{cccccc}
1 & 4 & 7 & 8 & 4 \\
-1 & -2 & -3 & -1 & -3 \\
\end{array}
\]

\[
\begin{array}{cccccc}
8 & 6 & 3 & 10 & 6 \\
-2 & -1 & -3 & -3 & -2 \\
\end{array}
\]

\[
\begin{array}{cccccc}
5 & 3 & 10 & 8 & 7 \\
-3 & -2 & -1 & -3 & -1 \\
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 11 & 10 & 4 & 5 \\
-1 & -3 & -2 & -1 & -2 \\
\end{array}
\]

\[
\begin{array}{cccccc}
2 & 3 & 12 & 9 & 6 \\
-2 & -1 & -3 & -2 & -3 \\
\end{array}
\]

\[
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9 & 7 & 2 & 11 & 5 \\
-3 & -2 & -1 & -2 & -1 \\
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<td>-2</td>
<td>-3</td>
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</table>
Topic 12 Day 2 Tutoring Sheet 4
(Minus 3, 4, 5)

\[
\begin{array}{cccc}
7 & 4 & 7 & 4 & 14 \\
-3 & -4 & -5 & -3 & -5 \\
\end{array}
\]

\[
\begin{array}{cccc}
8 & 3 & 13 & 6 & 10 \\
-4 & -3 & -5 & -4 & -3 \\
\end{array}
\]

\[
\begin{array}{cccc}
10 & 13 & 5 & 5 & 8 \\
-5 & -4 & -3 & -5 & -3 \\
\end{array}
\]

\[
\begin{array}{cccc}
8 & 9 & 10 & 9 & 5 \\
-5 & -5 & -4 & -3 & -4 \\
\end{array}
\]

\[
\begin{array}{cccc}
11 & 9 & 11 & 6 & 12 \\
-3 & -4 & -5 & -5 & -4 \\
\end{array}
\]

\[
\begin{array}{cccc}
7 & 12 & 12 & 11 & 6 \\
-4 & -3 & -5 & -4 & -3 \\
\end{array}
\]
Topic 12 Day 2 Tutoring Sheet 5
(Minus 4, 5, 6)

8    12    13    5    8
- 5   - 6   - 6   - 5   - 4

6    4    9    7    11
- 6   - 4   - 5   - 6   - 6

13   11   10   12   6
- 4   - 5   - 6   - 5   - 4

13   10   15    9    6
- 5   - 4   - 6   - 4   - 5

5    14   12    9    7
- 4   - 6   - 4   - 6   - 5

10    7   14    8   11
- 5   - 4   - 5   - 6   - 4
(Minus 5, 6, 7)

13  9  12  8  6
- 5 - 7 - 7 - 5 - 6

11  13  16  6  5
- 7 - 6 - 7 - 6 - 5

9  8  7  6  15
- 6 - 7 - 5 - 5 - 7

13  11  15  10  14
- 7 - 6 - 6 - 7 - 5

12  9  7  11  14
- 6 - 5 - 7 - 5 - 6

10  7  14  8  12
- 5 - 6 - 7 - 6 - 5
Topic 12 Day 2 Tutoring Sheet 7
(Minus 6, 7, 8)

\[
\begin{array}{cccccc}
7 & 14 & 12 & 13 & 8 \\
-7 & -8 & -8 & -6 & -7 \\
\end{array}
\]

\[
\begin{array}{cccccc}
10 & 16 & 7 & 12 & 10 \\
-6 & -7 & -6 & -7 & -8 \\
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 15 & 14 & 15 & 11 \\
-8 & -8 & -6 & -7 & -6 \\
\end{array}
\]

\[
\begin{array}{cccccc}
14 & 6 & 17 & 11 & 8 \\
-7 & -6 & -8 & -8 & -6 \\
\end{array}
\]

\[
\begin{array}{cccccc}
16 & 11 & 8 & 9 & 13 \\
-8 & -7 & -8 & -6 & -7 \\
\end{array}
\]

\[
\begin{array}{cccccc}
10 & 15 & 13 & 12 & 9 \\
-7 & -6 & -8 & -6 & -7 \\
\end{array}
\]
Topic 12 Day 2 Tutoring Sheet 8
(Minus 7, 8, 9)

\[
\begin{array}{cccccc}
14 & 11 & 10 & 11 & 15 \\
- \hspace{5mm} 8 & - \hspace{5mm} 9 & - \hspace{5mm} 7 & - \hspace{5mm} 8 & - \hspace{5mm} 7 \\
\end{array}
\]

\[
\begin{array}{cccccc}
16 & 8 & 17 & 11 & 8 \\
- \hspace{5mm} 8 & - \hspace{5mm} 7 & - \hspace{5mm} 9 & - \hspace{5mm} 7 & - \hspace{5mm} 8 \\
\end{array}
\]

\[
\begin{array}{cccccc}
12 & 10 & 13 & 12 & 7 \\
- \hspace{5mm} 7 & - \hspace{5mm} 9 & - \hspace{5mm} 8 & - \hspace{5mm} 9 & - \hspace{5mm} 7 \\
\end{array}
\]

\[
\begin{array}{cccccc}
14 & 15 & 9 & 14 & 10 \\
- \hspace{5mm} 7 & - \hspace{5mm} 9 & - \hspace{5mm} 7 & - \hspace{5mm} 9 & - \hspace{5mm} 8 \\
\end{array}
\]

\[
\begin{array}{cccccc}
9 & 16 & 9 & 15 & 18 \\
- \hspace{5mm} 8 & - \hspace{5mm} 7 & - \hspace{5mm} 9 & - \hspace{5mm} 8 & - \hspace{5mm} 9 \\
\end{array}
\]

\[
\begin{array}{cccccc}
13 & 16 & 12 & 13 & 17 \\
- \hspace{5mm} 9 & - \hspace{5mm} 9 & - \hspace{5mm} 8 & - \hspace{5mm} 7 & - \hspace{5mm} 8 \\
\end{array}
\]
Write the answer to each problem.

\[
\begin{align*}
16 &- 8 & &12 &- 4 & &17 &- 9 & &6 &- 2 & &10 &- 6 & &14 &- 7 & &5 &- 0 & &9 &- 3 \\
14 &- 6 & &11 &- 5 & &8 &- 3 & &15 &- 8 & &12 &- 9 & &3 &- 2 & &16 &- 9 & &13 &- 8 \\
9 &- 1 & &13 &- 5 & &15 &- 6 & &10 &- 8 & &7 &- 7 & &12 &- 9 & &11 &- 9 & &14 &- 8 \\
18 &- 9 & &12 &- 6 & &10 &- 5 & &14 &- 9 & &13 &- 4 & &11 &- 3 & &16 &- 7 & &10 &- 4 \\
9 &- 7 & &13 &- 6 & &7 &- 4 & &12 &- 8 & &6 &- 1 & &4 &- 2 & &9 &- 5 & &11 &- 4 \\
8 &- 5 & &15 &- 7 & &6 &- 0 & &14 &- 5 & &13 &- 9 & &12 &- 5 & &11 &- 6 & &17 &- 8
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<td>_____ tens _____ ones</td>
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<td>Counting by 5’s. Fill in the blanks:</td>
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<td>Write the number.</td>
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<td>4 tens 9 ones = ______</td>
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Number Rockets Volume 1

Sequence of Topics

**Topic 1: Identifying and Writing Numbers**
Day 1: Assessment of counting, identifying numbers, and writing numbers
Day 2: Counting objects, number words, writing numbers to 99
Day 3: Counting objects, number words, writing numbers to 99

**Topic 2: Identifying More & Less Objects**
Day 1: More, less, equal objects
Day 2: More, less, equal objects
Day 3: More, less, equal objects

**Topic 3: Sequencing Numbers**
Day 1: Numbers before, after, between
Day 2: Identifying smallest and largest numbers
Day 3: Completing a sequence of numbers

**Topic 4: Using <, >, and = signs**
Day 1: Writing <, > sentences
Day 2: Using <, >, and = signs
Day 3: Using <, >, and = signs

**Topic 5: Skip Counting by 10s, 5s, 2s**
Day 1: Assessment of skip counting
Day 2: Skip counting by 10s, 5s, 2s
Day 3: Skip counting by 10s, 5s, 2s

**Topic 6: Introduction to Place Value**
Day 1: Introducing 10s and 1s
Day 2: Identifying 10s and 1s
Day 3: Identifying 10s and 1s

**Topic 7: Place Value**
Day 1: Representing 10s and 1s
Day 2: Representing 10s and 1s
Day 3: Representing 10s and 1s

**Topic 8: Identifying Operations**
Day 1: Fill in “+” or “-” sign
Day 2: Fill in “+” or “-” sign
Day 3: Fill in “+” or “-” sign

**Topic 9: Writing Addition and Subtraction Sentences**
Day 1: Addition and subtraction using pictures
Day 2: Writing number sentences using pictures
Day 3: Writing number sentences using pictures
Number Rockets Volume 1

Sequence of Topics (Con't)

**Topic 10: Place Value**
- Day 1: Identifying 10s and 1s place
- Day 2: Identifying 10s and 1s place
- Day 3: Identifying 10s and 1s place

**Topic 11: Addition Facts**
- Day 1: Assessment of addition facts
- Day 2: Addition facts
- Day 3: Addition facts
- Days 4-6: Addition facts

**Topic 12: Subtraction Facts**
- Day 1: Assessment of subtraction facts
- Day 2: Subtraction facts
- Day 3: Subtraction facts
- Days 4-6: Subtraction facts

**Topic 13: Addition and Subtraction Facts Review**
- Days 1-3: Addition and subtraction facts review

**Topic 14: Place Value Review**
- Day 1: Review of place value, identify <, >, =
- Day 2: Review of place value, identify <, >, =
- Day 3: Review of place value, identify <, >, =

**Topic 15: Two-Digit Addition**
- Day 1: Using Base 10 Blocks for 2-digit addition
- Day 2: Computing 2-digit addition problems
- Day 3: Computing 2-digit addition problems
- Day 4: Computing 2-digit addition problems
- Day 5: Computing 2-digit addition problems
- Day 6: Computing 2-digit addition problems

**Topic 16: Two-Digit Subtraction**
- Day 1: Using Base 10 Blocks for 2-digit subtraction
- Day 2: Computing 2-digit subtraction problems
- Day 3: Computing 2-digit subtraction problems
- Day 4: Computing 2-digit subtraction problems
- Day 5: Computing 2-digit subtraction problems
- Day 6: Computing 2-digit subtraction problems

**Topic 17: Missing Addends**
- Day 1: Identifying missing addends in addition problems
- Day 2: Identifying missing addends in addition problems
- Day 3: Identifying missing addends in addition problems