LESSON 8.3

**Hands On • Subtract Tens**

**FOCUS**

**Common Core State Standards**
- 1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

**Mathematical Practices** (See Mathematical Practices in GO Math! in the Planning Guide for full text.)
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP6 Attend to precision.
- MP8 Look for and express regularity in repeated reasoning.

**LEARNING OBJECTIVE**

Draw a model to subtract tens.

**LANGUAGE OBJECTIVE**

Children explain to a partner step-by-step how to subtract tens.

**MATERIALS**

MathBoard, base-ten blocks, connecting cubes, Workmats 3 and 8 (see eTeacher Resources)

**About the Math**

**Professional Development**

** MPI Make sense of problems and persevere in solving them.**

Skilled problem solvers use many approaches to find an answer after they have worked out what the problem means and what question needs to be answered. One approach often used is to create a similar but simpler problem to help determine a way to find the answer.

Given a problem such as 30 – 10, better problem solvers will not count out 30 counters, remove 10 counters, and count to find the difference. Instead, they will first work to make sense of the problem. They may find that if they think of 30 as 3 tens and 10 as 1 ten, they can simply use something they already know (3 – 1 = 2) to help them understand that 30 – 10 can be thought of as 3 tens – 1 ten = 2 tens, or 20.

**Professional Development Videos**
How can you subtract tens?

Making Connections

Ask children to tell what they know about modeling tens.

- **How can you model ten?**
  - I can build a ten-cube train.
  - I can draw a quick picture of ten. I can use one tens-block to show ten.

- **How would you model 30?**
  - Possible answer: 3 tens blocks

- **How would you model 48?**
  - Possible answer: 4 tens blocks and 8 ones blocks

Learning Activity

What problem are children trying to solve? Connect the story to the problem. Ask the following questions.

- **When you model a ten, is it easier to show ten ones or one ten?**
  - 1 ten
  - Why? Possible answer: Because it is easier to think of one group of ten than to think of ten individual ones.

- **How is subtracting tens similar to subtracting ones?**
  - Possible answer: To subtract ones or tens, I model the ones or the tens, cross out to show subtraction, and count what is left.

Literacy and Mathematics

Choose from one or more of the following activities.

- Give children a start number, such as 60, and have them count back 3 tens. Repeat with other start numbers.

- As a class, write a story that starts with 90 objects and keeps subtracting ten until zero remain.

Fluency Builder

Subtraction Circle

Materials Math Mountain Cards (see eTeacher Resources)

Divide the class into small groups. Have each group form a circle on the floor. Give a volunteer in each group a stack of Math Mountain Cards with facts within 10.

Explain that children should pass the cards around the circle, each child taking one card. When a child receives a card, the child should use the numbers on the card to write a subtraction fact.

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10 - 6 = 4
10 - 4 = 6
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Pages 52–53 in Strategies and Practice for Skills and Facts Fluency provide additional fluency support for this lesson.
**Strategy:** Understand Context

Write $6 - 2 = \underline{\hspace{1cm}}$. Show the problem with base-ten blocks.

Then write $60 - 20 = \underline{\hspace{1cm}}$. Show 6 tens blocks.

- I start with 6 tens blocks or 60. I take away 20 or 2 tens blocks. Take away the 2 tens. I have 4 tens or 40 left. $60 - 40 = 20$.

- How is subtracting 2 from 6 and 20 from 60 similar? How is it different? Use the base-ten blocks to show the difference between subtracting tens and subtracting ones.
Model and Draw

MP4 Model with mathematics. Work through the model and the pictures together.

- What can you draw to show the subtraction for $80 - 30$? I can draw 8 tens, circle 3 tens, and mark with an X to show 3 tens taken away.

- How can you find the difference for $80 - 30$? Possible answer: I can start with 8 tens and take away 3 tens. I count how many tens are left. There are 5 tens left, or 50.

- What other ways can you use to solve $80 - 30$? Possible answers: I can think $8$ tens $- 3$ tens is 5 tens, or 50; I can use tens blocks; I can count back by tens from 80.

Share and Show

As children complete Exercises 1–4, have them use base-ten blocks to show the difference, draw quick pictures, and explain their work.

- In Exercise 1, is the difference 4 or 40? Explain. The difference is 40. There are 4 tens in 40, but 4 on its own means 4 ones.

- How do you know your answer is correct? Possible answer: My drawing shows tens so my answer must be written as tens.

Quick Check

If a child misses the checked exercises

Then Differentiate Instruction with

- Reteach 8.3
- Personal Math Trainer 1.NBT.C.6
- RtI Tier 1 Activity (online)

COMMON ERRORS

Error Children add instead of subtract.

Example For Exercise 1, children write the difference for $60 - 20$ as 80.

Springboard to Learning Have children point to and identify the minus sign. Suggest that they circle the sign as a reminder to subtract. Have children use their quick pictures to check the difference by counting the tens that are not crossed out.
On Your Own

MP6 Attend to precision. If children answered Exercises 3 and 4 correctly, assign Exercises 5–9. Children may continue to use base-ten blocks if they need to.

5. \[80 - 40 = \underline{40}\]

6. \[90 - 70 = \underline{20}\]

Exercise 9 requires children to use higher order thinking skills. Have children write the subtraction sentence for the story and the related addition sentence. Children can use a basic fact to identify the number, that when added to 1, will give a sum of 4. Children can then apply this strategy to adding 1 ten and 3 tens for a sum of 4 tens.

Math on the Spot

Video Tutor

Use this video to help children model and solve this type of Think Smarter problem.


TAKE HOME ACTIVITY • Ask your child to explain how to use tens to find \( 90 - 70 \).

Jeff has 40 pennies. He gives some to Jill. He has 10 pennies left. How many pennies does Jeff give to Jill?

30 pennies

Think Smarter

Solve.

9. Jeff has 40 pennies. He gives some to Jill. He has 10 pennies left. How many pennies does Jeff give to Jill?

Take Home Activity • Ask your child to explain how to use tens to find \( 90 - 70 \).

Chapter 8 • Lesson 3

DIFFERENTIATED INSTRUCTION

INDEPENDENT ACTIVITIES

Grab & Go!

Differentiated Centers Kit

Activities

Groups of Ten

Children complete blue Activity Card 14 by modeling groups of 10.

Literature

It’s a Homerun!

Children read the book and add baseball cards.
# Mid-Chapter Checkpoint

## Concepts and Skills

Add or subtract. *(1.OA.C.6)*

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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>4</td>
<td>+8</td>
<td>2.</td>
<td>15</td>
<td>-7</td>
<td>3.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>8</td>
<td></td>
<td>8</td>
<td>3</td>
<td></td>
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</table>

7. 30 + 50 = 80
8. 40 + 20 = 60

Use ☐. Draw to show tens. Write the sum. Write how many tens. *(1.NBT.C.4)*

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>7</td>
<td>8 tens</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>6 tens</td>
<td></td>
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</tbody>
</table>

9. 90 − 20 = 70
10. 60 − 40 = 20

Use ☐. Draw to show tens. Write the difference. Write how many tens. *(1.NBT.C.6)*

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<thead>
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<tbody>
<tr>
<td>9</td>
<td>7 tens</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>2 tens</td>
<td></td>
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</table>

11. **THINK SMARTER** Mike has 60 marbles. He gives 20 to Kathy. How many marbles does Mike have left? Show your work. *(1.NBT.C.6)*

40 marbles

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## Formative Assessment

Use the **Mid-Chapter Checkpoint** to assess children’s learning and progress in the first half of the chapter. The formative assessment provides the opportunity to adjust teaching methods for individual or whole class instruction.

**THINK SMARTER**

Exercise 11 assesses whether children can subtract tens. Children who answer incorrectly may add instead of subtract. Another common error is to write 4 tens as 4 rather than 40. Use place-value manipulatives, quick drawings, or a hundreds chart to reinforce the similarities between 4, 4 tens, and 40.

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## Data-Driven Decision Making

Based on the results of the Mid-Chapter Checkpoint, use the following resources to strengthen individual or whole class instruction.

<table>
<thead>
<tr>
<th>Item</th>
<th>Lesson</th>
<th>Standards</th>
<th>Common Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–6</td>
<td>8.1</td>
<td>1.OA.C.6</td>
<td>May confuse operation symbols</td>
</tr>
<tr>
<td>7, 8</td>
<td>8.2</td>
<td>1.NBT.C.4</td>
<td>May incorrectly model tens</td>
</tr>
<tr>
<td>9–11</td>
<td>8.3</td>
<td>1.NBT.C.6</td>
<td>May add instead of subtract</td>
</tr>
</tbody>
</table>

**Key:** R—Reteach (in the *Chapter Resources*)
**Practice and Homework**

Use the Practice and Homework pages to provide children with more practice of the concepts and skills presented in this lesson. Children master their understanding as they complete practice items and then challenge their critical thinking skills with Problem Solving. Use the Write Math section to determine children’s understanding of content for this lesson. Encourage children to use their Math Journals to record their answers.

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**Subtract Tens**

Draw to show tens. Write the difference. Write how many tens.

1. \(40 - 10 = \) __________
   - Draw tens:
   - Write the difference:
   - Write how many tens: __________ tens

2. \(80 - 40 = \) __________
   - Draw tens:
   - Write the difference:
   - Write how many tens: __________ tens

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**Problem Solving**

Draw tens to solve.

3. Mario has 70 baseball cards. He gives 30 to Lisa. How many baseball cards does Mario have left?
   - Draw tens:
   - Write the difference:
   - Write how many baseball cards: __________

4. **Write Math** Draw a picture to show how to solve \(50 - 40\).
   - Check children’s work.
Lesson Check (1.NBT.C.6)
1. What is the difference?
   Write the number.
   \[60 - 20 = 40\]
2. What is the difference?
   Write the number.
   \[70 - 30 = 40\]

Spiral Review (1.OA.C.6, 1.NBT.B.3)
3. Use \(\bigcirc\) and a ten frame. Show both addends. Draw to make ten.
   Then write a new fact. Add.
   \[
   \begin{array}{c}
   9 \\
   + 4 \\
   \hline
   13
   \end{array}
   \]

4. Bo crosses out the number cards that are less than 33 or greater than 38.
   What number cards are left?
   Number cards 36 and 37 are left.

Continue concepts and skills practice with Lesson Check. Use Spiral Review to engage children in previously taught concepts and to promote content retention. Common Core standards are correlated to each section.

Monitoring Common Core Success

Maintaining Focus on the Major Work
Part of the major work in Grade 1 is to solve problems involving addition and subtraction (1.OA.A). In Lesson 8.1, children add and subtract within 20 using a strategy they have already learned. In Lesson 8.2, children add a two-digit number to a multiple of ten (1.NBT.C.4). Then they learn to subtract multiples of 10 from multiples of 10 using base-ten blocks for modeling (1.NBT.C.6). Through the use of basic facts, mathematics modeling, and problem solving tools, children become more prepared to solve advanced addition problems.

Connecting Content Across Domains and Clusters
In Lesson 8.1, a connection is made between Cluster 1.OA.C and Cluster 1.NBT.C, children use strategies such as doubles minus one, related facts, and drawings to add and subtract within 20. They will connect Cluster 1.OA.C to Cluster 1.NBT.C in Lessons 8.2 and 8.3 when children use base ten models and quick pictures to add and subtract tens. Both of these clusters can be directly connected to Cluster 1.OA.A. Children use the skills attained in Lessons 8.1–8.3 to solve addition and subtraction word problems.

Building Fluency
In Lesson 8.1, children add and subtract within 20 (1.OA.C.6). Addition and subtraction skills continue to expand while children work to add and subtract tens. Fluency in addition and subtraction and the process of using appropriate problem solving strategies is further advanced in Lessons 8.2–8.3. Children use applicable mathematics tools, quantitative reasoning, mathematical modeling, and abstract thinking to become fluent in adding and subtracting within 10.