MA.1.NSO.2.5

Overarching Standard: *MA.1.NSO.2. Develop an understanding of addition and subtraction operations with one- and two-digit numbers.*

Benchmark of Focus

MA.1.NSO.2.5: Explore subtraction of a one-digit number from a two-digit number.

Example: Finding 37 - 6 is the same as asking, "What number added to 6 makes 37?"

Benchmark Clarifications:

Clarification 1: Instruction focuses on utilizing the number line as a tool for subtraction through "counting on" or "counting back." The process of counting on highlights subtraction as a missing addend problem.

Clarification 2: Instruction includes the use of manipulatives, drawings, or equations to decompose tens and regroup ones, when needed.

Related Benchmark/Horizontal Alignment

- MA.1.NSO.1.1/1.3
- MA.1.M.2.2/2.3

Vertical Alignment	
Previous Benchmarks MA.K.NSO.2.1 MA.K.NSO.3.1/3.2	Next Benchmarks MA.2.NSO.2.3/2.4

Purpose and Instructional Strategies

The purpose of this benchmark is to deepen students' understanding of place value while students explore subtraction. There is no expectation of procedural reliability until grade 2 withinthis given range. In Kindergarten, students explored subtracting within 20 and subtracting within 10 with procedural reliability. In Kindergarten students counted forward to 100 by 1s and 10s and backward by 1s within 20.

- Instruction focuses on choosing a strategy that makes sense to the student based on thegiven numbers, while guiding students to appropriate and more efficient strategies. (MTR.2.1, MTR.5.1)
 - Strategies include counting back, skip-counting, decomposing and composing, subtracting ones and tens, and decomposing tens for more ones when needed.
- The expectation for instruction of this benchmark does not include the use of an algorithm, but students should not be prevented from using an algorithm if they can use itreliably. However, the intent of this benchmark is for all students to deepen their understanding of place value while exploring subtraction. There is no expectation of procedural reliability until grade 2 within the range of this benchmark.

Common Misconceptions or Errors

- Students may reverse the minuend and subtrahend in the ones, from the assumption the minuend must be larger than the subtrahend (i.e., for 12 5, finding 15 2). In these cases is it important for students to use concrete manipulates such as base ten blocks as they must exchange a tens rod for ten ones so that they may physically take away from the ones place.
- Students may fail to subtract a ten from the difference when decomposing a ten to gain enough ones to subtract the ones. In these cases, it can be helpful for students to use base ten blocks to manipulate the exchange of a single tens rod for ten one units to subtract.

Strategies to Support Tiered Instruction

- Instruction includes providing context to the subtraction problem to ensure that students understands that the minuend is the amount that the student will take from. At this stage of the learning progress the minuend is greater than the subtrahend. Teacher should not refer the minuend as always being greater than the subtrahend as this will lead to a later misconception.
- Instruction includes the use of base ten blocks, place value chart, hundreds chart, and/or number line. Teacher provides a subtraction problem and students may solve using manipulatives like the ones listed. Teacher may need to assist in regrouping of tens and ones to subtract. Students may need to use the number line or hundreds chart to count back to solve.
 - For example, the teacher provides students with a problem like 33 6. Students may use base ten blocks and take away the 6. Teacher may need to remind students that regrouping of a ten may be needed. Teacher asks students what they need to do to subtract 6.



 For example, teacher provides students with a problem like 33 - 6. Student may use a number line and count back 6 to find the difference. Teacher asks the student about how the digits change when counting back and demonstrates how the numbers change when counting by using the hundreds chart as a tool.



Questions to ask students:

- Ask: Can you describe for me how you can solve 54 6 by counting back?
 - Sample answer that indicates understanding: I can start at 54, and count back six...53, 52, 51, 50, 49, 48. So 54-6 is 48.
- Ask: How would a number line help you solve 89 7?
 - Sample answer that indicates understanding: I can use it to start at 89 and jump back 7 times until I get to 82.
- Ask: What strategy would help you solve 43 8?
 - Sample answer that indicates understanding: Students describe a strategy including, but not limited to use of manipulatives, drawings or equations to decompose tens and regroup ones, when needed.
- Ask: How would you show 32 5 using your base ten blocks?
 - Sample answer that indicates understanding: I would first get three tens and 2 ones to make 32. Now I have to take 5 away. I only have two ones, so I can regroup this ten and now I have twelve ones. Now I can take 5 away and I have 7 ones left. I also have 2 tens left. That is 27.

Instructional Tasks

Instructional Task 1 (MTR.4.1)

Edward has 88 cents in his jacket pocket. There was a small tear and a nickel slipped out. Part A. How many cents does Edward have now? Use a number line to show your work. Write a subtraction equation to represent this problem.

Part B. Compare your number line and equation with a partner, did you both start at the same place on your number line? Did you both get the same answer?

Instructional Items

Instructional Item 1

To find the difference of 74 – 6, Tanya first subtracted 4 to get 70. What could her next step be? What is the difference? Use Tanya's strategy to find 35 – 6.

Instructional Item 2

Use a number line to model how you would find the difference of 64 - 9.

Instructional Item 3

To find 32 – 8, a student used base ten blocks. After removing 2 ones, the student is not sure what else to do. What might the next step be? Use this strategy to find 32 – 8.

Additional Resources:

CPALMS Resources

Resources/Tasks to Support Your Child at Home:

Math Task: Place 47 objects on a hundred chart. Ask students to count back 8 and remove the objects. Ask them how this represents 47-8. Repeat with various numbers.

To support students that are struggling to count backward, listen to this <u>Jack Hartman song</u>.

Math Game: Each player starts with 100 pennies. Take turns rolling the dice and subtracting that many by counting backwards. Record a subtraction sentence for each turn. The first person to 0 wins.