



## Topic D

# Varied Place Value Strategies for Addition to 100

## 1.NBT.4

|                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Focus Standard:</b>     | 1.NBT.4             | Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, 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. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. |
| <b>Instructional Days:</b> | 2                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Coherence</b>           | <b>-Links from:</b> | G1–M4 Place Value, Comparison, Addition and Subtraction to 40                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                            | <b>-Links to:</b>   | G2–M3 Place Value, Counting, and Comparison of Numbers to 1,000                                                                                                                                                                                                                                                                                                                                                                                                                                        |

During Topic D, students discuss and compare the various place value strategies they use when adding to 100 (**1.NBT.4**). Students have the opportunity to explain their thinking and better understand the strategies based on the examples and explanations of peers.

Lesson 18 has students adding a pair of two-digit numbers, such as  $36 + 57$ , in more than one way, explaining the similarities and differences in the methods. Students recognize that they can achieve the same accurate sum through the varied strategies, as they decompose and recompose the numbers, attending to the tens and ones.

Students share their preferred strategies in Lesson 19, explaining the reason they choose to use a particular strategy for a particular set of addends. For instance, when adding  $39 + 43$ , one student may prefer to use the make ten strategy, decomposing 43 into 1 and 42, because adding  $40 + 42$  is an easy problem for her. Another student may prefer vertically aligning the numbers to ensure that he is adding ones with ones and then tens with tens. Students discuss questions such as, “In which number bonds do you see an easier problem to solve? Is there another way to solve this problem? How are [the selected student’s] methods different from or the same as your partner’s? What is a compliment you would like to give [him or her]?”

**A Teaching Sequence Toward Mastery of Varied Place Value Strategies for Addition to 100**

**Objective 1:** Add a pair of two-digit numbers with varied sums in the ones, and compare the results of different recording methods.  
(Lesson 18)

**Objective 2:** Solve and share strategies for adding two-digit numbers with varied sums.  
(Lesson 19)