



Topic D

Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones

1.OA.1, 1.OA.6, 1.NBT.2a, 1.NBT.2b, 1.NBT.5

Focus Standards:	1.OA.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.
	1.OA.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use mental strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
	1.NBT.2ab	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones—called a “ten.” - The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
Instructional Days:	4	
Coherence	-Links from:	GK–M4 Number Pairs, Addition and Subtraction to 10
	-Links to:	G2–M3 Place Value, Counting, and Comparison of Numbers to 1,000
		G2–M5 Addition and Subtraction Within 1,000 with Word Problems to 100

Topic D closes the module with students renaming ten as a unit: *a ten* (**1.NBT.2a**). This is the very first time students are introduced to this language of ten as a unit, so this is exciting! The unit of ten is the foundation for our whole number system wherein all units are composed of ten of the adjacent unit on the place value chart.

In Lesson 26, students revisit representations of 10 ones that they have worked with in the past. They rename their Rekenrek bracelet, the ten-frame, the fingers on two hands, and two 5-groups as 1 ten. They connect teen numbers to the unit form (e.g., 1 ten and 1 one, 1 ten and 2 ones), and represent the numbers with Hide Zero cards. They now analyze the digit 1 in the tens place as representing both 10 ones and 1 unit of ten, further setting the foundation for later work with place value in Module 4. Students use their very own Magic Counting Sticks (i.e., their fingers) to help them to compose 1 ten. By bundling 1 ten, students realize that some ones are left over which clarifies the meaning of the ones unit (**1.NBT.2b**).

$$\begin{array}{r} 9 + 6 = \\ \quad \nearrow 5 \\ 10 + 1 = 11 \\ 10 + 5 = 15 \end{array}$$

In Lesson 27, students solve both abstract and contextualized *result-unknown* problems (**1.OA.1**). The lesson takes them through a progression from problems with teens decomposed or composed using 1 ten and some ones to problems wherein they find the hidden ten (e.g., $8 + 6$ or $12 - 5$).

In Lesson 28, students solve familiar problems such as, “Maria had 8 snowballs on the ground and 5 in her arms. How many snowballs did Maria have?” As students write their solutions, they break apart an addend to make a ten with another addend and write two equations leading to the solution (see the bond and equations to the right). This movement forward in their ability to record the two steps allows them to own the structure of the ten they have been using for the entire module, on a new level (MP.7).

$$\begin{array}{r} 13 - 8 \\ \quad \nearrow 3 \\ 10 - 8 = 2 \\ 2 + 3 = 5 \end{array}$$

Topic D closes with Lesson 29, where students solve *add to with change unknown* and *take apart/put together with addend unknown* problems. As in Lesson 28, students write both equations leading to the solution as they take from the ten (see bond and equation to the top right).

A Teaching Sequence Toward Mastery of Solving Varied Problems with Decompositions of Teen Numbers as 1 Ten and Some Ones

Objective 1: Identify 1 ten as a unit by renaming representations of 10.
(Lesson 26)

Objective 2: Solve addition and subtraction problems decomposing and composing teen numbers as 1 ten and some ones.
(Lesson 27)

Objective 3: Solve addition problems using ten as a unit, and write two-step solutions.
(Lesson 28)

Objective 4: Solve subtraction problems using ten as a unit, and write two-step solutions.
(Lesson 29)