1(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**1(2)(B)** The student is expected to use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones.

Materials

- Linking cubes or base-ten blocks

Procedure:

Student will use linking cubes or base-ten blocks to represent a given number in more than one way.

Use the objects to represent the number 45.

- **What is the value of the tens? What is the value of the ones?**
- **What is the combined value of the tens and ones?**

Use the objects to represent the number 45 in a different way.

- **What is the value of the tens? What is the value of the ones?**
- **What is the combined value of the tens and ones?**

Repeat using the number 36.
Repeat this task with other numbers as needed.

Check Student's Responses:

Represented 45 using _____ tens _____ ones

Composed/decomposed 45 using _____ tens _____ ones

□ Correctly described the value of the tens and the ones
□ Incorrectly described the value of the tens and/or ones

Represented 36 using _____ tens _____ ones

Composed/decomposed 36 using _____ tens _____ ones

□ Correctly described the value of the tens and the ones
□ Incorrectly described the value of the tens and/or ones

Notes:

1(2)(B) The student is expected to use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly represented the number.** This student may be ready to represent larger numbers up to 120.

- The student **incorrectly represented the number.** This student may need more practice representing numbers and describing the value of the objects in the tens and ones place. Observe to make sure the student is counting the correct number of blocks for each of the hundreds, tens, and ones and is arranging the objects from left to right.

- The student **correctly composed/decomposed the number.** This student may be ready to compose and decompose larger numbers up to 120 in multiple ways.

- The student **incorrectly composed/decomposed the number.** This student may need more practice composing and decomposing numbers using concrete models.

  A teaching strategy might include asking the student to represent the number 25. Prompt the student to describe the value of the tens and the value of the ones (20 and 5). Ask, "What is the combined value of 2 tens and 5 ones?" Prompt the student to decompose one of the tens into 10 ones then describe the new value of the tens and ones (10 and 15). Ask, "What is the combined value of the 1 ten and 15 ones?" Ask, "What value was represented by both of these sets?" Explain to the student that the value of the sets are the same because they simply decomposed 1 ten into 10 ones without adding or taking away any additional objects.