

[Illustrative Mathematics](#)

K.CC Assessing Reading Numbers

[Alignment 1: K.CC.A](#)

The teacher will need numeral cards 1–10 and 10–20.

In a one-to-one setting, a student is shown the numbers from 1–10, one number at a time, in random order. The teacher asks, “what number is this?”

If a student is not able to identify all of the numbers 1–10, there is no need to continue with the teen numbers; the area for instruction is identified. The number that is shown and the student's responses to that number should be carefully recorded. Note hesitations, sub-vocal counting, and false starts as well as errors. This information can be used to distinguish between numbers the student knows, numbers the student almost knows, and numbers the student does not know. This information can then be used to provide the appropriate amount of emphasis during instruction.

If a student is able to identify all of the numbers 1–10 accurately, the teacher should repeat the same steps using the set of cards with the numbers 11–20. Again, be sure to record successes, hesitations, and mistakes to target instruction.

Commentary:

- Students should be able to identify numbers when they are given numerals in random order. Identification of numerals when they are sequenced does not necessarily indicate facility with reading numbers because the sequence of the numbers offers students support for identification.
- A long pause when identifying a number may indicate that a student is counting in order to get a "running start" to help identify a target number. The student may use "sub-vocal" counting (like counting under their breath) from another number to arrive at the correct number name. This is a common student strategy that should be noted as this indicates that additional practice with this number is needed before they can be considered facile.
- These are other ways to check for number recognition. It is demonstrated when:
 1. A student can point out a 6 from a group of numbers when he or she is asked, "Where is the 6?"
 2. A student says, "That is 6," when asked, "What number is this?"

The second of these two approaches is slightly harder for a student and suggests a more sophisticated understanding of number recognition. In the first, the teacher has supplied the number name and the student has only to *recognize* the numeral. In the second, the student must *recall* the number name.

- Some students will confuse particular numerals. Two pairs of numbers that are commonly confused are (a) 6 and 9 and (b) 6 and 8. If the student doesn't correctly identify (*recall*) a randomly presented number, it may be useful to re-pose the question so that is only necessary for the student to *recognize* it. (For example, quickly turn several of the number cards - including the problem number - face up, and ask, "Where is the 8.")

Common confusions for the set of numbers 11–20 include (a) confusing 12 with 20 or with 21, (b) identifying thirteen as "three-teen", or fifteen as "five-teen," and (c) confusing teen numbers from (13 to 19) with decade numbers (30 to 90).

Solution: Solution

If a student is unable to identify the numbers 0–10 in the first part of the task you may want to re-pose the task as a number recognition task by laying out all the cards from 0–10 in random order on the table and then asking "what number is the ___?" Ask the question for each of the numbers that the student missed in the identification task. While each of these variations will not indicate that a student is proficient or facile in this area it will give the teacher an idea of what knowledge about the number the student has to help drive additional instruction for them.

If a student can read numbers 0–10, continue on to check the numbers 11–20. Students may have trouble with the "teen" numbers as noted in the commentary. Make note of any additional support that you give the student when assessing; ultimately students should be able to read numbers without hesitation. The inability of a student to do so simply indicates that additional instruction is needed in that area.



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