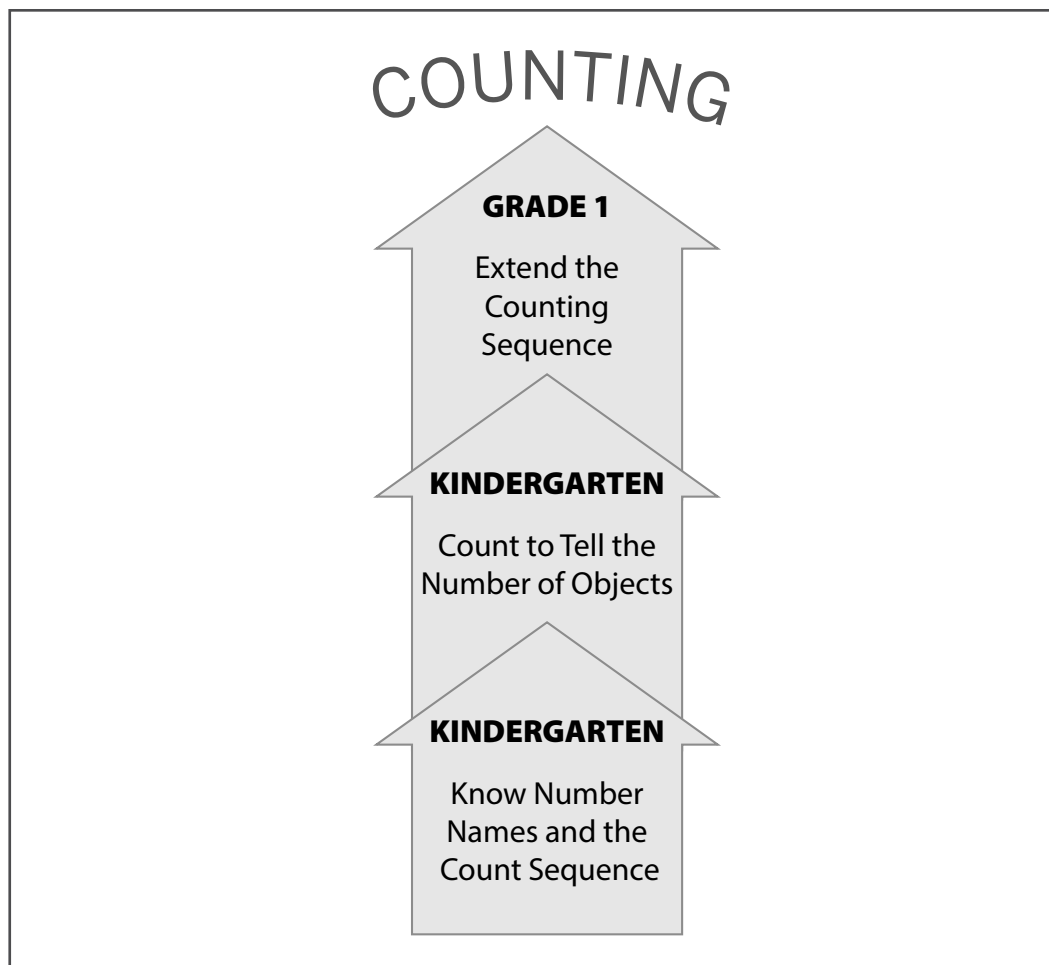


MATH K-1 Common Core Assessments

Grade 1

INTRODUCTION



Introduction to Counting

The assessments associated with the counting progression are designed to help you assess student understanding of numbers and counting. Early number sense has four interconnected aspects:

1. Recognizing and naming how many items are in a small group.
2. Learning names of numbers and the order of number names to ten and then beyond.
3. Counting objects by connecting one number word with one object in order.
4. Knowing that the last number associated with an object tells how many objects are in the group (Clement and Sarama).

These aspects of number sense are not strictly ordered. Children generally learn these aspects separately, through different activities, but connect them over time. These aspects of number sense build on each other; for example, trying to count a big pile of blocks may motivate learning number words beyond ten. Students who know number names to ten well and can count to ten with fluency have more working memory to dedicate to object counting to ten. These students are generally more successful than students still learning number names. Much of this early development occurs in pre-school. Students who have not had access to high-quality preschool may not have developed to the same level. These students may need more experiences recognizing, naming, and counting objects with numbers up to ten.

The kindergarten and grade one counting assessments focus on two interrelated aspects of number sense.

- Counting out loud or verbal counting: Learning names of numbers and the order of number names to ten and then beyond.
- Object counting and producing: Counting groups of objects by connecting one number word with one object in order, and counting out objects to form a group of a specified number of objects.

Cardinality, knowing that the last number counted tells how many objects are in the group, is included in the object counting assessment.

The first two task sets in the counting progression can be used together or one at a time in a repeated sequence. You might start with “Know Number Names and the Count Sequence Form A.” After some relevant instruction you might administer “Count to Tell the Number of Objects Form A.” After more instruction you might return to “Know Number Names and the Count Sequence Form B.” Students should NOT be required to master verbal counting before being exposed to object counting. These skills develop together and build on each other.

The learning progression below shows how the verbal counting and object counting progressions are connected and develop together. It starts at the preschool level to provide more background information.

All of the tasks in the counting progression are tied to the learning progression below. The assessments include:

- a blueprint (showing the specific common core standards targeted);
- directions for administration;

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- a scoring sheet/interpretation guide;
- a copy of the learning progression;
- a guide to creating instructional groups.

The scoring sheet/interpretation guide makes it easy to record student responses and interpret students' approximate developmental levels with respect to the learning progression. You can use the instructional grouping guide to create groups of students at approximately the same level who need experience working on the same or similar activities.

Learning Progression: Counting

Developmental Level	Description
Recites numbers to 10	Verbally counts to 10. May blur some words together.
Counts objects in small groups	Maintains one-to-one correspondence between number names and objects, at least for small groups of objects.
Produces to 5	Makes a pile of up to 5 objects by counting out the objects.
Counts and produces objects to 10	Counts up to 10 objects arranged in rows, arrays, etc. Relates each count to exactly one object and keeps track of the objects that have been counted (e.g., by pointing to or moving objects). Counts a specified number of objects, up to 10 objects. Counting is fluent enough that the student can remember the specified number of objects to count without prompting (K.CC.4, K.CC.5).
Counts out loud to 20	Counts to 20. May be able to tell the number just after or just before another number, but only by counting up from 1 (K.CC.1).
Object counts and produces to 20	Counts and counts out a specified number of objects up to 20. Knows that the last number counted tells how many (cardinality). Keeps track of objects that have and have not been counted (K.CC.4, K.CC.5).
Write numerals to 20	Writes numerals to represent the number of objects in a group from 1 to 20 (K.CC.3).
Counts out loud from any number up to 20	Counts out loud from numbers other than 1 (but does not yet keep track of the number of counts). Determines a number just after or just before a given number (K.CC.2).
Counts objects from any number up to 20	Counts with objects from numbers other than 1. Initially the student does not keep track of the number of counts but can determine numbers one after or one before immediately. Understands that a count of one more refers to a quantity that is one larger (K.CC.4).
Counts out loud to 100	Counts to 100. Makes decade transitions (e.g., from 29 to 30) starting at any number. Skip counts by 10s to 100 (K.CC.1, K.CC.2).
Skip counts by 5s and 2s to 100	Skip counts verbally and using objects by fives and twos with understanding (no standard).
Counts objects to 100	Unit counts from any number to 100. Counts by tens from any decade to 100.
Counts imagined or hidden objects to 100	Counts mental images or hidden objects.
Counts on and keeps track of counts to 100	Keeps track of a few counting acts by using rhythm, objects, or fingers, and eventually by counting counts (extension of K.CC.4 and leads to K.OA.1, K.OA.2).
Counts beyond 100	Unit counts, counts on from any number, skip counts, counts imagined items, and counts on keeping track (1.NBT.1).
Counts using place value	Understands the base-ten system and place-value concepts, including ideas of counting units and multiples of hundreds, tens, and ones. When counting groups of 10, can decompose into 10 ones if that is useful (1.NBT.2).
Counts to 200 and beyond	Unit counts and recognizes patterns of ones, tens, and hundreds.

References

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