



Common Core State Standards (CCSS) for Mathematics **North Carolina Assessment Specifications Summary**

READY End-of-Grade Assessments, Grades 3–8 READY End-of-Course Math I Assessments

Purpose of the Assessments

- Edition 4 grades 3–8 mathematics assessments and the Math I assessments will measure students' proficiency on the *Common Core State Standards (CCSS) for Mathematics*, adopted by the North Carolina State Board of Education in June 2010.
- Assessment results will be used for school and district accountability under the READY Accountability Model and for Federal reporting purposes.

Curriculum Cycle

- June 2010: North Carolina State Board of Education adoption of the *CCSS*
- 2010–2011: Item development for the Next Generation of Assessments, Edition 4
- 2011–2012: Administration of stand-alone field tests of Edition 4 assessments
- 2012–2013: Operational administration of Edition 4 assessments aligned to the *CCSS*

Standards

- The *CCSS* is posted at: <http://www.corestandards.org/>.
- Each grade includes a set of content standards.
- For high school, the *CCSS* groups the standards by conceptual categories rather than by grade or course. The *CCSS* suggests a course sequence for teaching standards by each pathway, traditional or integrated. However, the *CCSS* allows states to create their own sequence as long as the full set of standards is completed by the third year.
- North Carolina will teach and assess a common set of standards for the first-year high school course of mathematics. For the second and third high school years, schools or districts may follow either a traditional or integrated pathway.
- In addition to the content standards, the *CCSS* includes eight Standards for Mathematical Practice that cross domains, grade levels, and high school courses. Assessment items written for specific content standards will as much as possible also link to one or more of the mathematical practices.

Prioritization of Standards

- The North Carolina Department of Public Instruction invited teachers to collaborate and develop recommendations for a prioritization of standards indicating the relative importance of each standard, the anticipated instructional time, and the appropriateness of the standard for a multiple-choice or gridded-response item format. Subsequently, curriculum and test development staff from the North Carolina Department of Public Instruction met to review the results from the teacher panels and to develop weight distributions across the domains for each grade level. See Tables 1–3 below.
- Some content standards in the *CCSS* will not be directly assessed in the Edition 4 test because either (1) the standard cannot be appropriately assessed during a limited time assessment using multiple-choice and/or gridded-response items or (2) the standard is better assessed through another, more inclusive standard.

Table 1

Weight Distributions for Grades 3–5

Domain	Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	30–35%	12–17%	5–10%
Number and Operations in Base Ten	5–10%	22–27%	22–27%
Number and Operations—Fractions	20–25%	27–32%	47–52%
Measurement and Data	22–27%	12–17%	10–15%
Geometry	10–15%	12–17%	2–7%
Total	100%	100%	100%

Table 2

Weight Distributions for Grades 6–8

Domain	Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	12–17%	22–27%	NA
The Number System	27–32%	7–12%	2–7%
Expressions and Equations	27–32%	22–27%	27–32%
Functions	NA	NA	22–27%
Geometry	12–17%	22–27%	20–25%
Statistics and Probability	7–12%	12–17%	15–20%
Total	100%	100%	100%

Table 3
Weight Distributions for Math I

Conceptual Category	Math I
Number and Quantity	5–10%
Algebra	25–31%
Functions	35–40%
Geometry	10–15%
Statistics and Probability	15–20%
Total	100%

Cognitive Rigor and Item Complexity

- Assessment items will be designed, developed, and classified to ensure that the cognitive rigor of the operational test forms align to the cognitive complexity and demands of the CCSS for Mathematics. These items will require students to not only recall information, but also apply concepts and skills and make decisions.

Types of Items

- Grades 3 and 4 mathematics assessments will consist of four-response-option multiple-choice items.
- The grades 5–8 mathematics assessments and the Math I assessment will consist of four-response-option multiple-choice items and about twenty percent gridded-response items requiring numerical responses. *NCEXTEND2* assessments will consist of three-response-option multiple-choice items and gridded-response items.
- All CCSS mathematics assessments will include both calculator-active and calculator-inactive sections. One-third to one-half of the grades 3–8 assessments will be comprised of calculator-inactive items; approximately one-third of the high school assessments will be calculator inactive.
- The *NCEXTEND1* mathematics alternate assessments will consist of fifteen performance-based, multiple-choice items.

Delivery Mode

- Grades 3–8 mathematics assessments will be designed for paper/pencil administrations and may have an online administration option.
- The Math I assessment will be designed for an online administration but will also be available in a paper/pencil version.
- *NCEXTEND2* is an alternate assessment for students with disabilities whose Individualized Education Program (IEP) specifies an assessment aligned to the general content standards but based on modified academic achievement standards. The grades 3–8 *NCEXTEND2* mathematics assessments will closely follow the weightings of the standards on the general assessments. The *NCEXTEND2* mathematics assessments will be designed for online administrations.

- ***NCEXTENDI*** is an alternate assessment designed for students with significant cognitive disabilities whose IEP specifies an assessment aligned to the Extended *Common Core State Standards (CCSS)* and based on alternate academic achievement standards. The ***NCEXTENDI*** mathematics assessments will be designed for paper/pencil administrations with online data entry by the assessor.