

NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 North Carolina Test Specifications

Purpose of the Tests

The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 measure students’ proficiency on the [North Carolina Extended Content Standards for Mathematics](#), adopted by the North Carolina State Board of Education in September 2017.

Assessment results will be used for school and district accountability under the accountability model and for federal reporting purposes.

Curriculum Cycle

September 2017: North Carolina State Board of Education adoption of the [North Carolina Extended Content Standards for Mathematics](#)

2017–18: Items developed and administration of embedded field test items for the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8

2018–19: First operational administration of the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 (Edition 4)

Developing Tests

North Carolina educators were recruited and trained to write new items. The diversity among item writers and their knowledge of the current standards was addressed during recruitment. Trained North Carolina educators also review items and suggest improvements, if necessary. The use of North Carolina educators to write and review items strengthens evidence of content validity of these assessments.

For an in-depth explanation of the test development process, see North Carolina [State Board Policy TEST-013: Multiple Choice Test Development](#) or reference the [Test Development Process: Item, Selection, and Form Development document](#).

Prioritization of Standards

Members of the North Carolina Department of Public Instruction (NCDPI)’s Test Development Section invited North Carolina educators 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 test design.

Subsequently, the Office of Exceptional Children and Test Development staff from the NCDPI met to review the recommendations from the teacher panels and adopt final weight distributions across the domains for each grade level.

Some content standards in the Extended Content Standards will not be directly assessed in the assessments because either (1) the standard cannot be appropriately assessed during a limited time assessment using multiple-choice or (2) the standard is better assessed through another, more inclusive standard.

Tables 1, 2, and 3 describe the range of items by domain and Depth of Knowledge (DOK) that will appear on the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 (Edition 4).

Table 1. NCEXTEND1 Mathematics at grades 3–5 domain weight distributions.

Domain	Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	26–30%	26–30%	11–15%
Number and Operations in Base Ten	22–26%	19–23%	41–45%
Number and Operations – Fractions	15–19%	15–19%	11–15%
Measurement and Data, Geometry	34–37%	–	–
Measurement and Data	–	15–19%	15–19%
Geometry	–	19–23%	19–23%
Total	100%	100%	100%

Table 2. NCEXTEND1 Mathematics at grades 6–8 domain weight distributions.

Domain	Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	15–19%	11–15%	–
Number Systems	26–30%	19–23%	15–19%
Expressions and Equations	19–23%	15–19%	26–30%
Functions	–	–	15–19%
Geometry	15–19%	30–34%	18–22%
Statistics and Probability	15–19%	19–23%	11–15%
Total	100%	100%	100%

Table 3. NCEXTEND1 Mathematics at grades 3–8 item by DOK distribution.

Grades	DOK 1	DOK 2
3–5	60–70%	30–40%
6–8	50–60%	40–50%

Cognitive Rigor and Item Complexity

Test items for the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 have been designed, developed, and classified to ensure that the cognitive rigor of the operational test forms align to the cognitive complexity and demands of Webb’s Depth of Knowledge and the [North Carolina Extended Content Standards for Mathematics](#). Items on the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 cover the full breadth and depth of grade-level cognitive expectations that can be assessed using the current test format.

Testing Structure and Test Administration

The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 are teacher-facilitated online assessments that are administered individually to each student. The items are presented online in two sets. There is no formalized break between the sets. Students have two trials each for the first and second set of test items. The first trial will consist of multiple-choice items with three answer choices. If the student misses the answer in the first trial, the incorrect answer is removed from the choices for the second trial. The test will terminate at the end of set one for students who do not answer enough items correctly. Students who answer enough items correctly in set one will continue to set two. The assessment ends after the last item in set two. If the question is answered correctly in the first trial, it is worth two points. If the question is answered correctly in the second trial, it is worth one point. Table 4 provides the item count details for sets 1 and 2.

Table 4. NCEXTEND1 Mathematics at grades 3–8 total number of items.

Set	Operational Items	Field Test Items	Total Items
1	17	3	20
2	10	2	12
Total Items	27	5	32

The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 may be administered over several days or may be completed in one session. The assessor must use professional judgment to determine an appropriate length of time for a student’s assessment administration. The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 are administered individually to each student. The time required by a student to complete the assessment will be unique to each individual student, depending on the student’s ability to maintain focus, medical condition, and/or fatigue factor(s). Refer to the *North Carolina Test Coordinators’ Policies and Procedures Handbook* on the [Testing Policy and Operations webpage](#) and the *Testing Students with Disabilities Handbook* on the [Testing Students with Disabilities webpage](#) for additional information.

Test Cycle and Delivery Mode

The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 must be administered during the last ten days of the instructional year (traditional yearlong schedule).

The NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 are provided only in English. Native language translation versions are not available. North Carolina [G.S. §115C-81.45\(a\)](#) requires all teachers and principals to conduct all classes other than foreign language classes in English.

The NCEXTEND1 tests and practice activities are provided online through NCTest Admin. Students in grades 3–8 who will use a device for online testing are expected to complete an online practice activity before taking the assessment. Three practice activities (i.e., reading, mathematics, and science) are available for use. The practice activities can help students become familiar with the testing platform and practice responding to sample test questions. The practice activities may assist teachers in determining which administration option is most appropriate for their students. It is not necessary for students to complete a practice activity if they will be administered the assessment using the test cards with the assessor recording the responses on a device.

Supplemental Materials and Additional Resources

Students must be provided any four-function calculator with memory key. Refer to the *North Carolina Testing Program Calculator Requirements Assessment Brief* on the [Testing Policy and Operations webpage](#) for additional information.

All students must be provided scratch paper and a writing utensil. Students who have been routinely taught with counters or objects may use them on the assessment.

Released items are available on the [Alternate Assessment webpage](#). The released items for the NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 are built using the same operational test specifications. Released items may not reflect the full depth and breadth of grade level assessed standards found on any NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 operational test form.

Released items may be used by public school units to acquaint students with items. These materials must not be used for personal or financial gain, are copyrighted to the NCDPI, and cannot be uploaded into third party applications.

Achievement Level Descriptors for the Edition 4 NCEXTEND1 Mathematics Alternate Assessments at Grades 3–8 were adopted by the NC State Board of Education in August 2019 and are available on the [Alternate Assessment webpage](#).

A sample Individual Student Report is available on the NCDPI [Individual Student Reports \(ISR\) webpage](#).