



Essential Standards for Discrete Mathematics

North Carolina Assessment Specifications Summary

North Carolina's Final Exams for *Discrete Mathematics*

Purpose of the Assessments

North Carolina's Final Exams for *Discrete Mathematics* measure students' academic progress in the 2003 *Standard Course of Study (SCS)*.

NC Final Exam scores (along with any other relevant end-of-course or end-of-grade assessment scores) will be used in the Educational Value Added Assessment System (EVAAS) to produce student growth measures to satisfy Standards 6 and 8 of the North Carolina Educator Evaluation System.

NC Final Exams were developed to replace locally developed assessments, providing teachers and principals with a common measure for all students state-wide during a given testing window. NC Final Exams will contribute to final course grades.

NC Final Exams will not be used for school and district accountability under the READY Accountability Model or for Federal reporting purposes.

For more information on the North Carolina Educator Evaluation System go to <http://www.ncpublicschools.org/effectiveness-model/>.

Curriculum Cycle

June 2003: North Carolina State Board of Education adoption of the *SCS*.

2008: Item development for the NC Final Exams in *Discrete Mathematics*.

Fall 2013: First operational administration of NC Final Exams in *Discrete Mathematics*.

Standards

This NC Final Exam was aligned to the 2003 *Standard Course of Study in Discrete Mathematics*.

Prioritization of Standards

Members of the Mathematics Section of the North Carolina Department of Public Instruction (NCDPI) in collaboration with content experts at the Technical Outreach for Public Schools (TOPS) prioritized the goals and objectives of *Discrete Mathematics*. Preliminary weight distributions across the domains and item types were developed. Subsequently, North Carolinian Math teachers were asked to review the preliminary test specifications and to provide feedback concerning the recommended test specifications. The final weight distributions and item types are shown in Table 1.

Table 1 describes the percentage of score points that will appear on the NC Final Exam forms in *Discrete Mathematics*. Due to the cost of scoring constructed response items, constructed response items were removed from the assessment. Starting in the 2013-14 school year, all items are multiple choice items.

Table 1. Test Specification Weights for the NC Final Exams in Discrete Mathematics

2003 Standard Course of Study	Multiple Choice
1.01	16% to 24%
1.02	8% to 16%
2.01	14% to 22%
2.02	19% to 27%
2.03	16% to 24%
3.01	9% to 16%
Total percent of score points	100%

Cognitive Rigor

The *Discrete Mathematics* items were aligned to the content standards using Marzano’s *Thinking Skill Levels*. To read more about North Carolina’s *Thinking Skill Levels* and how they were used to align items to the 2003 SCS read http://www.ncpublicschools.org/docs/accountability/testing/eog/asb_thkskl.pdf.

Types of Items

- The NC Final Exams in Discrete Mathematics consist of four-response-option multiple-choice (MC) items.
- The MC items will align to the 2003 SCS content as shown in Table 1.
- Students may use a graphing calculator.
- Graph paper will be available.

Testing Structure and Time

- The NC Final Exams in Mathematics consists of 30 to 36 items. Each form contains some embedded experimental items not used for scoring.
- The total time allocated to the exam is 120 minutes unless students have documented accommodations (i.e., Multiple Testing Sessions, Extended Time). Students should monitor the clock to ensure they allow themselves adequate time to respond to all items.

Delivery Mode

- The NC Final Exams are designed for paper/pencil mode only.