

Purpose

[Test Specifications](#) are provided for the Minnesota Comprehensive Assessments (MCAs) and Minnesota Test of Academic Skills (MTAS) in reading, mathematics, and science. Test specifications provide information on the content's limitations and specific rules to guide the development of the test. The primary purpose of test specifications is to help test developers build a test that is consistent over time. The test specifications are meant to serve as a source of information about the test design for the vendor but are also available to teachers and the general public.

Test specifications do not indicate the limits of the content or what should be taught; the [Minnesota K-12 Academic Standards](#) do. Test specifications do not indicate how students should be taught; the classroom teacher does.

Grade 4

Strand 1—Number & Operation

(Online MCA, 16–20 items)
(Paper MCA, 18–22 items)

Standard 4.1.1: Demonstrate mastery of multiplication and division basic facts; multiply multi-digit numbers; solve real-world and mathematical problems using arithmetic.

(Online MCA, 6–8 items)

(Paper MCA, 8–10 items)

Benchmarks

4.1.1.1

Demonstrate fluency with multiplication and division facts.

Item Specifications

- Factors are limited to 1–9
- Vocabulary allowed in items: quotient and vocabulary given at previous grades

4.1.1.2

Use an understanding of place value to multiply a number by 10, 100 and 1000.

Item Specifications

- Numbers multiplied by 10, 100 and 1000 may contain at most, 2 digits
- Numbers must be whole numbers
- Vocabulary allowed in items: vocabulary given at previous grades

Application

[Test specifications](#) are excellent tools for gaining an in-depth understanding of the content and composition of the tests. However, they are not meant to be used as the basis for curriculum and instruction. Some concepts in the [Minnesota K-12 Academic Standards](#) can only be assessed in the classroom and not on a standardized statewide assessment. Test specifications indicate which strands, standards and benchmarks will be assessed on the test and in what proportions. In addition, test specifications provide the types of items to be included, number of items and distribution of cognitive levels (i.e. Depth of Knowledge). Test specifications also clarify, define and/or limit what can be assessed in an item.



Guiding Questions

How can teachers use the information provided in the Test Specifications to impact classroom instruction throughout the year?

- Do my classroom curriculum and instructional materials reinforce the vocabulary necessary to meet the benchmark?
- Are students provided with multiple opportunities to answer questions in a variety of ways (e.g. various algorithms, pictures, number lines and manipulatives) including the use of technology?
- Do my classroom curriculum and instructional materials meet the minimum requirements outlined in the test specifications or do they give students the opportunity to go beyond these minimum requirements?