MCA Mathematics Benchmark Report "How To" Quick Guide

Assessments are designed to provide information about student learning, but there is no single assessment that can provide the full perspective of what a student has learned. These assessments provide one data point that should be considered in the context of additional evidence of student learning.

The MCA Benchmark Report is a guidance tool educators can use to learn about performance at the school or district level on each benchmark from the Minnesota Academic Standards. The Minnesota Academic Standards identify the knowledge and skills that all students are expected to learn in each content area by the end of a grade or grade band. These standards are divided into one or more benchmarks which provide details about what students are taught in that content area.

Benchmark performance is calculated by comparing students' observed performance on test content aligned to a benchmark to the expected performance of the "Meets" achievement level cut score for a benchmark at the school or district.

Report Considerations

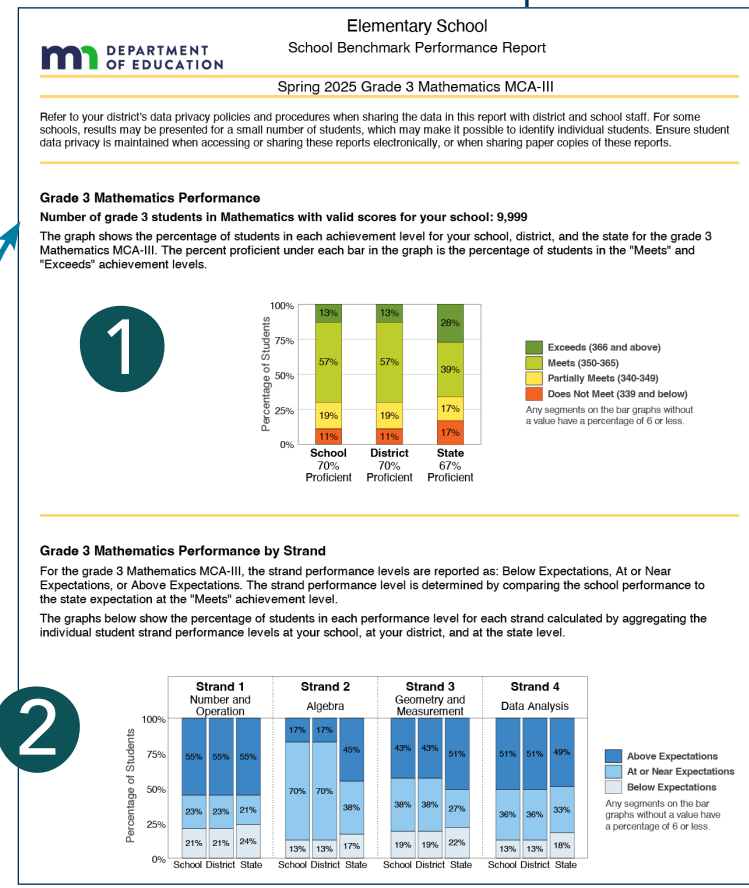
Benchmark reports are created by grade and subject for Reading and Mathematics MCA. Benchmark reports for 2019 and 2021–2025 are available. No benchmark reports were produced for 2020.

The Mathematics MCA is an adaptive assessment at the "item" level, meaning test questions (items) are chosen based on the student's responses to the previous items.

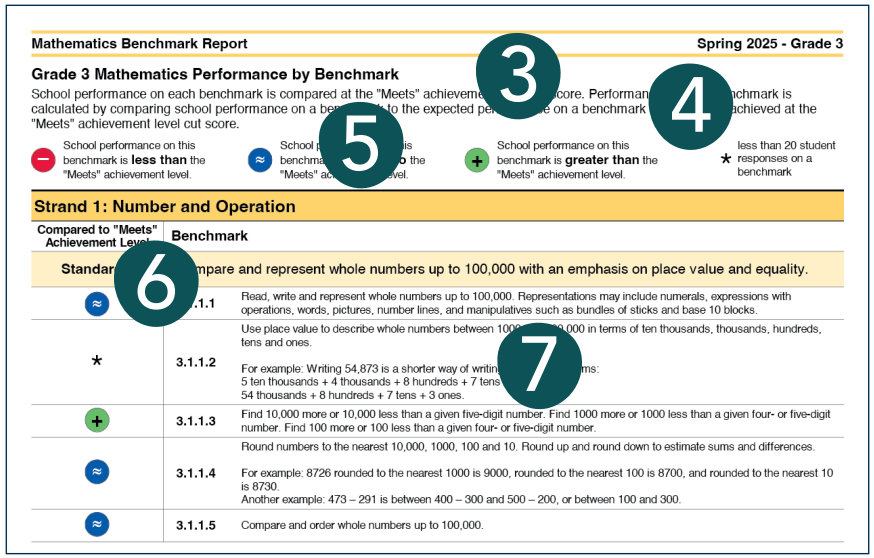
- All tests meet the "blueprints" or requirements in the test specifications, which describe how the standards are assessed on the test and in what proportions. However, not all students see items for each benchmark, and other students may see more than one item for the same benchmark.
- Benchmarks not assessed on the MCA are noted on the report.

Note: Science MCA benchmark reports are not available beginning in 2025 due to the transition to a new assessment. Benchmark reports can still be downloaded for previous test administrations.

Sections of the Benchmark Report



1. Overall performance, including:
   - The number of students with a valid, reportable score at the organization level for the grade and subject combination of the report.
   - An achievement level bar graph at the school, district, and state level, with the percentage of students at each achievement level.
   - The percent proficient, shown under each bar graph, is the combined percent of students at the "Meets" and "Exceeds" achievement levels.
2. Substrand performance, including:
   - Content area strand names and performance level percentages at the school, district, and state level.
   - Performance level categories include:
     Below Expectations, At or Near Expectations, and Above Expectations.
     Expectation is defined as the school's performance on each strand compared to the "Meets" performance level cut score.



3. Benchmark performance description.
4. Three performance symbols specific to the benchmark report are used to represent school or district performance on each benchmark, including less than, similar to, or greater than the "Meets" achievement level.
   An asterisk (*) indicates there were less than 20 student responses for that benchmark and results are not available.
5. Strand number and title.
6. Minnesota Academic Standards code reference and description
7. Benchmark, performance, benchmark code reference, and description.
   For mathematics, the four-digit code (such as, 3.1.1.3) lists, in order, the grade (3), strand (1), standard (1), and benchmark (3).

Note: Refer to the Minnesota Academic Standards for exact formatting of the math benchmarks and examples, as slight adjustments were made to fit the report.

Cautions When Interpreting the Benchmark Report

- For Mathematics MCA, the number of items for each benchmark will vary because the test is adaptive at the "item" level.
- The data displayed on the report are based on the student responses to the items from a particular benchmark that were administered to students in a school or district.
- Benchmark performance symbols do not correspond to overall achievement levels for Mathematics MCA (Does Not Meet, Partially Meets, Meets, or Exceeds the Standards), and the color/shape of each symbol does not reflect benchmark difficulty.

New Minnesota Academic Standards are being implemented for all subjects. Take your district's plan into consideration, and interpret these reports within the context of your school or district environment. The timeline for the first administration of the revised mathematics assessment is school year 2027–28.

Using the Benchmark Report in Your Classroom, School, or District

The MCA Benchmark Reports are an additional resource educators can use to evaluate and compare performance on benchmarks at the school, district, and state levels on the current year's test. Teachers and district staff can use benchmark report data as a starting point for discussions about strengths and gaps in curriculum.

Guiding questions when reviewing and discussing benchmark reports:

1. Are the students who completed the assessment representative of the total student population at your school or district?
2. Where and how are specific benchmarks taught in a course's scope and sequence?
3. What do you notice about the benchmark data? What surprises you?
4. How does the data compare with what you saw in the classroom?
5. What additional information do you have about student learning of the benchmarks?
6. What may be some reasons for the benchmarks that have symbols indicating performance above the "Meets" achievement level?
7. What may be some underlying causes for benchmarks below the "Meets" achievement level?
8. Are there additional emerging themes in all the information?
9. What are your next steps after reviewing your benchmark data?

Additional Benchmark Resources

View the **Minnesota Academic Standards** (MDE website > Districts, Schools and Educators > Teaching and Learning > Academic Standards (K-12)).

View the ***2007 Mathematics Standards Progression Across Grades*** resource on the MDE Testing 1, 2, 3 website (MDE Testing 1, 2, 3 > Plan and Teach > Standards Based Learning Goals > Resources).

View the **MCA test specifications** (MDE website > Districts, Schools and Educators > Teaching and Learning > Statewide Testing > Test Specifications).

View the **Frameworks for the Minnesota Science & Math Standards** (www.scimathmn.org > Minnesota STEM Teacher Center).

View the ***Benchmark Achievement Level Descriptors*** on the Testing 1, 2, 3 website (Testing 1, 2, 3 site > Plan and Teach > Success Criteria).

View the **Minnesota Questions Tool** for released items from MCA test (MDE Testing 1, 2, 3 > Assess > Minnesota Questions Tool).

View *Appendix A: Benchmark Report Calculations Resource* in the ***Technical Manual for Minnesota's MCA and MTAS Assessments*** (MDE website > Districts, Schools and Educators > Teaching and Learning > Statewide Testing > Technical Reports > Technical Manual).