

MCA MATHEMATICS BENCHMARK REPORT "HOW TO" QUICK GUIDE

The MCA benchmark report is a guidance tool educators can use to learn about school- or district-level performance on each benchmark from the Minnesota Academic Standards that is assessed on the current year's MCA.

The primary purpose of the MCA is to measure achievement on the Minnesota Academic Standards. The Minnesota Academic Standards identify the knowledge and skills that all students strive to achieve in a content area; these standards are divided into one or more benchmarks which provide details about what students are taught in that content area.

The benchmark report is calculated at the school- or district-level by comparing **observed performance** on a benchmark to the **expected performance** on a benchmark at the "Meets" achievement level cut score for a benchmark. Technical details on this calculation are available in the [2018-19 Benchmark Report Calculations Resource](#) (MDE website > Districts, Schools and Educators > Teaching and Learning > Statewide Testing > Technical Reports).

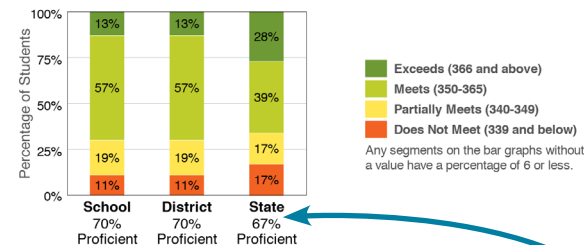
Sections of the Benchmark Report

GRADE 3 MATHEMATICS PERFORMANCE

Number of grade 3 students in Mathematics with valid scores for your school: 9,999

The graph shows the percentage of students in each achievement level for your school, district and the state for the grade 3 Mathematics MCA-III. The percent proficient under each bar in the graph is the percentage of students in the "Meets" and "Exceeds" achievement levels.

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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.

Reports by Grade and Subject

Benchmark reports are created by grade and subject for Reading, Mathematics, and Science MCA.

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

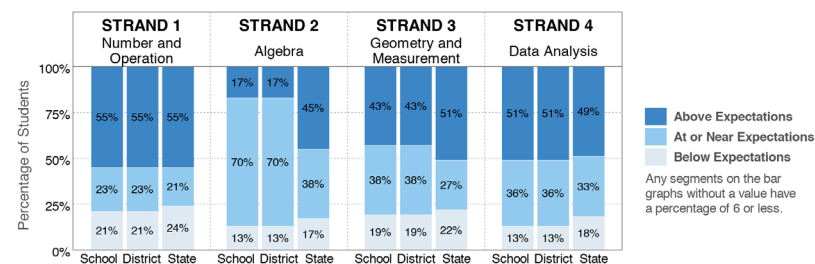
- All tests meet the "blueprints" or requirements in the test specifications, which describe how the standards are assessed on the test. However, not all students see items for each benchmark, and other students may see more than one item for the same benchmark.
- Benchmarks not assessed on the MCA are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

GRADE 3 MATHEMATICS PERFORMANCE BY STRAND

For the grade 3 Mathematics MCA-III, the content area strand results are categorized as: Below Expectations, At or Near Expectations, or Above Expectations. Expectation is defined as the school performance on each strand compared to the "Meets" achievement level.

The graphs below show the percentage of students in each performance level for each strand calculated by aggregating the individual student strand performance levels at your school, at your district, and at the state level.

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2. Strand 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.



For more information about benchmark reports, refer to the [Benchmark Report Interpretive Guide](#) or [Understanding the Benchmark Report Video](#), available on PearsonAccess Next (PearsonAccess Next > Reporting Resources > Additional Reporting Resources).

GRADE 3 MATHEMATICS PERFORMANCE BY BENCHMARK

District performance on each benchmark is compared at the "Meets" achievement level score. Performance on each benchmark is calculated by comparing district performance on a benchmark to the expected performance on a benchmark that would be achieved at the "Meets" achievement level cut score.

District performance on this benchmark is **less than** the "Meets" achievement level.
 District performance on this benchmark is **similar to** the "Meets" achievement level.
 District performance on this benchmark is **greater than** the "Meets" achievement level.
 less than 20 student responses on a benchmark

STRAND 1: NUMBER AND OPERATION

Compared to "Meets" Achievement Level	Benchmark
Standard 3.1.1	Compare and represent whole numbers up to 100,000 with an emphasis on place value and equality.
	3.1.1.1 Read, write and represent whole numbers up to 100,000. Representations may include numerals, expressions with operations, words, pictures, number lines, and manipulatives such as bundles of sticks and base 10 blocks. Use place value to describe whole numbers between 1000 and 100,000 in terms of ten thousands, thousands, hundreds, tens and ones.
	3.1.1.2 For example: Writing 54,873 is a shorter way of writing the following sums: 5 ten thousands + 4 thousands + 8 hundreds + 7 tens + 3 ones 54 thousands + 8 hundreds + 7 tens + 3 ones.
	3.1.1.3 Find 10,000 more or 10,000 less than a given five-digit number. Find 1000 more or 1000 less than a given four- or five-digit number. Find 100 more or 100 less than a given four- or five-digit number. Round numbers to the nearest 10,000, 1000, 100 and 10. Round up and round down to estimate sums and differences.
	3.1.1.4 For example: 8726 rounded to the nearest 1000 is 9000, rounded to the nearest 100 is 8700, and rounded to the nearest 10 is 8730. Another example: 473 - 291 is between 400 - 300 and 500 - 200, or between 100 and 300.
	3.1.1.5 Compare and order whole numbers up to 100,000.

3. Benchmark performance description

4. Three performance symbols specific to the benchmark report used to represent school or district performance on each benchmark, including **less than**, **similar to**, or **greater than** the "Meets" achievement level.

A fourth symbol, an asterisk (*), indicates results were not available as there were less than 20 student responses for that benchmark.

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 (i.e., 3.1.1.3) lists, in order, the grade (3), strand (1), standard (1), and benchmark (3).

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 to identify gaps in instructional content.

Guiding questions when reviewing and discussing benchmark reports:

- Does the data match what is happening in the classroom?
- What data catches your eye? What surprises you?
- Are there areas in the report that you feel should be celebrated? Why?
- How does this data compare with your intuitive or personal experiences at your school?
- What clarifying questions do you have? What is unclear to you?
- What concerns you the most? What is most important to you? Why?
- What may be some reasons for benchmarks above the "Meets" achievement levels?
- What may be some underlying causes for benchmarks below the "Meets" achievement level?
- Are there emerging themes in all the information?
- What needs to be addressed first? Why?

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 test questions (items) from a particular benchmark that were administered to students in a school or district.
- Benchmark performance indicators and symbols **do not** correspond to overall achievement levels for Mathematics MCA (i.e., Does Not Meet, Partially Meets, Meets, or Exceeds the Standards), and the color/shape of each marker does not reflect benchmark difficulty.

Frame any interpretation within the context of the school or district environment. External information about the curriculum, instructional practices, and data from other classroom assessments is critical to making appropriate inferences from the data in this report.

Additional Benchmark Resources

View [Achievement Level Descriptors](#) for Reading, Mathematics, and Science (MDE website > Districts, Schools and Educators > Teaching and Learning > Statewide Testing > Achievement Level Descriptors)

View the [Frameworks for the Minnesota Science & Math Standards](http://scimathmn.org/stemtc/) (http://scimathmn.org/stemtc/)

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

View the [MDE Testing 1,2,3](https://testing123.education.mn.gov) educator website (https://testing123.education.mn.gov)

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

View [Released Items and Passage Sets](#) for Reading and Mathematics (MDE website > Districts, Schools and Educators > Teaching and Learning > Statewide Testing > Released items and Passage Sets)