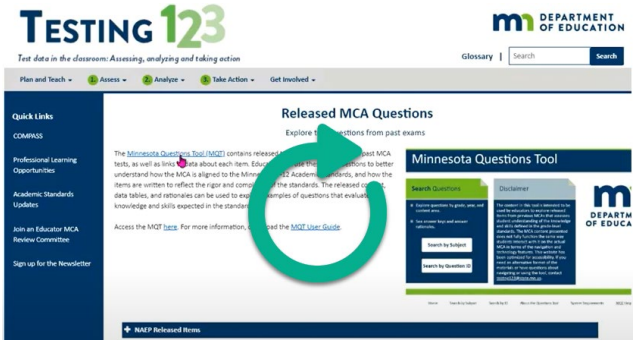
Minnesota Questions Tool with Released MCA Items

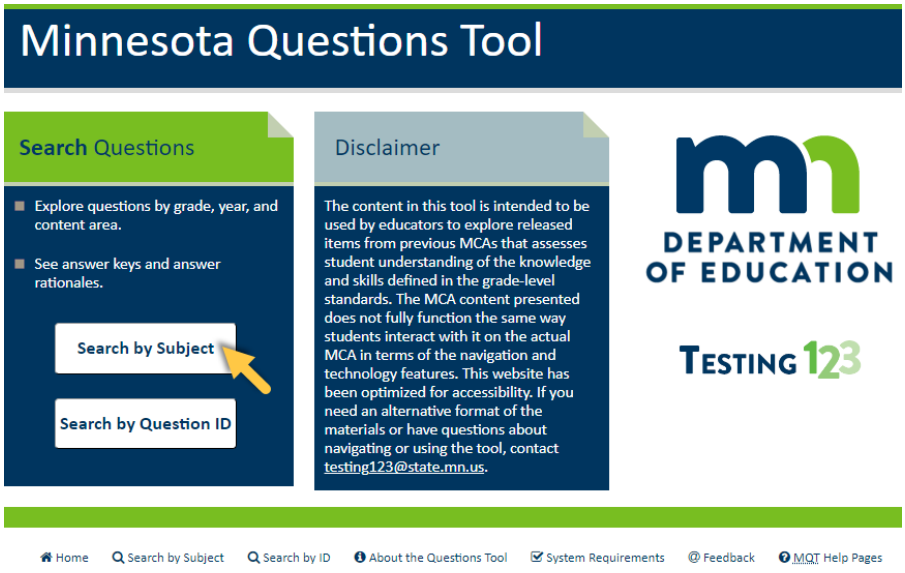
The Minnesota Department of Education (MDE) released the Minnesota Questions Tool (MQT) in the summer of 2022. This tool contains over 1,600 items that were previously administered on the Mathematics MCAs. Grades 3–8 each have over 200 items available for teachers to use. Grade 11 currently has 66 items available, and we are working to release more high school items in 2023.

How to use the MQT

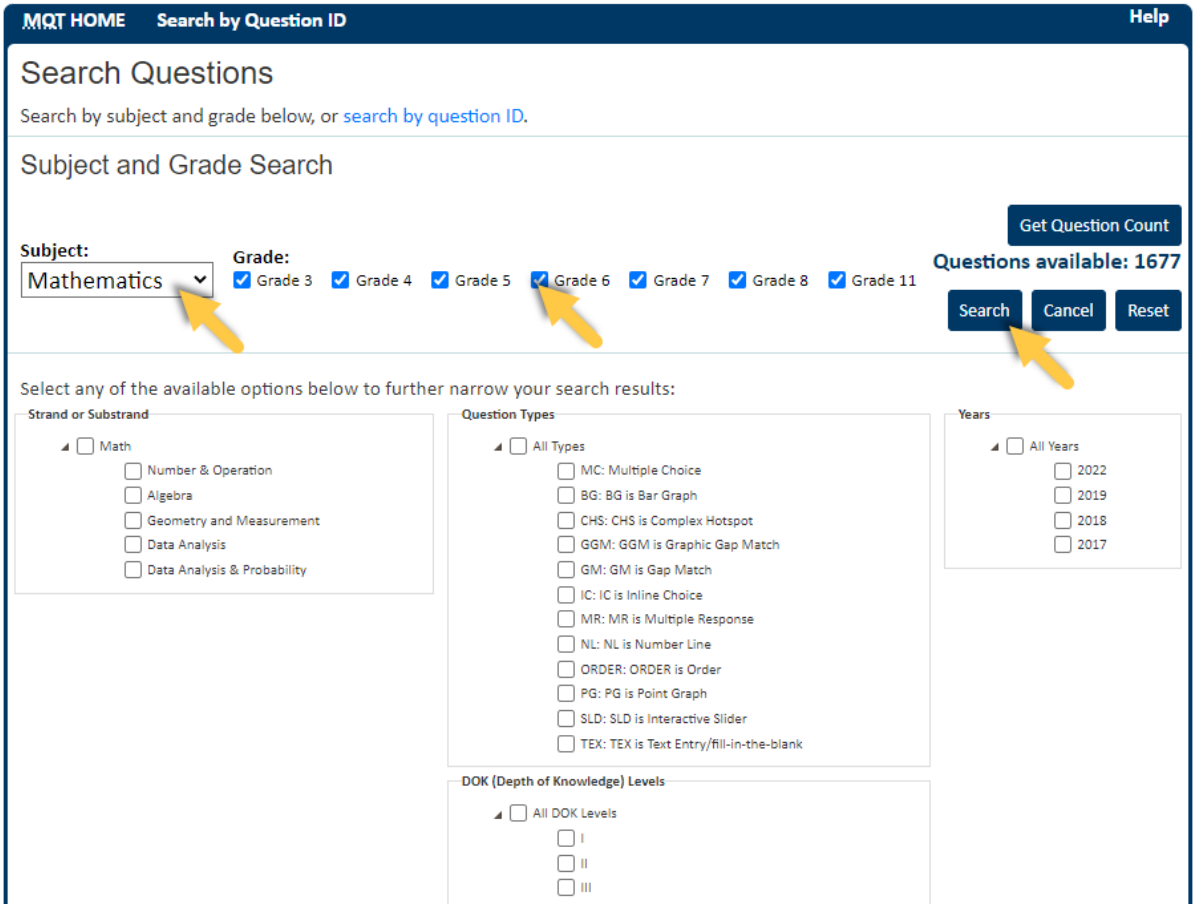
Here is a silent video showing how to navigate the steps explained below.



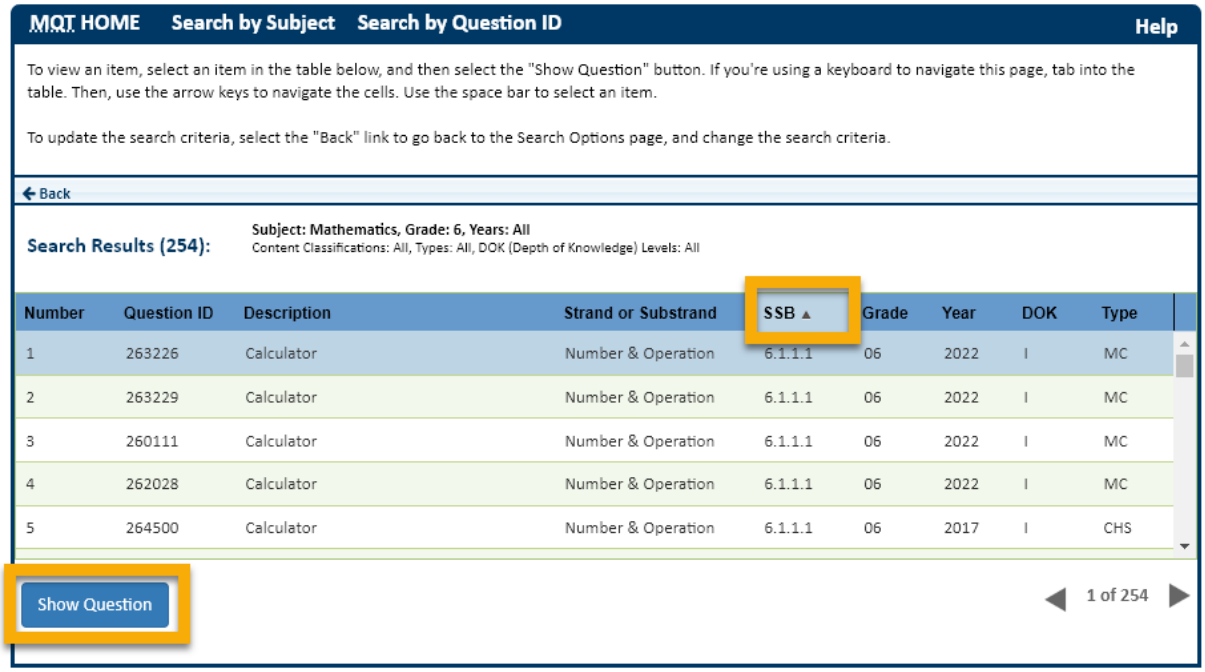
Here is how to access items in the MQT. Go to https://public.education.mn.gov/nqt/ and select **Search by Subject**.



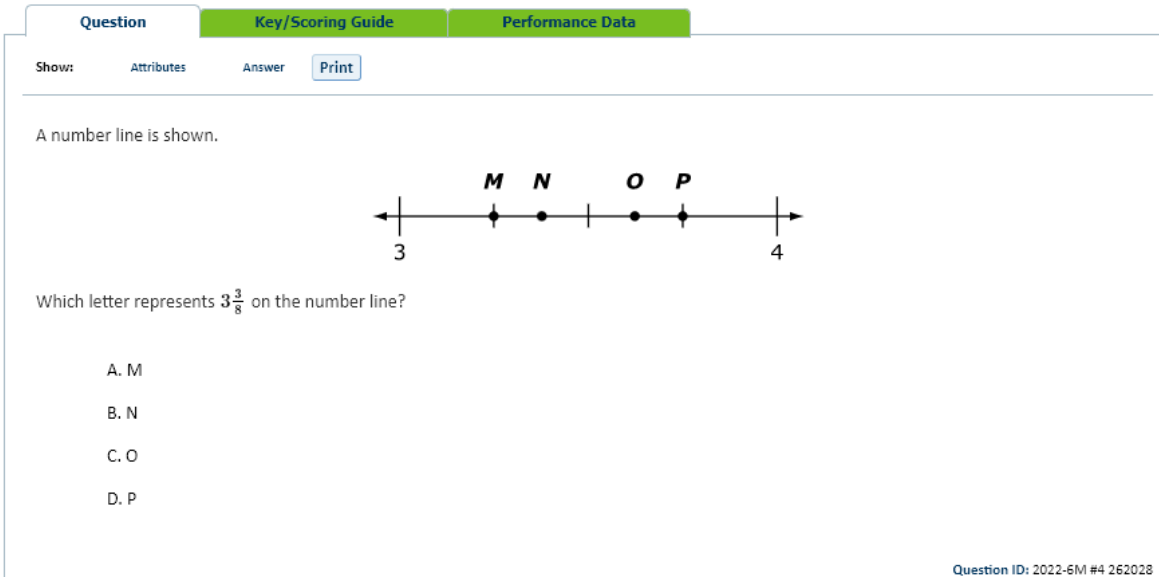
Then select a **Subject** (we recommend **Mathematics**) and the **Grade**(s) you are interested in searching. After that you have options to select specific math **Strand**, **Question Types**, and/or **DOK (Depth of Knowledge) Levels**. (The **Years** option just indicates the year the item was released and is likely not helpful for your search.) Then select the **Search** button.



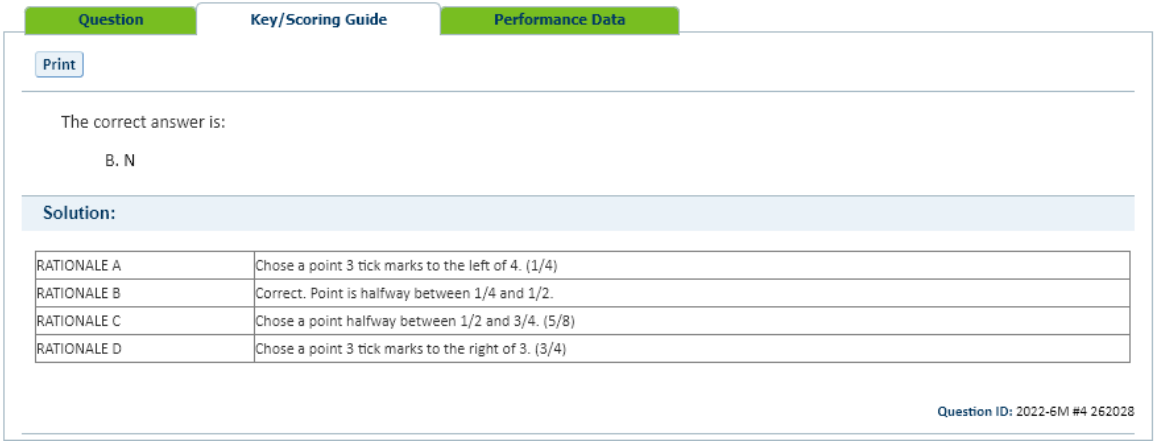
From there a list of items appear that can be sorted by various characteristics such as SSB (Strand, Standard, Benchmark). Select **Show Question** to see an item.



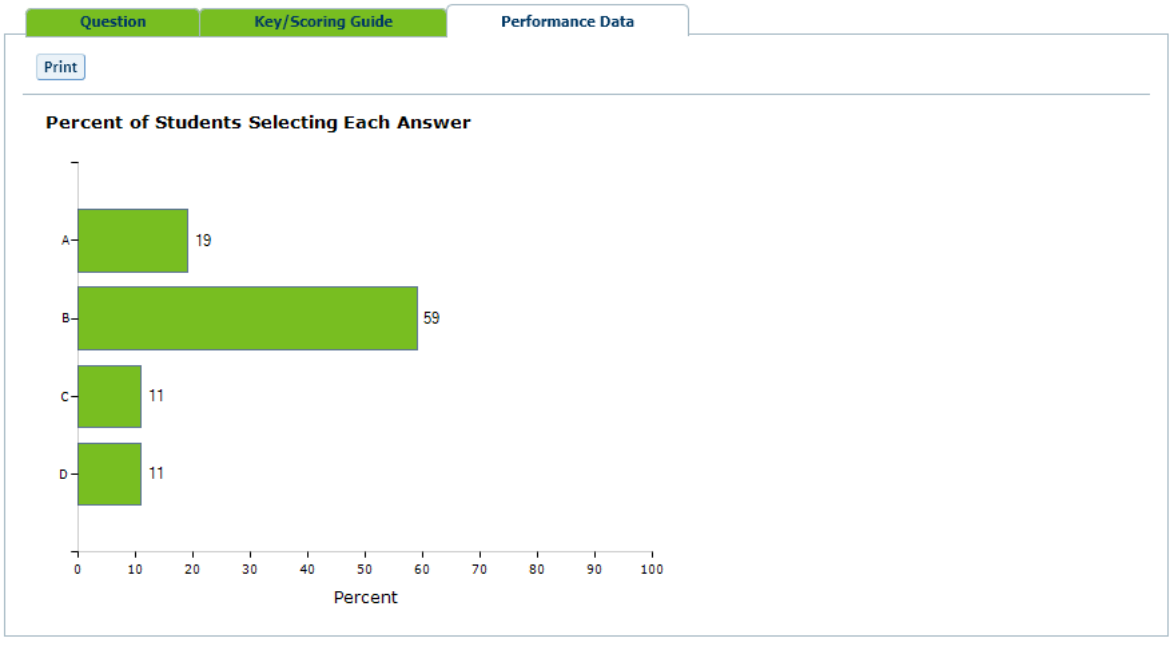
The **Question** tab shows the item. (Note: The MQT shows the mathematical content of the item, although the layout, functionality, and accommodations available are different than on the actual MCA.)



Selecting the **Key/Scoring Guide** tab shows the correct answer as well as possible reasons why someone might select the other distractors on multiple choice items.



Selecting the **Performance Data** tab shows the percent of students that correctly answered this item along with other incorrect responses for multiple choice items.



Some questions we have received about the released MCA items

- "Did you just release only the *bad* items?" No. The released items were perfectly valid as administered on previous years' MCAs. Committees of Minnesota math teachers edited and approved all items for use on the MCAs. Items were selected for release for educators to better understand how the MCA is

aligned to the Minnesota K–12 Academic Standards, and how the items are written to reflect the rigor and complexity of the standards.

- "Are these released items representative of all items on the MCA?" The released items are only a subset of the type of content students encounter on the MCA. They do not represent the totality of the content assessed. The released content, data tables, and rationales can be used to explore examples of questions that evaluate the knowledge and skills expected in the standards.

How to make use of the MQT tool

- Look at common misconceptions students have when responding to multiple choice questions with other educators.
- Have students provide the rationales for the incorrect answers (provide the correct answer and ask for an error analysis). This can be done with current or previous grade-level items to teach a concept and "accelerate learning."
- Review the Benchmark Achievement Level Descriptors (https://testing123.education.mn.gov/test/plan/success/) and access the examples provided in the MQT tool. We encourage you to see our previous MathBits article on the Benchmark Achievement Level Descriptors.

Benchmark	Does Not Meet *A typical student at this level of mathematics succeeds at few of the most fundamental mathematics skills of the Minnesota Academic Standards.* **Some of the skills typically demonstrated may include:**	Partially Meets *A typical student at this level of mathematics partially meets the mathematics skills of the Minnesota Academic Standards.* **Some of the skills typically demonstrated may include:**	Meets *A typical student at this level of mathematics meets the mathematics skills of the Minnesota Academic Standards.* **Some of the skills typically demonstrated may include:**	Exceeds *A typical student at this level of mathematics exceeds the mathematics skills of the Minnesota Academic Standards.* **Some of the skills typically demonstrated may include:**
6.1.1.4 **Determine equivalences among fractions, decimals and percents; select among these representations to solve problems.**	Identifies and writes the decimal representation of a 2-digit percent Released Examples: 44230, 263755	Identifies and writes the percent or decimal equivalent of a given fraction When given a fractional amount, identifies the complement represented as a percent Adds simple percents and fractions when identifying the total percent of something Released Examples: 44136, 263779	Identifies multiple representations of common percents Represents numbers as fractions (proper, improper, mixed, simplified and not simplified), decimals (including repeating decimals), and percents (including 1-digit percents) Solves one- and two-step problems involving percents and represents the answer as a fraction or a decimal Released Examples: 264927, 263753	Solves multi-step problems with fractions and represents the answer in various representations Consistently compares and represents numbers (including values less than 0.1) in various forms Released Example: 265611

We welcome your questions about this or other math related topics. Please contact us at the following addresses.

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