The Minnesota Questions Tool User Guide

The Minnesota Questions Tool (MQT) provides access to released or sample questions from past Minnesota Comprehensive Assessments (MCAs) and MTAS/Alternate MCA across all subjects (mathematics, reading, and science) and multiple grade levels. Minnesota's statewide assessments and test questions are reviewed by committees of educators and community members for grade-level appropriateness and alignment to the Minnesota academic standards with the goal of being culturally affirming, fair, and representative of Minnesota students.

The released or sample questions in the MQT are intended to support educators in understanding how the academic standards are assessed on the MCA and MTAS/Alternate MCA, to help identify student misconceptions, and to provide examples of questions that assess student understanding at different DOK (Depth of Knowledge) levels. The public release of MCA questions from past years' assessments is an integral part of the reporting process. Many factors are considered when deciding which questions to release, including ensuring that all released or sample questions have been shown to accurately measure student knowledge and skills from the standards.

Because the content in the MQT is intended to be used by educators to explore released or sample questions that assess student understanding of the knowledge and skills defined in the academic standards, it is important to note:

- These questions are not intended to be used as practice tests for the MCA or MTAS/Alternate MCA assessments. Student-facing resource tools are available to familiarize students and educators with the online and paper MCAs and Alt MCAs. They offer practice opportunities to navigate within the test, use tools and supports, and indicate answers to different types of questions.
- The questions in MQT do not function in the same way that students interact with them in the assessment delivery platform.
- Each released or sample question is aligned to the standards and grade level for each subject assessed but is not representative of student learning of the full standard and corresponding benchmarks.
- The released or sample questions in this tool do not represent a complete assessment that meets the blueprint outlined in the test specifications, including the range of cognitive skills assessed and difficulty level.

If you have questions about the MQT, contact mde.testing@state.mn.us

Characteristics of Released or Sample Questions

Alignment to Content Area and Standards

Released or sample questions are aligned to benchmarks in the relevant Minnesota Academic Standards in Mathematics, English Language Arts, or Science. For the Alternate MCA, questions are aligned to an extended benchmark. Extended benchmarks were written by Minnesota educators based on the original benchmark language in the Minnesota Academic Standards. These extended benchmarks identified to be used on the assessment are found in the Alternate MCA Test Specification documents.

Another resource for considering alignment to the academic standards is reviewing the Achievement Level Descriptors for MCA-III and MTAS and the Performance Level Descriptors for MCA-IV and Alternate MCA. Achievement/Performance Level Descriptors describe learning of the grade-level expectations set by benchmarks in the Minnesota Academic Standards and support teachers' analysis of the depth of their curriculum, instruction, and classroom assessments.

Released questions in MQT are aligned to benchmarks in the relevant Minnesota Academic Standards in Mathematics, English Language Arts, or Science:

Test Series	Standards Alignment	"Test Type" selection in MQT
Science MCA-IV and Alternate MCA	2019 Minnesota Academic Standards in Science	MCA-IV, Alt MCA
Reading MCA-IV and Alternate MCA	2020 Minnesota Academic Standards in English Language Arts	MCA-IV, Alt MCA
Mathematics MCA-III	2007 Minnesota K-12 Academic Standards in Mathematics	MCA
Mathematics MTAS	2007 Minnesota K-12 Academic Standards in Mathematics	Do not use "Test Type", use the MTAS link at bottom of page
Mathematics Alternate MCA	2022 Minnesota Academic Standards in Mathematics	Alt MCA

Difficulty or Depth of Knowledge Level

Cognitive complexity refers to the cognitive demand associated with a question or task. The level of cognitive demand is dependent upon the number of cognitive processes taking place in the mind of the learner when determining the correct answer to a question or task (for example, recalling a basic fact versus synthesizing across multiple sources or applying knowledge in a unique situation). Levels of cognitive complexity for the MCA are based on Norman L. Webb's Depth of Knowledge levels. A DOK level of 1, 2, or 3 is assigned to each question. Cognitive complexity is different than the difficulty of a question, which is based on the expected number of students who will answer correctly based on the inherent nature of the content being assessed, not the mental processes taking place in the mind of the learner. A question asking students to remember an obscure fact or definition can be considered difficult but still be classified as a DOK level 1.

Key/Scoring Guide

Each question provides the correct answer (key) and a scoring guide that includes a rationale, which provides justification for the correct answer and explains why all other options are incorrect. Additionally, the incorrect option rationales explain why the student may have decided to select the incorrect answer. This can be helpful for identifying student misconceptions. For example, if many students chose an incorrect option, it may be useful to closely review the incorrect options and their rationales to identify why students were led to the incorrect option. This information can be used to help teachers address misconceptions when planning for classroom instruction, or the question can be shown as an example to students.

Performance Data

For multiple choice questions that have been previously field tested or used on an assessment, the percent of students who answered a particular question correctly and the percent of students who selected each incorrect option are provided. This can be helpful for identifying student misconceptions. For example, if many students chose an incorrect option, it may be useful to closely review the incorrect options and their rationales to identify why students were led to the incorrect option.

Using the MQT

Users can filter questions by strand or substrand, question type and Depth of Knowledge. For each item, users can read rationales for correct/incorrect answers, review student performance data, and download questions for use in planning classroom assessments and instruction.

Searching for questions

To find released or sample questions, begin by setting your search criteria. You can search by subject or by question ID.

To search by subject:

1. Select Search by Subject.
2. Select the test type (MCA (representing MCA-III), MCA-IV or Alt MCA).
3. Select a subject area (Mathematics, Reading, or Science).
4. Based on your subject selection, available grade selections will appear. Select one or more grades by checking the applicable boxes. Then select Submit.
5. You can narrow your search using the following filters:
    - Strand or Substrand: The strands/substrands for the subject chosen.
    - Question Types: The type of questions available for that subject/grade.
    - Depth of Knowledge Levels (DOK): Levels of cognitive complexity for the MCA are based on Norman L. Webb's Depth of Knowledge levels. More information on DOKs can be found on the Testing 1, 2, 3 website under General Resources.
6. Select Search. The questions that meet your selected criteria will appear in a table format.
7. Click on a row to view each individual question.

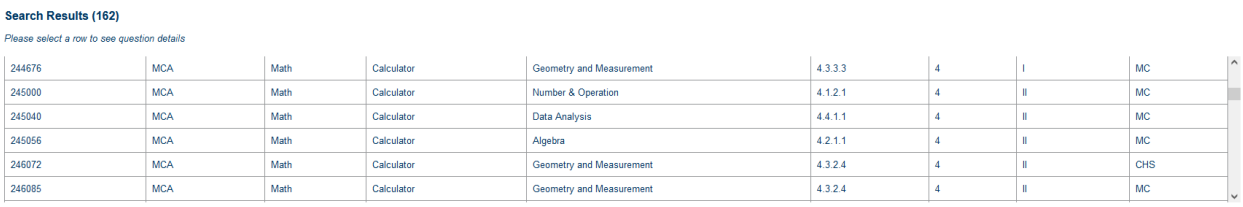
To search by Question ID:

1. Select Search by Question ID.
2. Enter the question ID into the text box and select Search.
3. The individual question will show on the screen.
4. Enter another question ID to view a different item.

View Results

Search results that include more than one item display in a table that lists the following information:

- Question ID: MDE-unique identifying number for each question
- Test Type: MCA (representing MCA-III), MCA-IV or Alternate MCA
- Subject: Math, Reading, or Science
- Description: For MCA mathematics questions, this field displays whether the question allows the use of a calculator. For MCA and Alt MCA reading and science questions, this field displays the name of the passage or phenomenon.
- Content Area: The name of the strand or substrand the question is aligned to.
- Standard: The numerical standard, strand, and benchmark the question is aligned to.
- Grade: The grade the question is aligned to.
- DOK: Depth of Knowledge level assigned to the question. Type: Multiple Choice (MC), Constructed Response (CR) or technology enhanced question types such as Bar Graph (BG) or Hot Spot (HS).



Search Results (162)

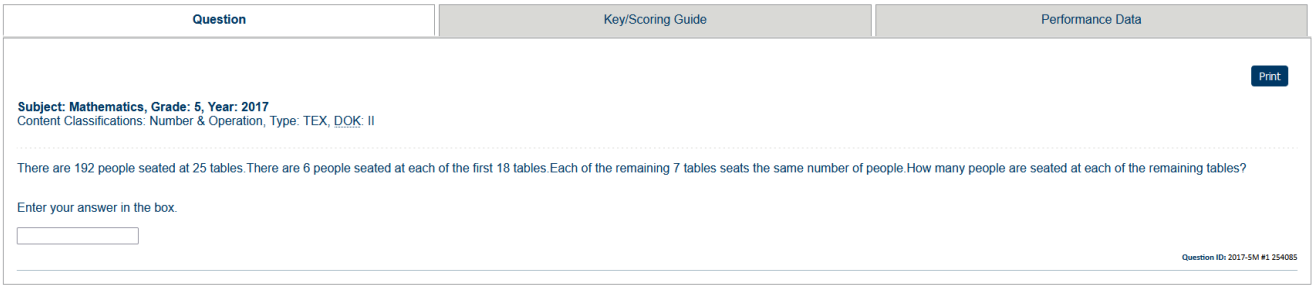
Please select a row to see question details

244676	MCA	Math	Calculator	Geometry and Measurement	4.3.3.3	4	I	MC
245000	MCA	Math	Calculator	Number & Operation	4.1.2.1	4	II	MC
245040	MCA	Math	Calculator	Data Analysis	4.4.1.1	4	II	MC
245056	MCA	Math	Calculator	Algebra	4.2.1.1	4	II	MC
246072	MCA	Math	Calculator	Geometry and Measurement	4.3.2.4	4	II	CHS
246085	MCA	Math	Calculator	Geometry and Measurement	4.3.2.4	4	II	MC

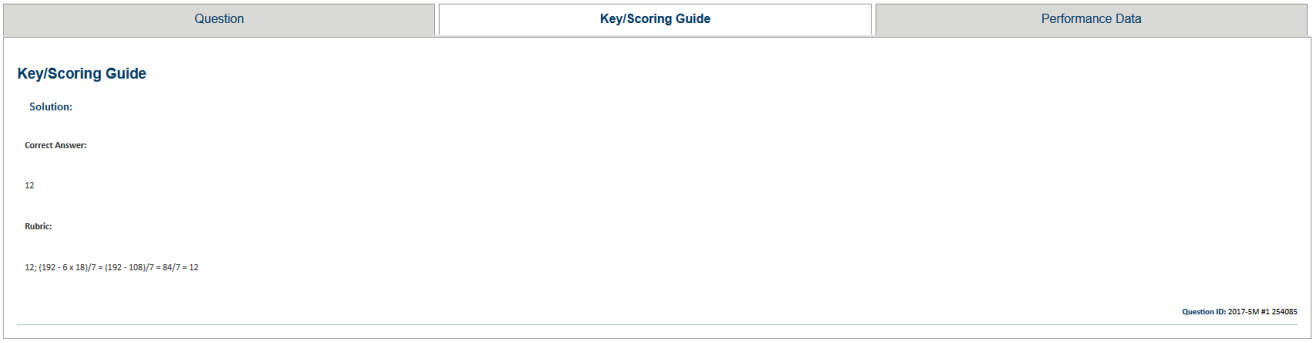
Show Question and Performance Data

To view the details of a question, select the question row in the table. Below the table, a window will open to show the Question, Key/Scoring Guide (question rationales), and Performance Data tabs.

The Question tab shows the question, the reading passage and science phenomena as well as the correct answer:



The Key/Scoring Guide tab shows the correct answer to the question, as well as the rationales for all answer choices.



The Performance Data tab shows the percent of Minnesota students selecting each answer for multiple choice items and the percent of students who chose the correct answer or technology enhanced items.

Print Question

To print the question, select Print.

Question | Key/Scoring Guide | Performance Data

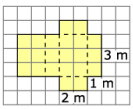
Show Answer | Print

s

Subject: Mathematics, Grade: 5, Year: 2022

Content Classifications: Geometry and Measurement, Type: MC, DOK: I

This net can be folded to make a rectangular box.



What is the surface area of the box?

A. 6 square meters

B. 11 square meters

C. 22 square meters

D. 36 square meters

Question ID: 2022-5M #175 250242