

Calculator Use General Guidelines

All Mathematics and Science MCA and MTAS/Alt MCA test items can be solved in a variety of ways; therefore, calculators are not required. However, they may be used to answer items when a calculator is allowed.

Overview

Refer to *Calculator Use* in Chapter 8 for detailed information about calculator use for online MCA, paper MCA, and MTAS/Alt MCA, including the use of other materials (such as mathematics manipulatives or tables). The following table provides a summary of what is addressed in Chapter 8. Online calculators include both Texas Instruments (TI) and Desmos versions. For more information about Desmos calculators, refer to the *Instructions for Using Desmos Calculators in TestNav* resource under the Stand-Alone Calculators header on the [Student Tools and Supports](#) page on the Minnesota Assessment Hub (Minnesota Assessment Hub > Resources & Training > Student Tools and Supports). In addition, online versions of the hundreds chart and multiplication tables are available in all online Mathematics MCAs when a calculator is allowed.

General Calculator Use Information

Test	Can Handheld Be Used?	Notes
Online Grades 3-8 Mathematics MCA	No	The online calculators and mathematics tables in TestNav are available when calculator use is allowed. If an IEP or 504 plan states that a handheld calculator must be used, a paper test book must be used.
Online Grade 11 Mathematics MCA	Yes	The online calculators and mathematics tables in TestNav are available throughout the entire test. A handheld calculator can be used instead of or alongside the online calculators.
Online Science MCA	Yes	The online calculators in TestNav are available for items on the test that may ask the student to complete simple mathematical computations. Any type of handheld calculator can be used instead of or alongside the online calculators.

Test	Can Handheld Be Used?	Notes
Paper Grades 3-8 Mathematics MCA	Yes; allowed segments	Handheld calculators and printed mathematics tables may be used, except for Segment 1 (the non-calculator segment). The type of calculator required is as follows: • Grades 3-5: Basic or four-function • Grades 6-7: Scientific • Grade 8: Graphing
Paper Grade 11 Mathematics MCA	Yes	Handheld calculators and printed mathematics tables may be used throughout the test. The type of calculator allowed is a graphing calculator.
Paper Science MCA	Yes	Any type of handheld calculator may be used; basic or four-function calculators are all that is required, but scientific or graphing calculators are also allowed.
Mathematics MTAS and Science Alternate MCA	Yes	Calculators, mathematics tables, or anything that the student uses as a calculator (such as mathematics manipulatives or assistive technology devices) may be used on any tasks. Note: While it is allowed to be provided, a calculator is not needed for the Science Alt MCA.

General Guidelines

The information in this section is intended to be a general description of allowable practices related to calculator use. It is not meant to be an exhaustive list of specific calculators, devices, or technologies. Refer to Chapter 8 for specific information on the use of handheld calculators. Note: As technology changes, these policies will be reviewed and may be updated.

- Students must be given an opportunity to become familiar with the handheld calculator or online calculators as well as the online mathematics tables (or printed versions for paper administrations) before testing. During testing, Test Monitors will not be able to assist students with the use of calculators or mathematics tables. The only exceptions are if a handheld calculator is not functioning (for example, dead batteries) or if the online calculator prevents a student from accessing an item, responding to an item, or moving within a test. For further information, refer to *What Help Test Administrators and Test Monitors Can Give to Students* in Chapter 8.

- Students may use their own calculator, or one provided by the school, when a handheld calculator is allowed.
- Students may not share calculators.
- Students may not use instructions for their handheld calculators during the test.
- Students with memory-enabled graphing calculators are not allowed to bring stored examples into the testing session, access programs during testing, or store the test questions afterwards. Additional requirements for memory-enabled calculators are listed below.
- Students may be asked at any time to surrender their calculator for examination by a Test Monitor and may be asked to delete programs on the calculator.
- When handheld calculators are allowed, follow the requirements listed below by grade level for Mathematics MCA. Using a more technologically advanced calculator than the one specified provides assistance that invalidates what is being assessed (for example, using a scientific calculator instead of a four-function calculator for grade 5). Using a less technologically advanced calculator than the type specified (for example, using a four-function calculator instead of a graphing calculator for grade 8) is allowed but not recommended as students do not have the same access to additional functions the calculator provides.
 - Basic or four-function calculators (required for grades 3-5 for mathematics)
 - Scientific calculators (required for grades 6-7 for mathematics)
 - Graphing calculators (for example, the TI-83, TI-84 Plus series, and TI-Nspire, without computer algebra systems, are acceptable; required for grades 8 and 11 for mathematics)
 - Basic or four-function, scientific, or graphing calculators may be used for the Science MCA.
 - Basic or four-function, scientific, or graphing calculators with a talking feature may also be used in an individual setting if its use is documented in the IEP or 504 plan.
 - Use of a device calculator application as determined by the IEP or 504 plan team for the assistive technology accommodation is allowed as long as the guidelines in this appendix are followed, Internet access is turned off, and other applications are not accessed. The student must test in an individual setting to ensure the device is used only as a calculator and that the required type of calculator is used (basic/four-function, scientific, or graphing).
 - While specific Texas Instruments and Desmos calculators are the types of calculators available in TestNav for online testing, any brand of calculator may be used when handheld calculators are allowed.
- The following are prohibited (except as an approved accommodation specified in Chapter 4):
 - Web-based calculators or calculator apps accessed from another device (for example, a Chromebook)
 - Calculators with built-in computer algebra systems (CAS)
 - Cell phones, tablets, laptop computers, or any other devices that can electronically send, receive, or capture information
 - Electronic writing pads or pen-input/stylus-driven devices

- Calculators with a typewriter keypad (a QWERTY keyboard similar in appearance and function to a word-processing keyboard with function and letter keys)
- Calculators with an infrared data port (not allowed unless students completely cover the infrared data port with heavy opaque material such as duct tape)
- Calculator modules that allow access to the Internet (such as the module that attaches to the TI-NSpire CX)

Handheld Calculator Memory Clearing Policy

Students with memory-enabled calculators are not allowed to bring stored examples, formulas, or programs into the test session, access programs during testing, or store the test questions afterwards. For this reason, a graphing calculator must either:

- Have its memory cleared both **before** and **after** each test session, or
- Have a feature that temporarily disables all flash applications and calculator files (for example, the TI-NSpire has “Press to Test” mode).

Test Monitors are required to check memory-enabled calculators before the test and disable any stored programs and applications by either clearing the memory both before and after the test session or by using the temporary disabling feature. Test Monitors must invoke the temporary disabling feature, if available, at the beginning of each test session and can return it to normal functionality at the end of each test session. Note that clearing the calculator memory will delete stored programs or applications. Students should be told prior to test day to save all data and stored programs on another device that is not being used for the test.

If a calculator can neither have its memory cleared nor have the applications and files temporarily disabled prior to test administration, students are not permitted to use that particular calculator during the test. Failure on the part of the Test Monitor to verify that each calculator meets the above requirements will constitute a security violation and the student’s test may be invalidated.