



Calculator Use Policy

In order to create a test administration that provides every student with a fair and equitable assessment opportunity, the Kentucky Department of Education (KDE) has developed a calculator policy. Following this policy will ensure that all students have a measure of their academic achievement that is comparable to all students across the state.

Calculator Use Policy for Online Testing

Desmos calculators will be available for students to use within TestNav for the Kentucky Summative Assessments (KSA). There are three calculators available – four-function, scientific and graphing. Students will have access to the three types of calculators depending upon the grade level and the question. Elementary (3-5) grades will have access to the four-function calculator; Middle (6-8) grades will have access to the scientific calculator; and High (10, 11) grades will have access to the graphing calculator for the Reading, Writing, Math, and Social Studies assessments. **Note: Students taking the Science assessment at grade 11 will have use of the scientific calculator.** Each grade level has a calculator and non-calculator section on the mathematics assessment; in the calculator section, a calculator will appear when the calculator button in the toolbar is selected. Students with the online calculator accommodation will have access to the calculator in the non-calculator section as well (see section *Online Calculator Accommodation*) To move the calculators (graphing, four-function, and scientific), students will select the calculator and drag it. The graphing calculator can also be resized by dragging the edges/corners of the window. Students can select the buttons or use their keyboard to use the calculator. Selecting the Calculator button again closes the calculator.

*Please note: Only certain types of calculators are **permitted** per grade level:*

- *Elementary (grades 3-5) – four-function calculator*
- *Middle (grades 6-8) – scientific calculator*
- *High (grade 10, 11) – graphing calculator*
 - *Grade 11 – will have access to a scientific calculator on the Science assessment*

(Calculators provided to students that are not the correct type for their grade level are prohibited.)

The Desmos online calculators are available for free to all students now and throughout the school year and are accessible to students with vision impairments. Tutorial videos are available for practice and guidance. Testing calculators differ from standard calculators available in the app stores and on desmos.com as some features and functionalities are disabled on the testing versions. To practice with the testing calculators, visit desmos.com/practice. Additionally, free test mode apps for Chromebooks, iPads, and iPhones can be downloaded through the iOS and Android App Stores. When Kentucky is selected, the app will run with the same functionalities available in TestNav and can be utilized in practice mode or a self-locking assessment mode.

Providing the online calculators within the TestNav system further standardizes the assessment. All students using the same calculator adds to the validity of Kentucky's state test, allowing for accurate representation of students' conceptual understanding, procedural/skill fluency, and application essential to the content.



Only students that receive specific accommodations or accommodated kits can use a hand-held calculator. If a student is taking the test using a paper test kit, Braille or Large-Print, then they may use a hand-held calculator that meets current calculator acceptable-use criteria.

Note: In the unlikely event that the online calculator should not function during a test administration, an approved hand-held calculator should be provided to the student.

Calculator Use Policy for Paper-Based State Testing

The KDE calculator policy applies to all paper-based state assessments, and to all students, including those who receive test accommodations with an Individual Education Program (IEP) or 504 Plan. In some instances, a student with an IEP or a 504 Plan might use a device not listed within this policy. The District Assessment Coordinator (DAC) must submit an electronic request to the Office of Assessment and Accountability (OAA) for permission allowing a student to use the device not included on the list. OAA will consider the request, which will include reviewing IEPs or 504 plans, to determine if the device is part of the plan and whether it would provide an unfair advantage on state assessments. Each grade level has a calculator and non-calculator section on the mathematics assessment; only permitted calculators should be used within the appropriate section of testing. Students with the calculator accommodation may use an approved calculator on all sections of the content area assessment.

Prohibited Computer Applications, Programs and Documents

During test administration, all applications, programs, or documents built-in, created or downloaded on calculators are prohibited for use on state assessments. This includes all applications and programs with a computer algebra system (CAS)¹. Some permitted calculators have suppression functions, such as Press to Test, that disable applications and use of documents for testing purposes. If available, the suppression function should be used on permitted calculators to deactivate prohibited applications and programs². In addition, all stored documents must be removed.

Examples of Prohibited Calculators

The following types of calculators are **prohibited** (not an exhaustive list):

- calculators with built-in or downloaded computer algebra system functionality
- calculators which contain functions, modes, and/or instructions that cannot be disabled and would provide an advantage over a student using the testing calculator within the testing platform

Prohibited calculators in this category include:

- Texas Instruments: All model numbers that begin with TI-10, TI-15, TI-30, TI-73, TI-89 or TI-92, the TI-36X Pro and the TI- Nspire CAS—Note: The TI-Nspire (non-CAS) is permitted.
- Hewlett-Packard: HP Prime, HP 48GII and all model numbers that begin with HP 40G, HP 49G, or HP 50G
- Casio: fx-CP400 (ClassPad 400), Algebra fx 2.0, ClassPad 300 and ClassPad 330, and all model numbers that begin with CFX-9970G

¹ Calculators with a Computer Algebra System (CAS) can produce symbolic results, manipulate algebraic expressions, perform operations such as factoring, expanding and simplifying expressions. In addition, calculators with CAS can give answers in exact form without numerical approximations. Some examples of applications with CAS functionalities: all versions of Zoom-Math, APP4MATH, F2K, Allmath and Polynomials All in One.

² Knowledgeable school staff may need to assist students in reinstalling or reactivating suppressed applications after testing is complete.



- handheld, tablet, or laptop computers, including PDAs
- electronic writing pads or pen-input devices—Note: The Sharp EL 9600 is permitted.
- calculators built into cell phones or any other electronic communication devices
- calculators with a keypad (letter keys in QWERTY format). Note: Letter keys not in QWERTY format are permitted.

*Please note: Only certain types of calculators are **permitted** per grade level:*

- *Elementary (grades 3-5) – four-function calculator*
- *Middle (grades 6-8) – scientific calculator*
- *High (grade 10, 11) – graphing calculator*
 - *Grade 11 – will have access to a scientific calculator on the Science assessment*

(Calculators provided to students that are not the correct type for their grade level are prohibited.)

Calculators Permitted with Modification

The following types of calculators are **permitted, but only after they are modified** as noted:

- calculators that can hold programs or documents—Remove all documents and remove all programs that have computer algebra system functionality.
- calculators with paper tape—Remove the tape.
- calculators that make noise—Turn off the sound.
- calculators with an infrared data port—Completely cover the infrared data port with heavy opaque material such as duct tape or electrician's tape (includes Hewlett-Packard HP 38G series, HP 39G series and HP 48G).
- calculators that have power cords—Remove all power/electrical cords.

Permitted Calculators

Students may use any four-function, scientific or graphing calculator, if:

- ✓ It is not on the list of **Prohibited Calculators**.
- ✓ All applications, programs and documents have been removed or deactivated as described in the **Prohibited Computer Applications, Programs and Documents** section.
- ✓ Proctors have made necessary modifications based on the **Calculators Permitted with Modification** section.

Calculator Use Policy for Paper-Based Testing and Online Testing with Accommodations

The use of a permitted calculator is allowed on all sections of the state-required assessment including those sections labeled non-calculator for students with an IEP or 504 Plan. The test administrator is not permitted to encourage the use of a calculator. It is the examinee's responsibility to know whether their calculator is permitted. Calculators that hold documents or programs must have all documents and programs removed that have computer algebra system functionality.



Hand-Held Calculator Accommodation

Students receiving Braille, Large-Print, or paper test kits must use a hand-held calculator that is not on the prohibited list and meets current acceptable-use criteria. Students taking the online test should use the online calculator provided, however some students may qualify for a hand-held calculator if they meet specific guidelines.

- They must have use of a calculator and a mathematics deficiency noted on their IEP or 504 Plan.
- They must have received and consistently used the calculator as part of regular classroom instructions throughout the year. Like all other accommodations, a calculator cannot simply be a state testing accommodation.
- A hand-held calculator must be clearly indicated on the IEP or 504; otherwise, the student only qualifies for an online calculator during testing. If students meet the above conditions, they may use an approved hand-held calculator on the online version of the test.

If a student needs a hand-held calculator that is outside of acceptable-use descriptions in this policy, the District Assessment Coordinator (DAC) must submit an electronic request to the Office of Assessment and Accountability (OAA) for permission allowing a student to use that device.

Online Calculator Accommodation

Students taking the online test with a calculator accommodation noted on their IEP or 504 Plan that clearly specifies online calculator may be provided that calculator even on non-calculator portions of content assessments. Use of the online calculator must meet specific guidelines:

- Student must have use of a calculator and a mathematics deficiency noted on their IEP or 504 Plan.
- Student must have received and consistently used the calculator as part of regular classroom instruction throughout the year. Like all other accommodations, a calculator cannot simply be a state testing accommodation.