

Calculator Policy for Calculator Sections of the Mathematics and DC Science Assessments

Originally Released July 2012, Updated February 2019¹

Allowable Calculators

- Grades 3-5: No calculators allowed, except for students with an approved calculator accommodation (see below)
- Grades 6-7: Four-function with square root and percentage functions
- Grade 8: Scientific calculators
- High school: Graphing calculators (with functionalities consistent with TI -84 or similar models)
- DC Science: Four-function with square root and percentage functions

Additionally, schools must adhere to the following additional guidance regarding calculators:

- No calculators with Computer Algebra System (CAS) features are allowed.
- No tablet, laptop (or PDA), or phone-based calculators are allowed during assessments.
- Students are not allowed to share calculators within a testing session.
- Test Administrators must confirm that memory on all calculators has been cleared by resetting the calculator to its default settings before and after each testing session. Additional steps may be needed to completely clear all memory, stored programs and formulas, RAM, archives, and non- factory-installed apps for graphing calculators. See the FAQs (#13) below for additional clarification on how to clear the memory, stored programs, and formulas of graphing calculators.
- Calculators with “QWERTY” keyboards are **not** permitted.
- If LEAs or schools permit students to bring their own hand-held calculators for assessment purposes, Test Administrators must confirm that the calculators meet requirements as defined above.

Calculator Accommodations:

For students who meet the guidelines in your Accessibility Features and Accommodations Manual for a calculation device, this accommodation allows a calculator to be used on non-calculator sections of any mathematics assessment. The following are allowable calculators for the accommodation on non- calculator sections:

- Grades 3-5: Four-function with square root and percentage functions
- Grades 6-7: Four-function with square root and percentage functions
- Grade 8: Scientific calculators (Student may also bring a four-function with square root and percentage functions in addition to grade-level calculator.)
- High School: Graphing calculators with functionalities consistent with TI-84 or similar models. (Student may also bring a scientific calculator or a four-function with square root and percentage functions.)
- DC Science: Four-function with square root and percentage functions

If a student needs a calculator as part of an accommodation in the non-calculator section, the student will need a hand-held calculator because an online calculator will not be available. If a student needs a specific calculator (e.g., large key, talking), the student can also bring his or her own, provided it is specified in his or her approved IEP or 504 Plan. The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that severely limits or prevents their ability to perform basic calculations (i.e., student is unable to perform single digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so.

¹ Calculator specifications were released July 2012. An addition was made July 2014 to allow four function calculators with square root AND percentage functions. Guidance on allowable calculators for accommodations was included September 2014. Clarification was added to the FAQs July 2016. Clarification was added on how to clear the memory of graphing calculators in February 2017. Clarification was added to the policy and FAQs regarding IEP or 504 requirements for accommodations in August 2017. Guidance on DC Science included.

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Frequently Asked Questions about the Calculator Policy

1. Can students use hand-held calculators for computer-based assessments?

Yes. If they prefer, students may use hand-held calculators on computer-based Mathematics assessments on any section where a calculator is allowable (grades 6 through high school) or on all DC Science assessments. All hand-held calculators must meet requirements as defined in this Calculator Policy.

It is recommended that schools identify which students prefer to use a hand-held calculator prior to administration to ensure that a sufficient number of calculators is available. Hand-held calculators are required for paper-based testing. Test administrators are responsible for ensuring hand-held calculators meet specifications, including ensuring the memory is cleared before and after administration.

2. Can students use their own calculators on mathematics assessments?

Yes. However, test administrators must confirm that the calculators meet requirements as defined in this Calculator Policy.

3. Who can receive a calculator during the non-calculator section of the mathematics assessments?

Students with a valid and current IEP or Section 504 plan that specify which devices or manipulatives the student may use during the mathematics assessments. The purpose of the calculation device on the non-calculator sections accommodation is to provide access for students with a disability that severely limits or prevents their ability to perform basic calculations (i.e., student is unable to perform single digit addition, subtraction, multiplication, or division), even after varied and repeated attempts to teach the student to do so. Prior to providing the student with the calculation device and/or mathematics tools, IEP/504 plan teams should also consider whether:

- The student is unable to perform calculations without the use of a calculation device, arithmetic table, or manipulative during routine instruction.
- The student's inability to perform mathematical calculations is documented in evaluations summaries from locally-administered diagnostic assessments.
- The student receives ongoing, intensive instruction and/or interventions to learn to calculate without using a calculation device, in order to ensure that the student continues to learn basic calculation and fluency.

4. Can students use calculators on PARCC assessments that are allowable for higher or lower grade level assessments?

In general, no. In order to provide comparability across schools in the consortium, students must only use a calculator that is allowable for their grade/course assessment. PARCC assessment items were developed with the Calculator Policy in mind. Allowing for the use of a calculator that is designated for a lower or higher grade level assessment may unfairly disadvantage or advantage students and is, therefore, not allowed. **Exception:** Students with a disability that *severely limits or prevents* their ability to perform basic calculations may receive the Calculation Device and Mathematics Tools (on Non-Calculator Sections of Mathematics Assessments) accommodation that permits the use of a calculator designated for a lower grade assessment on Non-Calculator Sections of Mathematics Assessments according to a student's IEP or 504 plan. Please review your Accessibility Features and Accommodation Manual (seventh edition) for the specific lower grade level calculators allowed.

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5. *If a student takes an Algebra I course where a graphing calculator is used, but the student is taking a grade 8 PARCC assessment where a scientific calculator is used, which calculator should they use?*

Calculator usage is assessment specific, regardless of the student's grade level (e.g., a student who takes the assessment for a specific grade or course must use the calculator required by the Calculator Policy for that assessment). In this example, the student should use a scientific calculator, since the student is taking the grade 8 PARCC assessment. A student taking the Algebra I assessment would use the graphing calculator for this assessment regardless of the student's grade level. Schools should ensure students have ample opportunity to practice with the allowable calculator for their PARCC grade/course assessment.

6. *Does my school have to buy new calculators?*

Maybe. All schools participating in computer-based PARCC and DC Science assessments will be provided an online calculator within the computer-based delivery platform. If a student chooses to use a hand-held calculator, he or she may either bring their own calculator or the school may provide the calculator. For paper-based assessments, all students in grades 6 and higher must have a hand-held calculator for the calculator portion of the PARCC assessment. All students participating in the DC Science assessment may use a hand-held calculator. Either schools must ensure they have a sufficient number of the appropriate calculators available or allow students to bring their own. All calculators must meet requirements defined in the Calculator Policy.

7. *If a student has the Calculation Device and Mathematics Tools (on Non-Calculator Sections of Mathematics Assessments) accommodation, what allowable mathematics tools can be used?*

A student with the calculation device and mathematics tools (on non-calculator sections of the mathematics assessments) accommodation may only use the following mathematics tools to aid in calculation:

- Arithmetic tables (e.g., addition charts, subtraction charts, multiplication charts; division charts)
- Two-color chips (e.g., single-sided or double-sided)
- Counters and counting chips
- Square tiles
- Base 10 blocks
- 100s chart

8. *Can students use the TI-Nspire (non-CAS) calculator on PARCC high school assessments?*

Yes. The TI-Nspire (non-CAS) calculator meets PARCC requirements as defined in the Calculator Policy.

9. *Do memories have to be cleared on every handheld calculator?*

Yes. Calculator memories need to be cleared by resetting the calculator to its default settings before and after each testing session.

10. *What will happen to my apps when the calculator is reset to its default settings?*

Preinstalled apps will still be present on the calculator after it has been reset. However, apps that have been created by the user will be deleted during the resetting process. If those apps are needed after testing has been completed, it would be prudent to transfer those apps to a PC/Mac prior to testing.

11. *When are the memories reset on the online graphing calculator?*

The online graphing calculator resets to its default settings after each unit. However, within a unit, the screen display on the online graphing calculator will carry from item to item.

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12. In what mode, radians or degrees, is the online graphing calculator set?

The default mode of the online graphing calculator at the beginning of each unit is radians.

13. How do I clear the memory for TI graphing calculators?

To clear the memory of TI-84 graphing calculators (or similar models), students and/or Test Administrators should complete the following steps:

Select the following:

- 2nd
- + (Mem)
- 7: Reset
- Scroll right twice to "ALL"
- 1: All Memory
- 2: Reset

The screen should say "Resetting All." When completed, the screen will say "Mem Cleared."

There may be other steps for completely clearing the memory for non-TI graphing calculators. Test Administrators are expected to check that other brand calculators are cleared for RAM, programs, formulas, archives and non-factory-installed apps.