



Hawai'i

Statewide Assessment Program



Guide for IEP/504 Teams Considering the Multiplication Table (MT) State Test Accommodation (September 2020)

The Multiplication Table (MT) state test accommodation described in this document is available at all grade-levels and may be used on all items found on the Smarter Balanced state test in mathematics. Student use of the MT is not limited to specific problems on the math assessment, and students are allowed to use the MT on items that do not allow calculator use.

The MT as an accommodation is only available to students with an IEP or 504 Plan and is specifically limited to students who have a documented and persistent calculation disability (e.g., dyscalculia). This disability must significantly impede student ability to demonstrate conceptual and procedural understanding of mathematics. For students whose basic computational ability is significantly impacted, this accommodation allows students to demonstrate their understanding of when multiplication should be applied. Without this support, students may know that a presented scenario should be solved using multiplication; however, they would otherwise be unable to calculate a product or work efficiently through a multi-step problem to the end.

Students who are provided this accommodation should be students who would otherwise be unable to participate equitably and meaningfully in the Smarter Balanced (SB) assessments in mathematics. *The MT as an accommodation is not appropriate for students who are struggling with mathematics, but rather is intended for students with significant disability in the area of mathematics computation.*

The MT is also available at the designated support level for the following state assessments: HSA Science and Biology, Algebra 1 and Algebra 2 End-Of-Course (EOC) tests. For these assessments that provide a calculator as a universal tool for all problems on the assessment, any student with a need may have the multiplication table designated support made available to them.

Students who receive the MT accommodation or MT designated support must use a print copy of the [approved multiplication table](#). The approved MT features a 12 by 12 grid with products from 1 to 144. This non-embedded accommodation or designated support is provided onsite as a standardized paper print copy. The MT is used by students to find factors or products to the presented problems and scenarios found on state tests in mathematics and science.

For more information about the accessibility supports available for summative testing: universal tools¹, designated supports², and accommodation³, see the [Smarter Balanced Assessment Consortium: Usability, Accessibility, and Accommodations Guidelines](#) (UAAG).

This document contains guidelines for the Multiplication Table state test accommodation and is organized into four sections: (I) general principles; (II) legal foundation; (III) critical considerations for teams; and (IV) decision guidance for teams.

Section I: General Principles Regarding State Test Accommodations

The statewide assessments are designed to measure student proficiency and growth over time, curriculum impact and effect, and school achievement and gains. Tests are aligned to standards for learning that are established at the grade-level. Statewide assessments measure our students against those standards and the grade-level expectations for achievement found there. In order to yield valid and comparable results, it is essential that our tests measure what students know and can do when measured to the grade-level standard expectations. In Hawai'i, the Common Core and Next Generation Science Standards are used as the metric. For an understanding of how these standards are used as a basis to generate a grade-level proficiency score for the state test in mathematics, see the [Smarter Balanced Mathematics Summative Assessment Blueprints](#).

The purpose of state test accommodations is to enable students with disabilities to participate “with adjustments that do not alter the assessed construct” and that are “applied to test presentation, environment, content, format (including response format), or administration conditions” (*Standards for Educational and Psychological Testing, 2014*). State test accommodations are intended to remove obstacles to student demonstration of knowledge and skills resulting from student disability. State test accommodations are not intended to reduce expectations for learning, modify the curriculum, or artificially inflate a student’s test score. **The key for appropriate accommodation provision during statewide assessments is to ensure that the student’s individual needs are met and the assessed “construct” (what a test measures) is not modified or altered.**

Additionally, state test accommodations should:

1. *Not be confused with instructional accommodations that support student learning.* Instructional accommodations may be applied to support emerging skills or reinforce the acquisition of new skills; however, these accommodations are strategically adjusted or removed in the classroom to monitor and/or assess student progress. Removal of the instructional accommodation during classroom assessment in many cases is the only way to acquire an accurate measurement of the student’s current level of skill.

¹ Universal tools - available to all students based on student preference and selection. Universal tools are access features of the assessment that are either provided digitally as part of the test system (embedded) or separate from the test system (non-embedded). *Note for Test Coordinators: non-embedded universal tools must be available on site to ensure equitable testing conditions and comparability of results.*

² Designated supports - features that are available for use by any student for whom the need has been indicated. Educators, parents/guardians, students or educator teams may be used for decision-making.

³ Accommodations - available only to those students with IEP/504 Plan documentation of need.

2. Be shown to specifically overcome a student’s disability. The student should have used the support in the past with success in both classroom assessments and interim assessments that are measuring the same skills (construct). *This evidence should be documented under the Present Levels of Educational Performance (PLEP) in the student’s IEP/504 Plan.*
3. Be assigned only when supported with substantial evidence of need. Documentation of student disability mediation and classroom use during tests of the same construct must be found in the IEP/504 record. *This evidence should be documented in the “Services or Accommodations and Related Services” and the “Statewide Assessment” pages of the student’s IEP/504 Plan record.*

State test accommodations are different from *modifications*. Modifications are allowances made for IDEA students that provide for adjustment(s) to the curriculum or assessment that change what is to be learned or what is to be measured. Examples of testing modifications that reduce expectations for learning and affect the construct of the test include: 1) simplification, clarification, or explanation of test questions or items; 2) use of spell-checking devices on a test of the student's spelling skills; and 3) use of a calculator on a test of the student's computational skills. While modifications may be used with caution during instruction to support students as they develop their knowledge and skills over time, they are not used in the general summative test.

Section II: Legal Foundation for State Test Accommodations

Under the IDEA, State has the responsibility to:

- Ensure that children with disabilities are provided appropriate accommodations on Title I, Part A assessments, where necessary, as determined on an individualized case-by-case basis by their IEP/504 team.
- Develop guidelines for the provision of appropriate accommodations. Under 34 CFR §§300.160(b)(2), the State’s guidelines must identify only those accommodations for each assessment that do not invalidate the score; and instruct IEP teams to select, for each assessment, only those accommodations that do not invalidate the score.

These State guidelines apply to the provision of appropriate accommodations under the IDEA on regular and alternate assessments (34 CFR §300.160 (a)).

Section III: Critical Considerations Before Assigning Multiplication Table Accommodation for State Tests in Mathematics

Decisions about assigning the MT state test accommodation should be based on the general principles and laws governing state test accommodations presented in Sections I and II and the specific MT guidelines found below.

Purpose of Multiplication Table (MT) State Test Accommodation

The purpose of the MT accommodation is to assist students with a documented and persistent calculation disability (e.g., dyscalculia) that limits their ability to perform calculations and basic multiplication. For these students, the multiplication table (MT) allows them to meaningfully participate in the SB mathematics state assessments.

Construct Measured by the State Tests in Mathematics

A test construct is what a test measures. The Smarter Balanced Mathematics Assessment measures student performance in mathematics based on the following four “claims” or domains:

- *Concepts and Procedures* - Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
- *Problem Solving* - Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies.
- *Communicating Reasoning* - Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.
- *Modeling and Data Analysis* - Students can analyze complex, real-life scenarios and can construct and use mathematical models to interpret and solve problems.

The math score that is generated provides information on how well students understand and can apply grade-level concepts within the four claims.

There are some specific questions on the Smarter Balanced (SB) Mathematics Assessment that measure students’ fluency in mathematics. For Grades 3 – 5, no calculator is provided for students. For Grades 6 – 8 and 11, a calculator is only available on select problems. When considering the MT accommodation, it is essential to remember that the SB assessment is attempting to measure math fluency. In addition, it must be understood that for Grades 6-8 and 11, the MT state test accommodation is not limited to the parts of the SB assessment where a calculator is allowed. The MT accommodation is available on all parts of the SB assessment, including the specific parts of the math assessment that are attempting to gain a measure of mathematical fluency. For this reason, the provision of the MT accommodation has a **high risk** of generating an invalid assessment score if it is provided to a student who does not have a significant disability impacting student computational skills.

Documented Need for the Multiplication Table (MT) State Test Accommodation

The MT state test accommodation should only be assigned when a student has a documented and persistent calculation disability (e.g., dyscalculia) that prevents him/her from accurately performing mathematical computations on the Smarter Balanced assessments. In order to receive this accommodation, it is necessary to show that the student’s disability impacts him/her significantly by providing the following documented evidence:

1. The student shows little to no improvement in his/her obtainment of math fluency despite repeated, extensive interventions;
2. The student consistently uses the MT accommodation during classroom assessments of mathematics knowledge, skills, and abilities; and
3. The student's ability to demonstrate mathematical conceptual and procedural understanding improves when he/she uses a MT during mathematics instruction and assessment.

Documented Familiarity with the Multiplication Table Test Accommodation

If students are to be assigned the MT accommodation for calculation/multiplication items on the Smarter Balanced state tests in mathematics, they must know how to use the MT. Students should have familiarity with the MT and be able to use it independently as no external assistance is allowed when this accommodation is used during the summative test.

Section IV: Guidance for IEP/504 Teams for Verifying the Need for MT State Test Accommodation for the Smarter Balanced Assessment in Mathematics

This section provides IEP/504 Teams a tool with a set of questions to help guide the MT state test accommodation decision-making process. The questions are intended to support team discussion and to help frame criteria that can serve as supporting evidence when considering student MT accommodation needs. These questions and the answers that are generated may be used to determine when and if there is sufficient evidence of student need supporting the provision of the MT accommodation for SB testing. The intent is for IEP/504 Teams to use the questions found in Table 1 as a starting point from which to engage in dialogue, examine evidence, record data, and indicate the team decision based upon knowledge of the student and the evidence found in the student's IEP/504 Plan. A preponderance of evidence as well as care should be used when making this team decision. (Table 1 is not intended to be a tally sheet.)

Table 1: Questions to Guide IEP/504 Team Decision about the Need for MULTIPLICATION TABLE (MT)

The purpose of this table is to guide IEP/504 team discussions about student state test accommodation needs and help generate appropriate decisions and recommendations regarding the MT state test accommodation.

Questions	Team Response	Evidence/ Comments
1. Is there evaluative information indicating that the student’s disability severely limits his/her ability to perform mathematical calculations, including multiplication?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Does the student have a documented and persistent calculation disability (e.g., dyscalculia) that impedes his/her ability to perform math calculations? If so, explain.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Is there evidence that the student is continuing to receive intervention support and has <u>not</u> been making progress in his/her math fluency skills?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Does the student know how to apply strategies to multiply (such as skip counting, using repeated addition, drawing equal groups or arrays to solve a multiplication problem)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Does the student use the Multiplication Table (MT) during classroom assessments of mathematics knowledge, skills, and abilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
6. Is there evidence that the student’s ability to demonstrate mathematical conceptual and procedural understanding increases when he/she uses a MT during mathematics instruction and assessment?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Is there an expectation that the student will need the MT accommodation when pursuing post-secondary career opportunities and/or higher education?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
8. Has the student provided input or stated a preference for using the MT as a means for demonstrating mathematical conceptual and procedural understanding in classroom assignments and assessments?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Are there additional considerations for recommending the MT test accommodation for this student, specific to his/her unique disability-related needs? If so, explain.	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Select the IEP/504 team recommendation below that is decided to be most appropriate for this student.

MT state test accommodation should be recommended for this student for the Smarter Balanced state assessment in mathematics.

More information is needed before making this decision.

Please list the names and titles of the IEP/504 team and other persons who were part of the state test accommodations decision-making team for the student (use the back if needed).

Name	Title	Date

Please retain a copy of the completed table and the names of the IEP/504 team for your records. Do not submit them to the Assessment Section.

Follow-up on this decision-making meeting by documenting any selected state test accommodations in [eCSSS](#). If the IEP/504 team makes the decision to recommend the MT state test accommodation for a student, then the School Testing Coordinator (TC) should consult the [Accessibility and Accommodations resources page](#) on the AlohaHSAP.org portal website for instructions to submit state test accommodation requests.

The HIDOE Assessment Section recommends that state test accommodation requests be submitted by Monday, November 2, 2020 for Fall 2020 testing and by Friday, January 15, 2021, for Spring 2021 testing. Please note that state test accommodation requests should be submitted no later than 10 days prior to testing.

If you have any questions, please email Elaine Lee at Elaine.Lee@k12.hi.us or Susan Forbes at Susan.Forbes@k12.hi.us or call the Assessment Section at (808) 307-3636.