

2015 State of Texas Assessments of Academic Readiness (STAAR®) Mathematics Bridge Study Questions and Answers

1) What is a bridge study?

A bridge study establishes a link between different assessments to determine equivalent performance standards. The 2015 STAAR mathematics bridge study will locate the performance standards from the previous STAAR mathematics assessments (administered from 2012–2014) on the new STAAR mathematics assessments (administered beginning in 2015).

2) How is the bridge study conducted?

The STAAR mathematics bridge study consists of three stages:

1. **Content overlap analysis:** This analysis allowed the Texas Education Agency (TEA) to determine that there is sufficient shared content between the two versions of the assessments to map the prior STAAR mathematics performance standards onto the new STAAR mathematics assessments. This content overlap analysis included a detailed review and comparison of the content standards (as defined by the student expectations from the Texas Essential Knowledge and Skills [TEKS] curriculum standards) measured by the old and new STAAR mathematics assessments.
2. **Empirical analysis:** The second stage of analysis will statistically map the old STAAR performance standards to the new assessments using student performance data. This is possible through the use of common items appearing on both the prior version and the new version of the STAAR mathematics assessments. Common items were previously field-tested as part of the old mathematics assessment but are also included as part of the new mathematics assessment.
3. **Impact data analysis:** The third stage involves evaluating the percent of students attaining each performance standard on the old STAAR mathematics assessments in relation to student performance on the new STAAR mathematics assessments (referred to as impact data). The impact data analysis can provide supplemental information to support the results from the empirical analyses.

3) Is there any precedent or research to support the use of a bridge study?

TEA has conducted bridge studies during times of transition of the assessment program, such as from the Texas Assessment of Academic Skills (TAAS) to the Texas Assessment of Knowledge and Skills (TAKS) and from TAKS to STAAR. All bridge study methods have been presented to, and are supported by, the Texas Technical Advisory Committee (TTAC). The TTAC consists of a national group of psychometric experts representing both academia and testing organizations. The bridge study methods are based on linking methods commonly used in research and practice (see Kolen, M. and R. Brennan (2014). *Test equating, scaling, and linking: Methods and practices* (3rd ed.). Springer Verlag.).

4) Are all questions on the tests used to determine students' performance on the equivalent standards from the bridge study?

Yes, the answers to all questions on the 2015 STAAR mathematics assessment are used to measure whether a student met the bridge study equivalent performance standard. This includes questions that cover both overlap and new curriculum. While the bridge study uses only the overlap items to link the old performance standards to the new test, a student's total score determines whether the student has met the equivalent performance standard.

5) Will the bridge study be used to establish more than one equivalent performance standard?

The bridge study will be used to establish equivalent performance standards for

- Phase-in 1 Level II: Satisfactory Academic Performance
- Final Recommended Level II: Satisfactory Academic Performance, and
- Level III: Advanced Academic Performance.

6) How will the equivalent performance standards established by the bridge study be used?

The STAAR mathematics bridge study results will be used in conjunction with other data during standard setting in July 2015.

The STAAR mathematics bridge study will also be used to update results of empirical research studies used during the 2012 standard-setting meetings. For more information about these studies, please see the **STAAR Standard Setting Technical Report** located on TEA's website at <http://tea.texas.gov/student.assessment/taar/performance-standards/>.

7) Why are new performance standards being set given the bridge study has already established equivalent performance standards?

To develop performance standards that appropriately reflect the changes in tested content, standard-setting committees of Texas educators will be convened to establish performance standards for the new STAAR mathematics assessments. While the bridge study will provide information about where the performance standards for the old STAAR grades 3–8 mathematics assessments would fall on the new assessments, it cannot account for the variety of content changes that have occurred due to the TEKS revisions. After standards have been set, CSRs will be sent out in September 2015 to provide information on student performance on the spring 2015 administration in relation to the new standards.

8) Does the bridge study hold pass rates constant from the old to the new STAAR mathematics assessments?

No, the bridge study will not hold pass rates constant from the old to the new STAAR mathematics assessments. The bridge-study results will reflect improvements or declines in student performance on the assessments. Although an impact data analysis (described above) is part of the bridge study,

equivalent performance standards are not established by holding the percent of students attaining each performance standard constant across the old and new assessments.

9) When will districts know what the equivalent performance standards established by the bridge study are?

By May 29, 2015, the STAAR mathematics equivalent performance standards will be posted to TEA's website (<http://tea.texas.gov/student.assessment/>). Districts will receive student performance data regarding the bridge cuts on the Consolidated Accountability File, which will be posted for districts on July 10, 2015.

Student performance on the 2015 equivalent performance standards based on the STAAR mathematics bridge study will not appear on Confidential Student Reports (CSRs). Information about student performance in relation to the new performance standards will be available on the second round of mathematics CSRs that will be provided in September 2015 (after performance standards are set in July 2015).