

Study Profile: STAAR Algebra II – THEA Mathematics (★★☆☆☆)

The STAAR Algebra II – THEA mathematics external validity study is designed to establish empirical links between performance on the STAAR Algebra II assessment and performance on the THEA mathematics test.

Motivation (★★★☆☆)

This analysis was based on a single group of students who took both the STAAR Algebra II and the THEA mathematics assessments in 2010 or 2011. Data from STAAR derive from a stand-alone field test administered in 2010 and a low-stakes operational administration in 2011 and are linked to motivated THEA mathematics scores in corresponding years.

Representativeness (★★★☆☆) and Sample Size (★★★☆☆)

Grade Levels

All Algebra II Examinees Versus Those Linked to THEA Scores

| Group | Grade 8 | | Grade 9 | | Grade 10 | | Grade 11 | | Grade 12 | | Missing | Total | |
|----------------|---------|----|---------|----|----------|-----|----------|-----|----------|-----|---------|-------|----------------|
| All Algebra II | 32 | 0% | 2,781 | 3% | 32,956 | 31% | 53,140 | 50% | 16,414 | 16% | 8 | 0% | 105,331 |
| Linked | 0 | 0% | 37 | 2% | 532 | 33% | 620 | 38% | 433 | 27% | 0 | 0% | 1,622 |

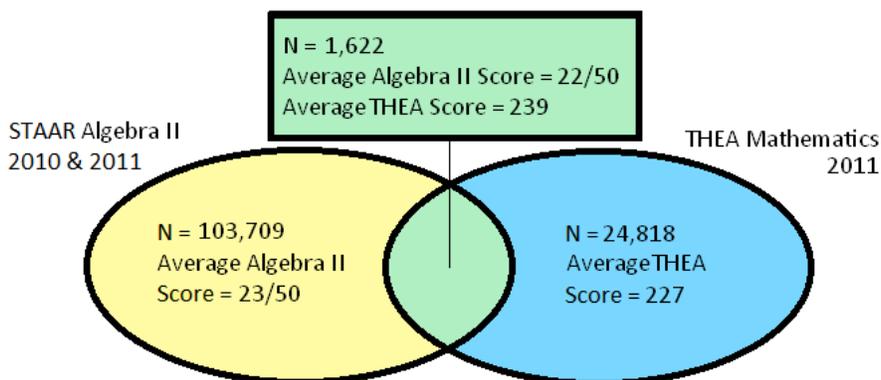
Demographic Characteristics

All Algebra II Examinees Versus Those Linked to THEA Scores

| Group | Female | | Economically Disadvantaged | | African American | | Hispanic | | White | | Other | |
|----------------|--------|-----|----------------------------|-----|------------------|-----|----------|-----|--------|-----|-------|----|
| All Algebra II | 53,491 | 51% | 45,660 | 43% | 11,881 | 11% | 45,667 | 43% | 39,123 | 37% | 8,660 | 8% |
| Linked | 951 | 59% | 763 | 47% | 209 | 13% | 737 | 45% | 585 | 36% | 91 | 6% |

Summary of STAAR Algebra II and THEA Mathematics Achievement

Linked and Unlinked Groups



Average THEA Mathematics Scores Based on Students' STAAR Performance

| Satisfactory Academic Performance | Advanced Academic Performance |
|-----------------------------------|-------------------------------|
| 264 | 291 |

Correlation (★★☆☆☆)

Correlation between STAAR Algebra II and THEA mathematics = **0.59**

Content Overlap (★★☆☆☆)

There is minimal (approximately 20%) content/skills overlap between the STAAR Algebra II assessment and the THEA mathematics test.

Assessment Characteristics

| Assessment Characteristic | STAAR Algebra II | THEA Mathematics |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose | Created to determine mastery of the Algebra II Texas Essential Knowledge and Skills (TEKS), the state-mandated curriculum | Created for use by Texas institutions of higher education to evaluate the mathematics skills that entering freshmen should have if they are to perform effectively in undergraduate certificate or degree programs in Texas public colleges |
| Assessment Type | A criterion-referenced assessment | A criterion-referenced assessment |
| Content | Measures properties and attributes of functions, representational tools to solve problems, properties of quadratic functions, representations of quadratic relations, properties of square root functions, properties of rational functions, and properties of exponential and logarithmic functions | Measures fundamental mathematics, algebra, geometry, and problem solving. There is minimal (approximately 20%) content/skills overlap between the STAAR Algebra II assessment and the THEA mathematics test. |
| Item Format | 50 items total: 45 multiple-choice items and 5 gridded-response items | 50 multiple-choice items total |
| Administration | <ul style="list-style-type: none"> • Administered in May, July, and December • Administered online and on paper • Administered by trained school personnel • 4 hour time limit | <ul style="list-style-type: none"> • Administered in February, April, June, July and October; administered on demand via THEA Quick Test administrations • Administered on paper and online at designated institutions • Administered by trained supervisors and proctors at an approved location (typically school staff administering the test at their school) • 5-hour time limit (students take one, two, or three sections of the test within the five-hour session) |
| Performance Standards | Performance standards will be established and implemented in spring 2012 | Scale score range is 100-300; minimum passing score is 230; college readiness cut score is 270; colleges and universities may consider this cut when placing students in college algebra courses. |