TSI Minimum Standards
&
Prerequisite Standards
in Mathematics and Statistics
Sam Houston State University

Introduction
As we raise academic standards at Sam Houston State University, it is necessary that we set appropriate prerequisite standards for students entering a first-year 100-level math class. In September 2007, the Department of Mathematics and Statistics recommended that the THEA prerequisite score for these entry-level classes be raised from 250 to 270. (This decision brings Sam Houston in line with similar institutions in Texas.)

The prerequisite standards for admittance to a first-year mathematics class are higher than the TSI minimum requirements set by the state of Texas. This document attempts to describe both the **TSI minimums**, as recognized at Sam Houston, and the entry-level **math prerequisite standards**

The following pages are an attempt to describe these standards in several different formats. The next pages contain the **TSI-mimimum Standards and Math Prerequisite Standards at Sam Houston State University** and a **description of the changes implemented for Fall 2008**, including a table of recommended equivalences for the various test scores.

January 21, 2008

TSI Minimum Standards
&
SHSU Prerequisite Standards
in Mathematics and Statistics

The Texas Success Initiative (TSI) is a state-legislative program designed for students entering Texas colleges. As part of that initiative, students must demonstrate that they are prepared for college level math classes before they enroll in a math class for college credit. A student may meet TSI minimum requirements but still not meet the prerequisites for entry into a first-year college math class.

One measure of a student's mathematics preparation for college is his/her score on the Texas Higher Education Assessment (THEA) exam.

TSI minimum standards
A student meets the TSI minimum standards if they are either TSI exempt or if they have a THEA score of 230 or higher. A student who does not meet the TSI minimum requirements must enroll in MTH 031 and must continue to enroll in a mathematics class each semester until he/she has successfully completed both MTH 031 and MTH 032. A student who meets the TSI minimum standards may enroll in MTH 032 or – if they meet the higher prerequisite standards – may enroll in a higher math class.

Prerequisite Standards for first-year math courses at Sam Houston
Students at Sam Houston meet the prerequisite for entry-level (college credit) mathematics classes (MTH 163, 164, 169, 170, 184, 199, STA 169) if they have a THEA score of **270** or higher.

Alternative scores to THEA
Students may demonstrate that they meet the TSI minimum standards or the SHSU math prerequisite standards by achieving an acceptable score in other tests besides the state THEA exam. Although these other exams do not provide exact equivalents to the THEA exam, for the purposes of mathematics placement, we have set cut-off scores that we view to be roughly equivalent to the THEA scores. (A student who believes his/her score is too low may retake one of these alternate exams to achieve a better score.)

For the purposes of mathematics placement, a student will be viewed as having met the TSI minimum standards if he/she achieves any of the following scores:

500 or higher on the Mathematics section of the **SAT** Reasoning Test
19 or higher on the Mathematics section of the **ACT**,
63 or higher on the **Elementary Algebra** section of the **ACCUPLACER test**,
38 or higher on the **Elementary Algebra** section of the **ASSET test,**
39 or higher on the **Algebra** section of the **COMPASS test.**

For the purposes of mathematics placement, a student will be viewed as having met the mathematics entry-level prerequisite standards (for MTH 163, 164, 169, 170, 184, 199, STA 169) if he/she achieves any of the following scores:

560 or higher on the Mathematics section of the **SAT** Reasoning Test
23 or higher on the Mathematics section of the **ACT**,
109 or higher on the **Elementary Algebra** section of the **ACCUPLACER test**,
63 or higher on the **College Mathematics** section of the **ACCUPLACER test,**
53 or higher on the **Elementary Algebra** section of the **ASSET test,**
76 or higher on the **Algebra** section of the **COMPASS test.**

In summary, the required scores are described in the table below:

Test	TSI-minimum not satisfied; remediation mandated	TSI-complete but not yet ready for entry-level mathematics classes	Meets entry-level prerequisites
	(Must enroll in MTH 031)	(May enroll in MTH 032)	(May enroll in certain 100-level math classes)
THEA	**0-229**	**230-269**	**270-300**
SAT math	**0-499**	**500-559**	**560-800**
ACT math	**0-15**	**19-22**	**23-36**
ACCUP. Elem Alg	**0-62**	**63-108**	**109-120**
ACCUP. Coll. Math	*NA*	*NA*	**63-100**
ASSET Elem Alg	**0-37**	**38-52**	**53-55**
COMPASS Algebra	**0-38**	**39-75**	**75-100**

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Further Resources

TSI exemption is described on the webpage
http://www.shsu.edu/~reg_www/schedule/spring2008/tsi.html ; see also
http://www.thecb.state.tx.us/Rules/tac3.cfm?Chapter_ID=4&SubChapter=C#4.54.

An explanation of the ACCUPLACER exam is available at
http://www.testprepreview.com/accuplacer_test_breakdown.htm

A description of the changes implemented for Sam Houston undergraduate students, Fall 2008

There are two fundamental changes implemented for Fall 2008:

(1) The entry-level math prerequisite is raised from a THEA 250 score to a THEA 270 score.
(2) The prerequisite for MTH 032D is raised from a THEA 206 score to a THEA 230 score.

Both of these changes are in keeping with similar changes in requirements at other Texas colleges and universities (including community colleges) and are consistent with the THECB intention to raise mathematics standards at the high school/college boundary. (The second change is also consistent with our prior requirement that a student with a THEA score below 230 must undergo mandatory remediation. That prior requirement on mandatory remediation is unchanged.)

Implementation of these two changes in THEA score requirements must take account of the alternative exams and their scores. For this reason, we offer the following crosswalk between the various exams[1].

THEA	ACT Math	SAT Math	ACCUP. Elem.Alg.	ASSET Elem. Alg.	COMPASS Algebra
206	16	400	42	30	23
230	19	500	63	38	39
250	21	520	86	48	70
270	23	560	109	53	76
300	36	800	120	55	100

[1] The various exams in this table test *different* areas of knowledge and understanding. For this reason, it is not really possible to define "equivalent" scores. In particular, an Elementary Algebra exam, which tests a *first year* of high school mathematics, is not an accurate measurement for determining prerequisites for a college mathematics class. However, until we have an inexpensive way for students to be tested for their knowledge of third/fourth year high school mathematics, these exams appear to be the most pragmatic solution.