# College Admissions Testing General Information, Classes of 2013 and 2014 

College Admissions Testing: The SAT and ACT

## Introduction

The SAT and ACT examinations are designed to measure students' college readiness and academic achievement as they prepare for postsecondary college and career opportunities. Most U.S. colleges and universities take into consideration some combination of college admissions test scores and school achievement records when making decisions about admissions and course placement. Both examinations are based on the high school curriculum. The SAT measures examinees' knowledge in core subject areas and how well students can apply that knowledge, as well as ability to reason, solve problems, and communicate (College Board, 2013c). The ACT measures examinees' academic readiness for college in key content areas and assesses student mastery of both college and career readiness standards. (ACT, Inc., 2014b). The College Board develops the SAT with guidance from test development committees made up of experienced educational professionals and subject-matter experts (College Board, 2013c). All test questions are subjected to independent sensitivity review processes and pretested on students under live testing conditions. ACT, Inc., develops the ACT using a range of information, including state curriculum frameworks, state-adopted textbooks, surveys of college faculty, and consultation with educational experts at the secondary and postsecondary levels (ACT, Inc., 2014b).

## The Examinations

SAT. The SAT consists of three sections: critical reading, mathematics, and writing (Table 1 on page 2). The critical reading section is 70 minutes in length (College Board, 2013c). This section consists of 19 multiple-choice sentence completion questions and 48 multiple-choice passage-based reading questions (College Board, 2013b). The sentence completion questions assess vocabulary and understanding of sentence structure. The passage-based questions assess understanding of vocabulary in context; ability to analyze and synthesize information; and ability to comprehend what is explicitly stated, as well as what is implied, in text passages.

The mathematics section is 70 minutes in length (College Board, 2013c). This section consists of 44 multiple-choice questions and 10 student-produced response questions (College Board, 2013b). Both

Table 1
A Brief Comparison of the SAT and ACT Examinations, 2012-13 and 2013-14


Note. Information contained in this table was compiled and summarized from resources available from ACT, Inc., and College Board, including ACT, Inc. (2014b) and College Board (2012, 2013b, 2013c).
${ }^{a}$ Not including the experimental section.

Table 1 (continued)
A Brief Comparison of the SAT and ACT Examinations, 2012-13 and 2013-14

| Characteristic | ACT | SAT |
| :---: | :---: | :---: |
| Length | 215 items: 2 hours, 55 minutes <br> Optional writing section essay: 30 minutes | 170 items: 2 hours, 55 minutes $^{\text {a }}$ 1 essay: 25 minutes |
| Penalty for incorrect answers | No penalty | Formula scoring: subtracts $1 / 4$ point for each incorrect answer, except on student-produced response questions in the mathematics section |
| Scoring | The score on each of the four major sections ranges from 1 to 36 . Composite score is the average of the four section scores rounded to the nearest whole number. The optional writing section has two scores: (1) a combined English/writing scale score ranging from 1 to 36 and (2) a writing subscore ranging from 2 to 12. | The score on each of the three major sections ranges from 200 to 800 (in 10-point increments). |
| Score reporting | If a student takes the test multiple times, he or she can choose which scores to have sent to colleges. | If a student takes the test multiple times, he or she can choose which scores to have sent to colleges. |
| Cost of exam | $\$ 35$ plus an additional $\$ 15.50$ for the optional writing section in 2012-13; <br> $\$ 36.50$ plus an additional $\$ 16$ for the optional writing section in 2013-14 | $\begin{aligned} & \$ 50 \text { in 2012-13; } \\ & \$ 51 \text { in 2013-14 } \end{aligned}$ |

Note. Information contained in this table was compiled and summarized from resources available from ACT, Inc., and College Board, including ACT, Inc. (2014b) and College Board (2012, 2013b, 2013c).
${ }^{a}$ Not including the experimental section.
types of questions in the mathematics section assess ability to reason logically in a variety of situations. The questions assess knowledge and ability in the areas of numbers and operations; algebra and functions; geometry and measurement; and data analysis, statistics, and probability.

The writing section is 60 minutes in length (College Board, 2013c). This section consists of 25 multiple-choice questions related to improving sentences, 18 multiple-choice questions related to identifying sentence errors, 6 multiple-choice questions related to improving paragraphs, and a studentproduced essay (College Board, 2013b). The multiple-choice section assesses ability to: understand grammatical elements and structures within sentences; recognize and identify sentence-level errors; recognize correctly formed grammatical structures; communicate ideas clearly and effectively; improve writing through revision and editing; clearly express ideas through sentence combining and the use of transitional words and phrases; and improve coherence of ideas within and among paragraphs. The student-produced essay requires students to develop and support a point of view on an issue presented in an excerpt using the conventions of standard written English.

The current version of the SAT was first administered to examinees in March 2005 (College Board, 2013c). This version of the examination differed from the previous version in that the essay section was added and there were minor changes to the content of the verbal and mathematics sections. The testing time for the SAT is 3 hours, 20 minutes, not including the 25 -minute experimental section.

ACT. The ACT consists of five sections: English, mathematics, reading, science, and an optional writing section. The English section is 45 minutes in length and consists of 75 multiple-choice passage-based questions that assess understanding of the conventions of standard written English and rhetorical skills
(ACT, Inc., 2014b). Specifically, the six elements assessed by this section are punctuation, grammar and usage, sentence structure, strategy, organization, and style.

The mathematics section is 60 minutes in length and consists of 60 multiple-choice questions that assess mathematical reasoning skills in the areas of pre-algebra, elementary algebra, intermediate algebra, coordinate geometry, plane geometry, and trigonometry (ACT, Inc., 2014b). The mathematics items are categorized according to four levels: knowledge and skills, direct application, understanding concepts, and integrating conceptual understanding.

The reading section is 35 minutes in length and consists of 40 multiple-choice questions that assess reading comprehension by requiring examinees to understand what is explicitly stated, as well as what is implied, in text (ACT, Inc., 2014b). Specific skills assessed include the ability to determine main ideas, locate and interpret significant details, understand sequences of events, make comparisons, comprehend cause-effect relationships, use context to determine meaning, draw generalizations, and analyze voice and method. The reading section presents passages in four content areas: literary narrative, humanities, social studies, and natural sciences.

The science section is 35 minutes in length and consists of 40 multiple-choice questions that assess skills required in the sciences, including interpretation, analysis, evaluation, reasoning, and problem solving (ACT, Inc., 2014b). The content includes biology, chemistry, earth/space sciences, and physics. The science items are constructed in three formats: data representation, requiring examinees to interpret graphs, scatterplots, and information presented in tables, diagrams, and figures; research summaries, requiring examinees to interpret experimental results; and conflicting viewpoints, requiring examinees to understand, analyze, and compare alternative viewpoints or hypotheses.

Designed to complement the English section of the test, the 30-minute writing section is optional and requires each examinee to write an essay, based on a prompt, by presenting a position on an issue (ACT, Inc., 2014b). The prompt describes an issue and provides two different perspectives on the issue. Examinees are asked to support one of the two perspectives or develop a response based on their own perspective. The writing section allows students the opportunity to express judgments, maintain focus on a topic, develop and organize ideas, and use language clearly and effectively.

In February 2005, the optional writing section was added to the ACT. The testing time for the ACT is 2 hours, 55 minutes. The optional writing test adds 30 minutes to the testing time.

## SAT and ACT Scoring

Student performance on the SAT is reported as a scaled score, which is a normative standard score calculated from a raw score. Scaled scores on each section of the SAT range from 200 to 800 in 10-point increments (College Board, 2013c). For the critical reading and mathematics sections of the SAT, the raw score equals the number of questions answered correctly minus one-quarter of the number of multiplechoice questions answered incorrectly. No points are deducted for unanswered questions or for wrong answers to student-produced response questions on the mathematics section. The writing scaled score is derived from: (a) a raw score calculated in the same manner as the critical reading and mathematics
sections and (b) the essay score, which is the sum of two readers' scores. The essay makes up approximately 30 percent of the total writing score.

Student performance on the ACT is reported as a scaled score that ranges from 1 to 36 in 1-point increments (ACT, Inc., 2014b). For the English, mathematics, reading, and science sections of the ACT , the raw score equals the number of questions answered correctly; no points are deducted for incorrect answers. Examinees also receive a composite score, calculated as the average of the English, mathematics, reading, and science scores rounded to the nearest whole number. Students who complete the optional writing section receive a combined English/writing score on a scale of 1 to 36 and a writing subscore on a scale of 2 to 12 . The writing subscore is the sum of two readers' scores.

Because the SAT and ACT may vary in difficulty from test form to test form or from year to year, the raw scores are not comparable. To allow for performance comparisons, the raw scores are converted to scaled scores. The statistical equating procedures used in the conversion ensure that any given scaled score indicates the same level of ability across test forms or testing dates.

## Use of Individual SAT and ACT Scores in Texas

## Distinction Designations

Overview. Under the Texas public school accountability system, distinction designations are awarded to recognize school districts and campuses for outstanding achievement in specified academic areas (Texas Education Agency [TEA], 2014, 2015b; TEC, Chapter 39, Subchapter G, 2013). The distinction designations are based on results across a number of indicators. Results for a campus are evaluated in relation to results for a comparison group of similar campuses. Results for a district are evaluated based on results for campus-level indicators aggregated across all campuses in the district. To be eligible to earn a distinction designation, a district or campus must receive an accountability rating of Met Standard.

Academic achievement distinction designations. For the 2014 and 2015 accountability ratings cycles, there were six campus-level academic achievement distinction designation (AADD) indicators for SAT and ACT examinations: (1) participation in either the SAT or ACT examination; (2) performance in English language arts (ELA) on the SAT; (3) performance in ELA on the ACT; (4) performance in mathematics on the SAT; (5) performance in mathematics on the ACT; and (6) performance in science on the ACT. The ELA indicators were based on performance on the critical reading and writing sections of the SAT and performance on the English and reading sections of the ACT. The mathematics indicators were based on performance on the mathematics section of each examination. The science indicator was based on performance on the science section of the ACT. The SAT and ACT indicators for AADDs were evaluated based on data for the previous school year's graduating class. For example, the SAT and ACT indicators for 2015 distinction designations were evaluated based on data for the class of 2014. AADDs were not available for districts. For information about SAT and ACT calculations for AADDs, see College Admissions Testing Glossary of Terms, Classes of 2013 and 2014 (TEA, 2015a).

Postsecondary readiness distinction designations. For the 2014 and 2015 accountability ratings cycles, one postsecondary readiness distinction designation (PRDD) was available at the campus level, and one was available at the district level. In each case, the PRDD included two SAT/ACT indicators: participation in, and performance on, either the SAT or ACT examination. For purposes of awarding PRDDs, the SAT/ACT performance indicator measured the percentages of graduating examinees who scored at or above a criterion score on either the SAT or ACT examination. The criterion scores were defined as a combined score of 1110 on the critical reading and mathematics sections of the SAT and a composite score of 24 on the ACT. The SAT/ACT indicators for PRDDs were evaluated based on data for the previous school year's graduating class. For example, the SAT/ACT indicators for 2015 distinction designations were evaluated based on data for the class of 2014. For information about SAT/ACT calculations for PRDDs, see College Admissions Testing Glossary of Terms, Classes of 2013 and 2014 (TEA, 2015a).

## Exemption From Texas Success Initiative Testing

In 1987, the Texas Legislature established a system of testing and remediation called the Texas Academic Skills Program, or TASP (TEC §51.306, 1988). In 2003, TASP was replaced by the Texas Success Initiative (TSI) (TEC §51.3062, 2004). Under the TSI, undergraduate students enrolling for the first time in public institutions of higher education are required to take an assessment to evaluate their readiness for freshman-level academic coursework (TEC §51.3062, 2013). The Texas Legislature allows exemptions from TSI assessment requirements based on student performance on the SAT, the ACT, and the state assessment (Title 19 of the Texas Administrative Code $\S 4.54,2015$; TEC $\S 51.3062,2013$ ). To qualify for an exemption based on the SAT or ACT, a student must receive a specified minimum score in one of the five years prior to enrollment in a public institution of higher education. On the SAT, a student must receive a score of 500 or higher on the critical reading or mathematics section of the examination and a score of 1070 or higher on the critical reading and mathematics sections combined. On the ACT, a student must receive a score of 19 or higher on the English or mathematics section of the examination and a composite score of 23 or higher.

## Reporting of SAT and ACT Results by the Texas Education Agency

## Data Sources

Texas public schools. The College Board provides TEA with annual examination results and demographic information for Texas public high school SAT examinees. Similarly, ACT, Inc., provides TEA with annual examination results and demographic information for Texas public high school ACT examinees. TEA receives scores from the testing companies based on year of graduation, rather than year of test administration. When registering for SAT or ACT examinations, students are asked to provide an expected year of graduation. The testing companies use information such as the student-reported expected year of graduation to determine whether to include examinees' scores in that reporting year. Students may take the SAT and ACT examinations more than once, but TEA receives and reports only the results of examinees' most recent examinations.

Data on public school student grade level, race/ethnicity, economic status, and gender, as well as other relevant district, campus, and student information, are obtained from the TEA Public Education Information Management System (PEIMS). College Board and ACT, Inc., data on race/ethnicity and gender for examinees are used when the equivalent PEIMS data are not available.

Sums of public school examinees by student characteristic and program participation may differ from one another or from the total of all examinees. Whereas counts of all examinees reflect all examinees reported by the testing companies, counts of examinees by race/ethnicity and by gender reflect examinees who could be found in PEIMS plus examinees who could not be found in PEIMS but for whom the specified demographic data were available from the testing companies. Examinees reported by the testing companies may not be found in PEIMS because of data reporting errors. Because data on other student characteristics and program participation are not available from the testing companies, counts of examinees by these data reflect only those examinees who could be found in PEIMS.

Combined public and nonpublic schools in Texas and in the United States. SAT and ACT results for public and nonpublic school graduates combined in Texas, other states, and in the United States were obtained, when available, from summary reports released annually by the College Board (College Board, 2013a, 2014) and ACT, Inc. (ACT, Inc., 2013a, 2013b, 2014a, 2014c), respectively. As is the case with testing data reported by TEA, annual reports provided by the testing agencies include only the results of examinees' most recent examinations. Additionally, results in the reports are based only on the scores of examinees identified by the College Board and ACT, Inc., as expecting to graduate in the reporting year.

The denominators for examination participation rates obtained from the College Board and ACT, Inc., are projected counts of graduating seniors reported by the Western Interstate Commission for Higher Education (WICHE). Participation rates not available from College Board or ACT, Inc., reports were derived by dividing counts of graduating examinees obtained from the testing companies by WICHE projections of graduating seniors.

The College Board reports SAT performance data for three separate Hispanic subgroups: Mexican American, Puerto Rican, and other Hispanic students. TEA uses these data to calculate results for Hispanic students overall. Because of rounding, the average scores for Hispanic students on the critical reading and mathematics sections of the examination may not sum to the average critical reading and mathematics combined scores shown for the group.

## Interpretation of Results

The effect of group size. It may be informative to compare a group's average scores over time, but the reliability of such comparisons is dependent on the size of the group. When the group is small, reliability is reduced and caution should be used when interpreting year-to-year change. In general, changes in the average scores of a large group, such as White SAT examinees in Texas, are less likely to have occurred by chance than changes in the average scores of a small group, such as American Indian or Pacific Islander SAT examinees in Texas. Between-group comparisons are also dependent on the sizes of the groups. When groups differ substantially in size, comparisons of changes in scores between them can be
misleading and, generally, are not appropriate. Among non-Hispanic SAT and ACT examinees in Texas, the American Indian and Pacific Islander populations are small in number, compared to other racial/ethnic groups. Therefore, discussions of test performance results for non-Hispanic students, including comparisons across racial/ethnic groups, do not include these populations in reports produced by the Division of Research and Analysis. Among Hispanic SAT and ACT examinees in Texas, the African American, Asian, Pacific Islander, and multiracial populations are small in number, compared to other racial/ethnic groups. Therefore, discussions of test performance results for Hispanic students, including comparisons across racial/ethnic groups, do not include these populations in reports produced by the Division of Research and Analysis.

The effect of participation rate. Because both the SAT and ACT are voluntary, a self-selected portion of the high school population takes the tests. In situations like this, the rate of participation plays an important role in the interpretation of average scores. Specifically, the accuracy of the estimate of the average score for a population on a given examination is dependent on the proportion of that population that takes the examination. For example, a 90 percent participation rate would generally yield an average score that is more representative of the population than a 10 percent participation rate. This effect of participation rate on reported average scores affects the kinds of group comparisons that can be made. Typically, in groups with low participation rates, the examinees have completed academically rigorous courses and apply to the nation's most selective scholarship programs and colleges (College Board, 2011). Consequently, low participation rates generally result in inflated average score estimates. Assuming the average ability level of each population is in reality the same, the average score estimate for a population with a very low participation rate will usually be higher than the average score estimate for a population with a high participation rate.

The inverse relationship between participation rate and average score estimate is illustrated by SAT mathematics participation and performance data in the 50 states and the District of Columbia in 2014 (Figure 1 on page 9). As a state's participation rate increases, its average score estimate generally decreases. Generally, bias in the estimate of a population's average score is reduced when the participation rate is moderate to high. Participation rates directly affect the validity of comparisons among states, districts, campuses, and various student groups. Generally, comparisons of average SAT or ACT scores are most informative between groups with similar participation rates.

Participation rates over time. SAT and ACT participation rates can be affected by many factors, including varying graduation rates, availability of test fee waivers, availability of financial aid for higher education, and state mandating of participation in one of the examinations. The number of graduates is the denominator in SAT and ACT participation rate calculations, and the number of examinees is the numerator. In 2005, for the first time in nearly a decade, the number of students graduating from Texas public schools decreased (TEA, 2006). Because the decrease in graduates did not result from a decrease in enrollment, and because the numbers of SAT and ACT examinees increased, examination participation rates increased for all student groups in 2005. Shifts such as this should be taken into account when comparing participation rates over time.

Figure 1
Relationship Between SAT Mathematics Participation and Performance for States, Class of 2014


Source. Primary data from College Board.

Texas Education Code $\S 39.0261$ (2013) provides that high school students in the spring of the 11th grade or during the 12th grade may select and take once, at state cost, one of the valid, reliable, and nationally norm-referenced assessment instruments used by colleges and universities as part of their undergraduate admissions processes. Under the Texas College Preparation Program, TEA contracted with the College Board and ACT, Inc., to offer free SAT and ACT examinations in 2010 and 2011 to high school juniors enrolled in Texas public school districts and charters. The standard registration fees for the SAT and ACT were funded by TEA.

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Citation. Texas Education Agency. (2015). College admissions testing general information, classes of 2013 and 2014. Austin, TX: Author.

Abstract. This report presents general information about the SAT and ACT, including descriptions of the examinations, uses of individual scores in Texas, data sources, and interpretation of results.

Keywords. SAT, ACT, college admissions, testing, accountability, high school, scores, graduate.
The report is available in PDF format on the agency website at http://tea.texas.gov/acctres/ sat act index.html. Additional information about this report may be obtained by contacting the Texas Education Agency Division of Research and Analysis by phone at (512) 475-3523 or by e-mail at Research@tea.texas.gov.

For additional information about the SAT, contact the College Board Southwestern Regional Office at (512) 721-1800 or http://www.collegeboard.com/. For additional information about the ACT, contact ACT, Inc., Southwest Region, at (512) 345-1949 or http://www.act.org/.

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December 2015


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