

The SSAT

# 2023-2024 Interpretive Gui

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For the Middle & Upper Level SSATs The Enrollment Management Association is pleased to provide this guide in order to acquaint member schools and organizations with various aspects of the Secondary School Admission Test (SSAT) and to provide guidelines for the interpretation and use of test scores. For more than 50 years, the SSAT has been used to help students and schools make critical decisions about applying and admission. Sections of the SSAT measure verbal and mathematical ability and reading comprehension. The test also includes

an unscored, timed writing sample, which is sent to schools with the student's score report to supplement the student's application for admission. Each student takes the SSAT under standardized testing conditions and is given the same amount of time and instruction (exceptions are made for those who qualify for testing accommodations). This guide contains information for the Middle and Upper Level exams for students in grades 5–11.





### The Enrollment Management Association

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## Introduction

The Interpretive Guide for the Middle and Upper Level SSATs has been prepared to assist with the interpretation of SSAT results. Although this guide does not cover all aspects of the psychometric data that is available about the SSAT, it does provide information that can help admission officers and educators with those aspects of the test that are most useful to them. In addition, this guide contains general information about the SSAT.

#### **Purpose of the SSAT**

The SSAT is designed for students who are seeking entrance to independent schools in grades 4 to PG in the U.S., in Canada, and worldwide. The purpose of the SSAT is to measure the basic verbal, quantitative, and reading skills students develop over time that are needed for successful performance in independent schools. The SSAT provides independent school admission professionals with meaningful information about the possible academic success of potential students at their institutions, regardless of students' background or experience.

The SSAT is not an achievement test. It is not designed to measure the extent of knowledge about a specific curriculum that has been covered in class. Further, SSAT tests are not designed to measure other characteristics, such as motivation, persistence, or creativity, that may contribute to a student's success in school.

#### **Test Development Process**

SSAT test items are written by test development specialists and subject matter experts. Our test editors review all test material for any questions that may be inappropriate for various subgroups of the population. In addition, questions are reviewed for ambiguities to ensure that there is only one "best" response for each item.

In order to develop a pool of items for future tests, the Middle and Upper Level SSATs contain a brief experimental section. These questions have been developed, scrutinized, and determined to meet SSAT standards. Each test question is then analyzed statistically to determine its usefulness. Satisfactory items become part of the item pool from which new editions of the test are assembled. Unsatisfactory items are discarded or rewritten. Rewritten items are subject to the review and pretesting process again. These experimental questions are not part of a student's score.

### **Test Specifications**

This guide contains information on two levels of the SSAT. The Middle Level test is administered to students in grades 5–7, and the Upper Level test is administered to students in grades 8–11.

The SSAT consists of four multiple-choice sections with a testing time of 30 minutes for the verbal and each of the two quantitative sections, and 40 minutes for the reading section. These sections yield four scores:

- Verbal
- Quantitative (Math)
- Reading Comprehension
- Total (Verbal + Quantitative + Reading)

In addition, each administration of the SSAT includes a 25-minute writing sample. Writing samples are not scored but are submitted to score recipients to supplement a student's application. The total testing time for a standard SSAT administration is 185 minutes, including the experimental section and two breaks.

Samples of SSAT question types are provided on the SSAT website and in The Official Study Guide for the Middle Level SSAT and The Official Study Guide for the Upper Level SSAT. These publications are available for purchase through the SSAT website, <u>www.ssat.org</u>.



Content and statistical specifications can help ensure that the test measures the intended construct for the target population, that multiple forms are built to the same blueprint, and that scores earned on different forms are comparable after score equating. Items are scrutinized according to a number of factors so that content, skills measured, and overall difficulty of items are consistent in all test editions. A brief description of content specifications for each section of the SSAT follows.

#### **Verbal Section**

The verbal section of the test consists of 30 synonym questions and 30 analogy questions. The synonym portion measures verbal ability. The analogy portion measures a student's proficiency in identifying logical relationships between words and concepts.

The verbal section is not intended to be a test of vocabulary only and therefore includes common words that are expected to be familiar to the average SSAT test taker.

Both types of verbal items—synonyms and analogies—are carefully balanced to avoid advantage or disadvantage to students whose interests and backgrounds may have led them to read more or acquire a large vocabulary in specific areas.

### **Quantitative Section**

The SSAT includes two quantitative sections containing 25 questions each. The quantitative score is comprised of all 50 questions in the two sections. The questions are designed to measure understanding of mathematical concepts, computation, routine mathematical manipulations, and problem solving, as well as some recall of basic nomenclature and rules. The test items vary in difficulty and measure different levels of understanding. Depending upon the student's experiences in school, some concepts may be unfamiliar.

The questions in this section are drawn from the following areas:

- Arithmetic word problems (including percent, ratio)
- Basic concepts of addition, subtraction, multiplication, and division
- Estimation
- Rational numbers
- Sequences and series
- Frequencies
- Properties of exponents
- Algebraic word problems
- Equations of lines
- Patterns
- Absolute value

- Area and circumference of a circle
- Area and perimeter of a polygon
- Volume of a cube, cylinder, box
- Pythagorean theory and properties of right, isosceles, equilateral triangles
- · Properties of parallel and perpendicular lines
- Coordinate geometry (Upper Level test only)
- Slope (Upper Level test only)
- Interpretation (tables, graphs)
- Trends and inferences
- Probability



### **Reading Comprehension Section**

The reading comprehension section consists of 40 questions based on reading passages that generally fall into the categories of narrative (literary fiction, novels, short stories, poems) and argument (the presentation of an obvious and definite point of view on some subject, such as essays). The subject matter of the reading passages is drawn from the following general fields: humanities (such as art, biography, and poetry), social studies (such as history, economics, and sociology), and science (such as medicine, astronomy, and anthropology). The passages cover a variety of sources and subject areas so that examinees will not be at an advantage or disadvantage as a result of encountering material related to an area with which they may or may not be familiar. The passages vary in length but are typically 100 to 350 words.

The reading comprehension questions, designed to measure a student's ability to understand and assimilate what has been read, ask the test taker to:

- Recognize the main idea
- Locate details
- Make inferences
- Derive the meaning of a word or phrase from its context
- · Determine the author's purpose
- Determine the author's attitude and tone
- Understand and evaluate opinions/arguments
- · Make predictions based on information in the passage

### **Writing Section**

The SSAT includes an unscored writing sample that is sent to schools with the student's score report. The Middle Level exam includes two prompts: one creative and one essay, from which the student will choose one. The Upper Level writing section presents two essay prompts: one personal and one general, from which the student will choose one. All students have 25 minutes to complete the writing portion of the exam. The writing sample can be up to two pages long.



## **Administration of the SSAT**

### **Test Security**

The SSAT is a secure test. The integrity of the test prior to and following a test administration is strictly maintained. Testing centers must meet rigid standards and comply with established rules for the receipt, storage, administration, and return shipment of test materials.

#### **Uniform Conditions**

The SSAT is a standardized test. Test development, interpretation of scores, and test administration are managed in a prescribed way. To ensure that scores earned by examinees at different administrations are strictly comparable, *the Test Administrator's Guide* to the SSAT provides precise instructions, to be followed by qualified and experienced test administrators, from the moment the student is admitted to the test center until the time of dismissal. Any deviations from the uniform testing conditions are reported in writing to The Enrollment Management Association. Each report is reviewed by The Enrollment Management Association and issues and/ or problems are resolved.

### **Testing Accommodations**

A student with a disability may apply for testing accommodations for administrations of the SSAT. Students requiring testing accommodations such as extra time, large print, or Braille editions of the test, for example, may be accommodated, pending application and submission of documentation (if applicable).

Additional information regarding application for testing accommodations is available on the SSAT website: <u>www.ssat.org/TA.</u>

## **Reporting SSAT Scores**

There are two types of scored test administrations—paper based and computer based. Computer-based testing is available at Prometric test sites and through the SSAT at Home, the at-Home administration of the SSAT. Paper-based testing is available through member schools, on six scheduled test dates at select locations, or on an as-needed basis.

School scores for paper-based tests are routinely reported online ten days after the test. For computer-based tests, scores are routinely reported online weekly on the Wednesday following the Monday through Sunday test date range. Score reports to students are routinely reported the same day they are available to schools.

### **Score Reports**

The SSAT score report is available to schools, educational consultants, and educational organizations. Parents, guardians, students, or advisers designate school score report recipients. A separate score report is provided to the test taker. Score reports to test takers do not contain any school-specific information.

SSAT scores are reported to schools online in exportable rosters and as individual report PDFs.

EMA Members should only use official SSAT score reports in their decision making. Official SSAT score reports are only those delivered through your MAP or through EMA's official APIs directly to you from EMA. Family score reports from third parties or families should not be accepted as PDF files are easily manipulated.

EMA understands that for preliminary information, schools sometimes accept unofficial score reports. We do not recommend this, however, if you do, EMA strongly recommends that you validate any self-reported, preliminary information with an official SSAT score report before making final admission decisions. It is also best to advise candidates of this validation requirement.

Context is a key component to effective interpretation of test scores. To increase support for SSAT score interpretation, school applicant comparison context data is added to the school score reports following the school's submission of data on accepted and enrolled students. For the 2023-2024 year, the scores of a test taker are placed in many different contexts on the school score report.



### **School Score Report Sample**





## **SSAT Writing Sample**

<ul> <li>Writing campus</li> <li>Writing campus</li> <li>Schools would like to get to know you better through a story you tell using the idea as your first sentence. Please fill in the circle the idea you find most interesting and write a story using the idea as your first sentence. Please fill in the circle next to the one you choose.</li> <li>I put my hand in my pooket and pulled out</li> <li>(a) All I wanted was a glass of water.</li> <li>Use this page and the next page to complete your writing sample.</li> <li>I put my hand in my pooket and pulled out</li> <li>(b) All I wanted was a glass of water.</li> <li>Use this page and the next page to complete your writing sample.</li> <li>I put my hand in my pooket and piece of parts of pa</li></ul>	Whiting Sample	the ring one of the ideas below. Please choose
<ul> <li>I put my hand in my pocket and pulled out</li> <li>(a) All I wanted was a glass of water.</li> <li>Use this page and the next page to complete your writing sample.</li> <li>I put my hand in my pocket and piece of pulled out a numpleal piece of pulled out a numpleal piece of and it was a treadence map?</li> <li>A put it back in my pocket it of and it was a treadence map?</li> <li>A put it back in my pocket it and it was a pocket it was a treadence map?</li> <li>A put it back in my pocket it and it was a treadence map?</li> <li>A put it back in my pocket it and it was a treadence map?</li> <li>A put it back in my pocket it and to be at my probable it and non to get my probable it and non to get my probable it and non to get a post of the pock it and poiled out a structure of the pock it and to be post at the post it and to be post at the post it and to be post.</li> </ul>	Schools would like to get to k the idea you find most intere next to the one you choose.	now you better through a story you tell using one of all the end of the second store of the store of the store as your first sentence. Please fill in the circle sting and write a story using the idea as your first sentence.
I All I wanted was a glass of water.          I All I wanted was a glass of water.         I put my hand in my porket and piece of pulled out a numpled piece of pulled out a numpled piece of and it was a fully opened it.         I put it bouls in my porket and it was a treadure map?         and it was a data of pulled on to get my porket it.         I put it bouls in my porket and it was a treadure map?         and it was a fully opened it.         I put it bouls in my porket and it.         and non to get my porket in my porket it.         I put it bouls in my porket it.         I and it was a glass of water.         I put it bouls in my porket it.         I and it was a get and other it.         I and it was a get and plan it.         I put it bouls in my porket it.         I have a set my fulled and it.         I have a set of your lived.         I have a set of a set of your lived.         I have a set of a set of your lived.         I have a bound on the path attrue and.         I have a bound on glade.	I put my hand in my po	ocket and pulled out
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"Into one brows where we are." Where did she map come from?" Just then we have she house and map pointed to what was in she tree house? Use looked around but what see any one. I climbed up first, and didn't we away what I found with both Paul and Arma were in she treehouse with me. If was my little brother with a plate of cookiess with a plate of cookiess of my brother in she field behind our house. Now we all had a place to play.



## **Family Score Report**

The family score report is available to families online for free. A hard copy of the score report can be mailed to a family for an additional fee.





## **Interpreting SSAT Scores**

#### **Raw Scores**

Scores for the Middle and Upper Levels are calculated by adding one point for each correct answer and zero points for each omitted question, and by subtracting one-quarter of one point for each incorrect answer. The number of answers scored as right, wrong, and omitted on each subsection of the test constitute the raw score for that subsection (subscore). Raw scores from different editions of the test cannot be compared directly to each other.

#### **Scaled Scores**

The raw score is converted to a score on the 440–710 Middle Level scale or 500–800 Upper Level scale, which is called the *scaled score*. This is the score that appears on the student's score report. The scaled score yielded by a raw score can vary slightly from one edition of the test to another. This is due to small differences in difficulty among different editions. A statistical procedure called "equating" is used to adjust for these small differences. See "Score Equating" on page 15 for more details.

#### **Range of Scaled Scores**

In reality, a perfectly reliable test is never realized. Standard Error of Measurement (SEM) measures how a student's observed test scores vary from his or her "true" score (see "True Score" on page 18). This is why ranges of scaled scores are provided in the score reports, to emphasize the possibility of score differences due to SEM. See "Standard Error of Measurement" on page 17 for more details.

The crucial use of the SEM is to treat each scaled score as a band rather than as a point when using scores to make decisions about test takers. It is a common practice to extend the band one SEM above the obtained score and one SEM below the obtained score. For example, the SEM of the Upper Level test is 20 on the verbal section. If a student gets a scaled score of 698 on verbal, there is a 68% chance that his/her score will fluctuate between 678 and 718 if he or she takes the test again.

#### **Norms and Percentiles**

The SSAT is a norm-referenced test. A *norm-referenced* test interprets an individual test taker's score relative to the distribution of scores for a comparison group, referred to as the norm group. The SSAT Middle Level and Upper Level test norm groups consist of all the first-time test takers (same grade level) who took the test on a Standard test date typically within the past three-year period in the U.S. and Canada. For students who tested multiple times, only the first test scores are used to calculate the ranking percentile.

The SSAT reports percentiles. The *percentile* is the percentage of students in the norm group whose scores fall at or below a particular scaled score. For example, if an 8th grade student's scaled score is 698 and his/ her percentile is 67 on the verbal section, it means that 67% of verbal section scores of all the other 8th grade students (who took the test for the first time on a Standard test date over a three-year period in the U.S. and Canada) fell at or below 698.

Tables 1 to 7 (pages 20 to 26) provide percentiles for grades 5 through 11.



#### **Average Scores**

The average of a group of scores provides a useful reference point when considering an individual score (e.g., above average, below average) for a test taker's grade. The average scores shown are for all first-time test takers testing in the U.S. and Canada on a Standard test date over a three-year period of the same grade as the reported test taker. For students who tested multiple times, only the first test scores are used to calculate the average score.

#### **Questions Not Answered**

Questions not answered includes both omitted questions and questions not reached. Omitted questions are questions test takers are able to reach but choose not to answer after consideration. For example, if a test taker does not answer question #10 but answers questions 11, 12, 13, etc., question #10 is counted as an omitted question. Questions not reached refers to those questions (usually near the end of a section or a test) that test takers are not able to reach because they run out of time. For example, if a test has 50 questions, and a test taker does not answer questions 46–50, questions 46–50 are counted as not reached.

The SSAT is designed to ensure that test takers have sufficient time to consider every question on the test. The *number of not reached* questions is generally very low.

#### School-Specific Context Data

Context is a key component to effective interpretation of test scores. The most important context for interpretation of test scores and other information is your school; thus your school's context data is added to each test taker's SSAT score report if your school reports its accepted and enrolled data to The Enrollment Management Association. The contexts included on the school score report place the test taker's scores into the school's environment, providing a much more meaningful comparison. School score reports are specific to each school and include context data for that school.

#### School Context: All 2022-23 Reports

This table places the test taker's scores in the context of all of the same-grade test takers who sent scores to your school in the last admission year. The reported test taker's scores can be compared directly with those of all of the same-grade test takers' scores received by your school last year. Also shown are the mean (average) scores for all of the same-grade test takers whose scores your school received in the last admission year.

#### School Context: 2023 Accepted Students

This table places the test taker's scores in the context of all scores of the same-grade test takers accepted by your school in the last admission year. Also shown are the average scores for all of the same-grade test takers accepted by your school in the last admission year. (If your school does not participate in the Applicant Comparison Data share, these fields are blank.)

### School Context: 2023 Enrolled Students

This table places the test taker's scores in the context of all of the same-grade test takers enrolled by your school in the last admission year. Also shown are the average scores for all of the same-grade test takers enrolled by your school in the last admission year. (If your school does not participate in the Applicant Comparison Data share, these fields are blank.)



#### **SSAT Subject Areas**

SSAT results are reported in the following subject areas:

#### Verbal

- Synonyms-These questions test the student's verbal capability.
- Analogies-These questions test the student's ability to relate ideas to each other logically.

### Quantitative

- Number Concepts and Operations—These questions deal with the way numbers are used or written and include concepts of and operations with integers, fractions, decimals, and percents, as well as number problems and relationships.
- Algebra, Geometry, and Other Math—These questions cover the use of variables in equations and inequalities; coordinate systems; informal measurement-related concepts of area, perimeter, volume, and measure; the knowledge of triangles and other plane and solid shapes taught in the elementary school years; graphs, tables, charts, and miscellaneous topics such as simple probability and statistics, logic, and flowcharts.

#### **Reading Comprehension**

- Main Idea and Content—Some of these questions require students to recognize the main idea of a passage either by choosing a main idea statement or by choosing a title for the passage that most appropriately describes the author's main point. The remaining questions require students to recognize the details from a passage that support the author's thesis.
- Higher Order and Interpretation—These questions require students to reason, draw inferences, and apply
  information, recognize meaning not directly stated in a passage, and identify such elements of the passage as
  the author's logic, style, and tone.

For each subject area, the score report provides:

- · The number of questions answered correctly
- · The number of questions answered incorrectly
- · The number of questions omitted
- The number of questions not reached at the end of each test section

It is recommended that schools use this information to understand a child's scores in more depth. For instance, a low reading comprehension score could indicate either a reading problem or a slower reading speed. A score report may reflect the latter in the number of items not reached as compared to the total number of questions omitted in the entire section.

## **Statistical Terms and the SSAT**

### **Score Equating**

Different SSAT forms are built and administered to students each year. Although test developers follow prescribed specifications when they assemble new forms so that different forms can be parallel in difficulty as much as possible, in reality it is inevitable that there are variations in form difficulty. A statistical procedure referred to as *score equating* is used to adjust for minor form difficulty differences, so that scores reported to students taking different forms are comparable.

#### Mean

The *mean* of a group of scores is the arithmetic average. Computing the mean is a useful way to determine the average of a group for most kinds of measurement. The mean becomes a more useful and reliable measure as the size of the group upon which it is based increases. It is determined by adding the scores and dividing by the number of scores in that group.



#### **Standard Deviation**

The standard deviation is a statistic that indicates how much variation exists in a set of scores. A group with many high scores and many low scores will have a large standard deviation. A group of scores that are all close together will have a small standard deviation. If a group of scores has a normal distribution (the familiar bell- shaped curve), as is the case for national norm groups on many tests, about 68% of scores will fall within one standard deviation of the mean. About 16% of the scores will be more than one standard deviation below the mean score, and about 16% will be more than one standard deviation above the mean.

Figure 1 illustrates the relationship between standard deviation and test scores. The mean score for this test is 656, and the standard deviation is 54 points. One standard deviation above the mean is a score of 710, and 34% of the test-taking population earn scores that are between 656 and 710. Similarly, another 34% of the population score within one standard deviation below the mean, or between 602 and 656. This means that 68% of the test-taking population score within one standard deviation (54 points) above or below the mean score (656), or between 602 and 710. More than 26% score between one and two standard deviations above or below the mean, so a total of 95% of the test takers score within two standard deviations of the mean, or between 548 and 764. Notice that less than 5% of test takers score more than two standard deviations above or below the mean.

An understanding of how means and standard deviations are related can help you to compare how students perform relative to the entire test-taking population and may help you to identify those who are "average," "above/below average," or "exceptional" in either direction. You may be aware that a score of 770 on the reading comprehension section is very good. However, when you consult Figure 1, you will see that such a score is greater than two standard deviations above the mean and that you have before you a student who has scored in the top 2% of all test takers.





### **Reliability of Test Scores**

*Reliability* is the tendency of test scores to be consistent on two or more occasions of testing if there is no real change in the test taker's abilities. Most concern focuses on reliability as it involves the specific questions that a student answers. As the questions on a particular test represent a mere sample of the many questions that could possibly have been included, one must consider how closely the test results agree with the results that would have been produced by a different set of similar questions.

For scaled scores, a reliability coefficient of 1.00 indicates perfect reliability; a coefficient of .00 indicates no reliability at all. The Middle Level SSAT tests have reliability coefficients ranging between .82 and .93. The Upper Level SSAT tests have reliability coefficients ranging between .82 and .94.

### Standard Error of Measurement (SEM)

Standard Error of Measurement (SEM) does not mean that someone has made a mistake in administering or scoring the test. It only means that students' scores on a test tend to differ somewhat from the scores they would earn if the test were perfectly reliable (true score). In reality, however, a perfectly reliable test is never realized. Standard Error of Measurement (SEM) measures how a student's test scores vary from his or her "true score" (see "True Score" on page 18).

The crucial use of the SEM is to treat each scaled score as a band rather than as a point when using scores to make decisions about test takers. It is a common practice to extend the band one SEM above the obtained score and one SEM below the obtained score. For example, the SEM of the Upper Level test is 20 on verbal. If a student gets a scaled score of 698 on verbal, there is a 68% chance that his/her score will fluctuate between 678 (one SEM below 698) and 718 (one SEM above 698) if he or she takes the test again.

The chart that follows specifies the Standard Error of Measurement for each section of the test.

Section	Upper Level Test SEM	Middle Level Test SEM
Reading Comprehension	20 points	18 points
Verbal	20 points	15 points
Quantitative	19 points	14 points

### Standard Error of Difference (SED)

Because test scores are not perfect measures of ability, we expect an examinee's scores to differ if the person takes the test more than once (see "Standard Error of Measurement" above). In the same way, we should expect the scores of two examinees of equal ability to differ. The *Standard Error of Difference (SED)* is an index of the average-sized difference that we would expect between test scores of two examinees of equal ability. If the test scores of two examinees differ by less than the SED, there is no substantial evidence that the two examinees differ in ability. As the test scores differ by an amount greater than the SED (say, 1.5 the SED), then we may have confidence that the two individuals truly differ in ability as measured by the test.

The SED is calculated as  $\sqrt{2}$  × SEM . For example, the SEM of the SSAT Upper Level test is 20 points on verbal.

The SED is roughly 30 points. If two individuals' verbal scores differ by more than 45 points (1.5 times the SED), then we may have confidence that the two individuals truly differ in their verbal abilities as measured by the SSAT.



#### **True Score**

*True score* is a hypothetical concept indicating what an individual's score on a test would be if the test were perfectly reliable. It is thought of as the hypothetical average of an infinite number of obtained scores for a test taker with the effect of practice removed.

### Validity

Test validity refers to the degree to which evidence exists to support the interpretation of test scores for particular purposes. It is important to note that we validate a test score for a particular use (e.g., admission, placement) and that validity is not the property of a test in and of itself. This means that as opposed to talking about a test as simply valid or not valid, one should instead state, for example, "There is a great deal of validity evidence to support the use of SSAT scores for independent school admission decisions." This also represents the notion that validity is a matter of degree and not absolute. It is therefore very important to gather validity evidence over time to either enhance, confirm, or contradict previous findings.

There are various sources of validity evidence that can be examined, such as the content tested (e.g., subject area and types of items), the internal structure of the test (e.g., reliability and other psychometric properties), and relationships between the test scores and other variables (e.g., correlations with the outcomes the test is expected to predict). The SSAT is primarily used in making independent school admission decisions. For that reason, admission officers are interested in its ability to predict first-year school grades. In spring 2015, The Enrollment Management Association conducted a predictive validity study. We received responses from 59 schools, with 2,918 Middle Level students and 13,744 Upper Level students.

The results showed that both Middle and Upper Level SSATs are strong predictors of the first year GPA (FYGPA). The correlation coefficients of individual section scores (verbal, quantitative, and reading) with FYGPA range from 0.44 to 0.53 for the Middle Level test, and from 0.44 to 0.50 for the Upper Level test. The total SSAT score (V, Q, R) correlates even higher: 0.54 for the Middle Level and 0.53 for the Upper Level.

#### **Test Speededness**

The SSAT began a transition from a speeded to a non-speeded test in the 2003-2004 test year. The transition was completed in the 2004-2005 test year.

A test section is speeded to the extent that performance on it is determined by the number of questions examinees have time to answer. There is no single criterion to determine test speededness, but several criteria can be used together. One measure is provided by the percent of test takers who reached at least three-quarters of the questions in a timed section. A test section may be regarded as being virtually unspeeded if essentially all test takers reach at least three-quarters of all the items in that section.

In the 2004-2005 test year, all sections of the SSAT were essentially unspeeded. For example, a typical Upper Level form, analyzed for grade 8 students, shows that three-quarters of the items in the verbal section were reached by 99.9% of the students, 99.7% for the quantitative sections, and 99% for the reading comprehension section. Corresponding percents for grade 6 students who took the Middle Level form are 99.9% (verbal), 99.9% (quantitative), and 97.7% (reading).



## **Appendices**

#### **Appendix A:**

#### SSAT Program Norms by Grade

The norms presented in the following tables are based on first-time test takers who tested at a United States or Canadian Standard administration of the Secondary School Admission Test between August 1, 2019, and July 31, 2023. If a student tested multiple times, only the first test scores were used to calculate the norms. They are not representative of students in general throughout the country, nor are they representative of all students enrolled in independent schools.

Percentiles reported on individual score report forms are based on the performance of students of the same grade and may be found in the following tables. EMA now provides only scores based on mixed gender scores.

#### Guide to Reading Tables

Verbal	V
Quantitative	Q
Reading Comprehension	R



#### **PERCENTILE RANKS ON THE SSAT**

SSA	T Percei	ntile	Scaled	SSA	T Perce	entile	Sealed		Sealed		Sealed		Sealed	
V	0	R	Score	M	0	R	Score	%ile	Score	%ile	Score	%ile	Score	%ile
00	00	00	570	07	20	20		00	1000	00	1760	00	1510	
33	99	99	5/2	27	29	32	2130	99	1926	82	1/22	28	1518	
99	99	99	569	25	26	30	2127	99	1923	82	1719	27	1515	1
99	99	99	566	23	24	28	2124	99	1920	81	1716	26	1512	1
99	99	99	563	21	22	25	2121	99	1917	81	1713	25	1509	1
99	98	99	560	20	20	24	2118	99	1914	80	1710	25	1506	1
98	98	99	557	18	18	22	2115	99	1911	80	1707	24	1503	1
98	97	98	554	16	16	20	2110	99	1908	79	1704	23	1500	1
00 07	07	00	551	15	15	19	2112	00	1900	75	1704	20	1407	1
07	06	07	5.0	10	10	10	2109	99	1905	78	1/01	22	1497	
97	90	97	546	13	15	10	2106	99	1902	/8	1698	22	1494	1
96	95	97	545	12		14	2103	99	1899	77	1695	21	1491	1
95	95	96	542	11	10	13	2100	99	1896	76	1692	20	1488	1
94	94	96	539	10	9	12	2097	99	1893	76	1689	19	1485	1
94	93	95	536	8	8	10	2094	99	1890	75	1686	18	1482	1
93	92	95	533	7	6	9	2091	99	1887	74	1683	18	1479	1
92	91	93	530	6	6	8	2088	99	1884	74	1680	17	1476	1
90	90	92	527	5	5	7	2085	99	1881	73	1677	17	1473	1
RQ	88	92	524	1	1	5	2000	00	1070	70	1674	16	1470	1
88	87	90	521	4	3	5	2002	00	1070	72	1671	10	14/0	1
07	00	00	521	4	2	4	2079	99	1070	72	10/1	15	1407	1
57	00	89	518	3	3	4	20/6	99	18/2	/1	1668	15	1464	
56	85	87	515	3	2	3	2073	99	1869	70	1665	14	1461	1
34	83	86	512	2	2	3	2070	99	1866	70	1662	14	1458	1
83	82	85	509	2	1	2	2067	99	1863	69	1659	13	1455	1
81	80	83	506	2	1	2	2064	99	1860	68	1656	13	1452	1
79	79	82	503	1	1	1	2061	98	1857	67	1653	12	1449	1
77	77	80	500	1	1	1	2058	98	1854	66	1650	11	1446	1
75	75	79	497	1	1	1	2055	98	1851	66	1647	11	14.43	1
73	73	77	101	1	1	1	2005	00	10.01	65	1644	10	1445	1
70	73	75	401	1	1	1	2052	90	1040	03	1044	10	1440	1
/1	/1	75	491		1		2049	98	1845	64	1641	10	1437	1
69	69	/3	488	1	1		2046	98	1842	63	1638	9	1434	1
67	67	71	485	1	1	1	2043	97	1839	62	1635	9	1431	1
65	65	69	482	1	1	1	2040	97	1836	61	1632	8	1428	1
62	63	68	479	1	1	1	2037	97	1833	60	1629	8	1425	1
60	61	65	476	1	1	1	2034	97	1830	59	1626	8	1422	1
57	58	64	473	1	1	1	2031	96	1827	58	1623	7	1419	1
55	56	61	470	1	1	1	2002	96	1824	58	1620	7	1416	1
53	52	50	467	1	1	1	2020	06	1024	53	1617	6	1412	1
50	53	59	407	1	1	1	2025	90	1021	5/	101/	0	1413	1
00	51	5/	464		1		2022	96	818	56	1014	б	1410	
48	49	54	461	1	1	1	2019	96	1815	55	1611	6	1407	1
46	47	52	458	1	1	1	2016	95	1812	54	1608	5	1404	1
43	45	49	455	1	1	1	2013	95	1809	53	1605	5	1401	1
41	42	47	452	1	1	1	2010	95	1806	52	1602	5	1398	1
39	40	45	449	1	1	1	2007	94	1803	52	1599	4	1395	1
37	38	42	446	1	1	1	2004	94	1800	51	1596	4	1392	1
3/	36	40	1/12	1	1	1	2004	9/	1707	50	1503	1	1380	1
20	30	40	440	1	1	1	2001	04	1737	40	1535	4	1009	1
5Z	34	37	440			1	1998	94	1794	49	1590	4	1360	1
50	31	35					1995	93	1/91	48	1587	3	1383	
							1992	93	1788	47	1584	3	1380	1
							1989	92	1785	46	1581	3	1377	1
							1986	92	1782	46	1578	3	1374	1
							1983	92	1779	45	1575	2	1371	1
							1980	91	1776	44	1572	2	1368	1
							1977	91	1773	43	1569	2	1365	1
							1974	90	1770	42	1566	2	1362	1
							1074	90	1767	41	1563	2	1359	1
							1971	00	1764	40	1503	2	1359	1
							1968	90	1704	40	1560	1	1350	1
							1965	89	1/61	39	1557		1353	
							1962	89	1758	39	1554	1	1350	1
							1959	89	1755	38	1551	1	1347	1
							1956	88	1752	37	1548	1	1344	1
							1953	88	1749	36	1545	1	1341	1
							1950	87	1746	35	1542	1	1338	1
							1947	87	1743	34	1539	1	1335	1
							10.47	86	1740	33	1536	1	1330	1
							1944	00	1740	33	1550	1	1002	1
							1941	85	1/3/	32	1533		1329	1
							1938	85	1/34	31	1530		1326	
							1935	84	1731	30	1527	1	1323	1
							1932	84	1728	29	1524	1	1320	1
							1929	83	1725	29	1521	1		

Scaled	SSAT Percentile								
Score	V	Q	R						
710	99	99	99						
707	99	99	99						
704	99	99	99						
701	99	99	99						
698	99	98	99						
695	98	98	99						
692	98	97	98						
689	97	97	98						
686	97	96	97						
683	96	95	97						
680	95	95	96						
677	94	94	96						
674	94	93	95						
671	93	92	95						
668	92	91	93						
665	90	90	92						
662	89	88	92						
659	88	87	90						
656	87	86	89						
653	86	85	87						
650	84	83	86						
647	83	82	85						
644	81	80	83						
641	79	79	82						
638	77	77	80						
635	75	75	79						
632	73	73	77						
629	71	71	75						
626	69	69	73						
623	67	67	71						
620	65	65	69						
617	62	63	68						
614	60	61	65						
611	57	58	64						
608	55	56	61						
605	53	53	59						
602	50	51	57						
599	48	49	54						
596	46	47	52						
593	43	45	49						
590	41	42	47						
587	39	40	45						
584	37	38	42						
581	34	36	40						
578	32	34	37						
575	30	31	35						



Scaled Score 

#### **PERCENTILE RANKS ON THE SSAT**

SSA	T Perce	ntile	Scaled	SSA	T Perce	entile	Scaled		Scaled		Scaled		Scaled	
V	0	R	Score	V	0	R	Score	%ile	Score	%ile	Score	%ile	Score	%ile
00	00	00	530.0	15	14	00	00010		00010		00010		obore	
99	99	99	5/2	15	14	20	2130	99	1926	66	1722	14	1518	1
98	98	99	569	14	13	19	2127	99	1923	65	1719	14	1515	1
97	97	98	566	12	12	17	2124	99	1920	65	1716	13	1512	1
96	97	98	563	11	11	15	2121	99	1917	64	1713	13	1509	1
95	96	97	560	10	10	14	2118	99	1914	63	1710	12	1506	1
94	95	96	557	9	9	13	2115	99	1011	62	1707	12	1503	1
03	94	95	554	8	8	11	2113	00	1009	61	1707	12	1503	1
33	00	33	554	7	7	10	2112	99	1908	01	1704		1500	-
92	93	94	551	/	/	10	2109	99	1905	60	1/01	Ш	1497	1
91	91	92	548	6	6	9	2106	99	1902	59	1698	11	1494	1
89	90	91	545	6	5	8	2103	99	1899	58	1695	10	1491	1
88	88	90	542	5	5	7	2100	98	1896	57	1692	10	1488	1
87	86	89	539	5	4	6	2097	98	1893	57	1689	9	1485	1
85	84	88	536	4	3	5	2094	98	1890	56	1686	9	1482	1
83	82	87	533	4	3	4	2091	98	1887	55	1683	8	1479	1
81	79	85	530	3	2	3	2001	07	1007	54	1600	0	1476	1
70	75	00	500	2	2	2	2000	97	1004	54	1000	0	1470	1
79	77	03	527	3	2	3	2085	97	1881	53	1677	8	14/3	1
78	75	82	524	2	2	3	2082	97	1878	52	1674	/	1470	
/5	/3	/9	521	2	1	2	2079	97	1875	51	1671	7	1467	1
74	71	78	518	2	1	2	2076	96	1872	50	1668	7	1464	1
72	69	76	515	2	1	2	2073	96	1869	50	1665	6	1461	1
70	67	74	512	1	1	1	2070	96	1866	49	1662	6	1458	1
67	64	73	509	1	1	1	2067	95	1863	48	1659	5	1455	1
65	62	70	506	1	1	1	2064	95	1860	47	1656	5	1452	1
63	60	69	503	1	1	1	2004	94	1957	46	1652	5	14.0	1
60	57	66	503	1	1	1	2001	94	1057	40	1053	5	1449	1
50	5/	00	500	1	1	1	2058	94	1854	45	0001	5	1446	
58	55	64	497		1	1	2055	93	1851	44	1647	5	1443	1
56	53	62	494	1	1	1	2052	93	1848	43	1644	4	1440	1
53	51	60	491	1	1	1	2049	92	1845	43	1641	4	1437	1
51	48	58	488	1	1	1	2046	92	1842	42	1638	4	1434	1
48	46	56	485	1	1	1	2043	91	1839	41	1635	4	1431	1
46	44	54	482	1	1	1	2040	91	1836	40	1632	3	1428	1
11	12	52	170	1	1	1	2070	01	1922	30	1620	3	1425	1
41	42	10	4/3	1	1	1	2037	91	1033	39	1629	3	1420	1
41	40	49	4/0	1	1	1	2034	90	1830	30	1020	3	1422	1
38	38	4/	4/3		I		2031	89	1827	38	1623	3	1419	
37	35	44	470	1	1	1	2028	89	1824	37	1620	3	1416	1
34	33	42	467	1	1	1	2025	88	1821	36	1617	2	1413	1
32	31	40	464	1	1	1	2022	88	1818	35	1614	2	1410	1
30	29	38	461	1	1	1	2019	87	1815	34	1611	2	1407	1
29	27	36	458	1	1	1	2016	87	1812	34	1608	2	1404	1
26	26	33	455	1	1	1	2013	86	1809	33	1605	2	1401	1
25	20	30	450	1	1	1	2010	86	1806	32	1603	2	1309	1
20	24	32	402		1	1	2010	00	1000	32	1002	2	1090	1
23	22	30	449		1		2007	85	1803	32	1599	2	1395	
21	20	28	446	1	1	1	2004	85	1800	31	1596		1392	1
20	19	26	443	1	1	1	2001	84	1797	30	1593	1	1389	1
18	18	24	440	1	1	1	1998	84	1794	29	1590	1	1386	1
17	16	22					1995	83	1791	29	1587	1	1383	1
							1992	82	1788	28	1584	1	1380	1
							1989	82	1785	27	1581	1	1377	1
							1986	81	1782	27	1579	1	1374	1
							1002	01	1702	27	1576	1	1374	1
							1983	00	1779	20	1575	1	13/1	1
							1980	80	1/76	25	1572		1368	
							1977	79	1773	24	1569	1	1365	1
							1974	79	1770	24	1566	1	1362	1
							1971	78	1767	23	1563	1	1359	1
							1968	77	1764	22	1560	1	1356	1
							1965	76	1761	22	1557	1	1353	1
							1962	75	1758	21	1554	1	1350	1
							10502	75	1755	20	1554	1	13/7	1
							1959	75	1755	20	1551	1	134/	1
							1956	74	1/52	20	1548	1	1344	
							1953	/3	1/49	19	1545		1341	1
							1950	73	1746	19	1542	1	1338	1
							1947	72	1743	18	1539	1	1335	1
							1944	71	1740	18	1536	1	1332	1
							1941	70	1737	17	1533	1	1329	1
							1938	70	1734	16	1530	i	1326	1
							1025	60	1721	16	1507	1	1220	1
							1935	69	1/31	10	152/	1	1323	1
							1932	68	1/28	15	1524		1320	
							1929	67	1725	15	1521	1		



#### PERCENTILE RANKS ON THE SSAT

SAT P	ercentile	S	caled	SSA	T Perce	ntile	Scaled		Scaled		Scaled		Scaled	
	O _R	S	core	V	0_	R.	Score	%ile	Score	%ile	Score	%ile	Score	%ile
			70	10	Q	14			- COOLC		00010		Coore	
, ,	39 95	5	12	10	9	14	2130	99	1926	53	1722	9	1518	1
5 !	97 97	7 5	69	9	8	12	2127	99	1923	52	1719	9	1515	1
L 9	96 96	5 5	66	9	7	12	2124	99	1920	51	1716	8	1512	1
3	95 95	5 5	63	8	7	10	2121	99	1917	50	1713	8	1509	1
	03 0/	1 5	60	7	6	9	2121	00	1014	40	1710	7	1505	1
	01 02	+ J	57	7	5	3	2118	99	1914	49	1/10	/	1506	1
,	91 93	5 5	57	/	5	8	2115	99	1911	48	1707	7	1503	1
) !	90 91	1 5	54	6	5	8	2112	98	1908	47	1704	7	1500	1
' :	87 90	) 5	51	6	4	7	2109	98	1905	47	1701	6	1497	1
5 5	84 87	7 5	48	5	4	6	2106	00	1002	46	1609	6	1404	1
			46	E	2	E	2100	90	1902	40	1090	0	1494	1
) (	52 80	5 5	45	5	3	5	2103	97	1899	45	1695	6	1491	1
5	30 85	5	42	4	3	5	2100	97	1896	44	1692	6	1488	1
	77 82	2 5	39	4	3	4	2097	96	1893	43	1689	5	1485	1
	75 81	5	36	3	2	3	2094	96	1890	42	1686	5	1482	1
	72 80	) 5	33	3	2	3	2001	96	1887	/1	1683	5	1/79	1
	2 77	7 5	20	0	1	2	2031	30	1007	41	1005	5	1473	1
,	58 77	5	30	2	1	2	2088	95	1884	41	1680	5	1476	1
(	56 /t	5	2/	2	1	2	2085	95	1881	40	1677	4	1473	1
(	64 74	1 5:	24	2	1	2	2082	94	1878	39	1674	4	1470	1
	61 70	) 5	21	2	1	2	2079	94	1875	38	1671	4	1467	1
	59 60	3 5	18	1	1	1	2076	93	1872	38	1669	1	1464	1
	57 00		16	1	1	1	2070	00	10/2	27	1000	4	1404	1
	5/ 66	5	ID IO		1		2073	93	1869	3/	1665	3	1461	1
1	o4 64	1 5	12	1	1	1	2070	92	1866	36	1662	3	1458	1
	51 61	5	09	1	1	1	2067	91	1863	36	1659	3	1455	1
	48 59	9 5	06	1	1	1	2064	91	1860	35	1656	3	1452	1
	16 56	5	03	1	1	1	2061	90	1957	34	1653	3	1440	1
-	10 00	5	00	1	1	1	2001	90	1007	34	1053	3	1449	
-	44 54	+ 5	00		1		2058	89	1854	33	1650	3	1446	I
	41 52	2 4	97	1	1	1	2055	89	1851	32	1647	2	1443	1
:	39 50	) 4	94	1	1	1	2052	88	1848	32	1644	2	1440	1
	37 47	7 4	.91	1	1	1	20/19	87	18/15	31	16/1	2	1/137	1
			00	1	1	1	2045	07	1040	20	1041	2	1437	1
•	54 40	4	66	-	1		2046	87	1842	30	1038	2	1434	1
	33 44	4 4	85	1	1	1	2043	86	1839	29	1635	2	1431	1
	31 41	4	82	1	1	1	2040	85	1836	28	1632	2	1428	1
	29 40	) 4	79	1	1	1	2037	85	1833	28	1629	2	1425	1
	28 37	7 1	76	1	1	1	2034	84	1830	27	1626	2	1/22	1
			70	1	1	1	2004	04	1000	27	1020	2	1410	
	20 30	4	/3	-	1		2031	83	1827	26	1623		1419	1
	24 33	3 4	70	1	1	1	2028	82	1824	26	1620	1	1416	1
	23 32	2 4	67	1	1	1	2025	82	1821	25	1617	1	1413	1
	21 30	) 4	64	1	1	1	2022	81	1818	24	1614	1	1410	1
	20 27	7 /	61	1	1	1	2010	80	1915	24	1611	1	1407	1
	20 27	4	50	- 1	1	1	2013	70	1010	24	1000	1	1407	
	18 26	4	58	1	1	1	2016	79	1812	23	1608	1	1404	1
	17 24	1 4	55	1	1	1	2013	78	1809	23	1605	1	1401	1
	16 23	3 4	52	1	1	1	2010	78	1806	22	1602	1	1398	1
	14 21	4	49	1	1	1	2007	77	1803	21	1599	1	1395	1
	12 10	4	46	1	1	1	2004	76	1800	21	1596	1	1392	1
	10 19	4	40	1	1	1	2004	70	1000	21	1530	1	10.02	1
	12 18	4	43		1		2001	/5	1/9/	20	1593		1389	1
	11 16	j 4	40	1	1	1	1998	74	1794	20	1590	1	1386	1
	10 15	;					1995	73	1791	19	1587	1	1383	1
							1992	72	1788	18	1584	1	1380	1
							10.02	71	1725	19	15.01	1	1277	1
							1909	71	1785	10	1581		1377	
							1986	/1	1/82	1/	1578		1374	I
							1983	70	1779	17	1575	1	1371	1
							1980	69	1776	16	1572	1	1368	1
							1977	68	1773	16	1569	1	1365	1
							1074	67	1770	16	1566	1	1262	1
							1974	07	1770	10	1500	1	1002	1
							1971	66	1/6/	15	1563		1359	1
							1968	65	1764	14	1560	1	1356	1
							1965	65	1761	14	1557	1	1353	1
							1962	64	1758	13	1554	1	1350	1
							10502	62	1755	12	1554	1	12/7	1
							1959	03	1/00	13	1001		134/	
							1956	62	1752	12	1548	1	1344	1
							1953	61	1749	12	1545	1	1341	1
							1950	60	1746	12	1542	1	1338	1
							10.47	50	1742	11	1520	1	1225	1
							1947	59	1/43	11	1539		1335	1
							1944	58	1/40	11	1536		1332	1
							1941	57	1737	11	1533	1	1329	1
							1938	56	1734	10	1530	1	1326	1
							1935	55	1731	10	1527	1	1323	1
							1000	EE	1700	0	1527	1	1020	1
							1932	55	1/28	9	1524		1320	1
							1929	54	1725	q	1521			



#### PERCENTILE RANKS ON THE SSAT

	I Perce	entile	Scaled	SSA	T Perce	ntile	Scaled		Scaled		Scaled		Scaled	
V	0	R	Score	V	0	R	Score	%ile	Score	%ile	Score	%ile	Score	%ile
00	00	00	647	40	30	42	0.400	00	0175	00	1050	20	1705	4
00	00	00	644	40	21	42	2400	99	21/5	83	1950	38	1/25	4
98	96	99	644	38	31	40	2397	99	2172	83	1947	37	1722	4
98	95	99	641	36	29	38	2394	99	2169	82	1944	36	1719	4
98	95	99	638	35	28	36	2391	99	2166	82	1941	36	1716	4
97	94	99	635	33	26	34	2388	99	2163	81	1938	35	1713	3
97	93	99	632	32	25	33	2000	00	2160	01	1025	25	1710	2
00	00	00	002	02	2.5	00	2385	99	2100	01	1935	35	1/10	3
90	92	99	629	30	24	31	2382	99	2157	80	1932	34	1/0/	3
96	92	99	626	29	22	29	2379	99	2154	80	1929	33	1704	3
95	91	99	623	27	21	27	2376	99	2151	79	1926	33	1701	3
95	90	99	620	26	20	26	2373	00	2149	70	1023	30	1608	2
04	00	00	617	20	10	20	2373	99	2140	79	1923	32	1090	2
94	89	98	617	25	19	24	2370	99	2145	78	1920	32	1695	2
94	89	98	614	23	17	22	2367	99	2142	78	1917	31	1692	2
93	88	98	611	22	16	21	2364	99	2139	77	1914	30	1689	2
92	87	98	608	21	15	19	2261	00	2126	77	1011	30	1696	2
01	06	07	605	10	14	10	2001	00	2100	77	1000	00	1000	2
91	00	97	005	19	14	10	2358	99	2133	76	1908	29	1683	2
90	85	97	602	18	13	16	2355	99	2130	76	1905	29	1680	2
90	84	97	599	17	12	15	2352	99	2127	75	1902	28	1677	2
89	83	96	596	16	11	14	2349	99	2124	75	1899	27	1674	1
88	81	95	593	15	10	13	2246	00	2121	74	1006	27	1671	1
00	00	05	535	14	0	10	2340	99	2121	74	1090	27	10/1	1
8/	80	95	590	14	9	11	2343	99	2118	/3	1893	26	1668	1
86	79	95	587	13	8	10	2340	99	2115	73	1890	26	1665	1
85	78	94	584	12	8	9	2337	99	2112	72	1887	25	1662	1
84	77	94	581	11	7	8	2334	99	2109	72	1884	24	1659	1
02	75	04	570	10	6	0	2004	00	2109	72	1004	24	1059	1
02	/5	94	5/8	10	0	8	2331	98	2106	71	1881	24	1000	
81	74	92	575	9	6	7	2328	98	2103	71	1878	23	1653	1
80	73	92	572	8	5	6	2325	98	2100	70	1875	23	1650	1
78	71	89	569	7	4	5	2322	98	2097	69	1872	22	1647	1
. 0	70	20	566	6	4	5	2022	00	2007	60	10/2	22	1047	1
77	70	09	500	0	4	5	2319	98	2094	69	1869	22	1044	1
/6	69	87	563	6	3	4	2316	98	2091	68	1866	21	1641	1
75	67	85	560	5	3	4	2313	98	2088	67	1863	21	1638	1
73	66	84	557	5	3	3	2310	97	2085	67	1860	20	1635	1
72	64	81	554	1	2	3	2207	07	2082	66	1957	20	1632	1
72	04	00	554	-	2	0	2307	07	2002	00	1057	20	1002	1
/0	63	80	551	3	2	2	2304	97	2079	66	1854	19	1629	1
69	61	78	548	3	2	2	2301	97	2076	65	1851	19	1626	1
67	60	76	545	3	1	2	2298	97	2073	64	1848	19	1623	1
65	58	75	542	2	1	1	2295	96	2070	64	1845	18	1620	1
64	56	72	E20	2	1	1	2200	06	2067	62	10 / 0	17	1617	1
04	50	73	539	2			2292	90	2007	03	1042	17	1017	
62	55	/0	536	2			2289	96	2064	62	1838	17	1614	
61	53	68	533	1	1	1	2286	96	2061	62	1836	17	1611	1
59	51	66	530	1	1	1	2283	95	2058	61	1833	16	1608	1
58	50	64	527	1	1	1	2280	95	2055	60	1830	16	1605	1
50	40	04	527		1		2200	05	2000	00	1000	10	1000	1
50	48	03	524		1		2211	95	2052	00	1627	CI	1602	1
54	47	61	521	1	1	1	22/4	95	2049	59	1824	15	1599	
53	45	59	518	1	1	1	2271	94	2046	58	1821	14	1596	1
51	43	56	515	1	1	1	2268	94	2043	58	1818	14	1593	1
10	/1	54	512	1	1	1	2265	9/	2040	57	1815	13	1590	1
40	41	54	512	1	1	1	2200	04	2040	57	1010	10	1500	1
+8	40	52	509				2262	94	2037	5/	1812	13	1587	
16	38	50	506	1	1	1	2259	93	2034	56	1809	13	1584	1
5	37	48	503	1	1	1	2256	93	2031	55	1806	12	1581	1
13	35	46	500	1	1	1	2253	93	2028	55	1803	12	1578	1
/1	34	11					2250	93	2025	54	1800	11	1575	1
41	34	44					2230	00	2025	54	1707	11	1575	1
							2247	92	2022	53	1/9/	11	1572	
							2244	92	2019	53	1794	11	1569	1
							2241	92	2016	52	1791	10	1566	1
							2238	91	2013	51	1788	10	1563	1
							2235	91	2010	51	1785	10	1560	1
							2200	01	2010	EO	1700	0	1650	1
							2232	91	2007	50	1/8/	9	100/	1
							0000	00	0001	10	1702	0	100.0	
							2229	90	2004	49	1779	9	1554	1
							2229 2226	90 90	2004 2001	49 49	1779 1776	9 9	1554 1551	1
							2229 2226 2223	90 90 90	2004 2001 1998	49 49 48	1779 1776 1773	9 9 8	1554 1551 1548	1
							2229 2226 2223 2220	90 90 90 89	2004 2001 1998	49 49 48 47	1779 1776 1773	9 9 8 8	1554 1551 1548 1545	1 1 1 1
							2229 2226 2223 2220	90 90 90 89	2004 2001 1998 1995	49 49 48 47	1779 1776 1773 1770	9 9 8 8	1554 1551 1548 1545	1 1 1 1
							2229 2226 2223 2220 2217	90 90 90 89 89	2004 2001 1998 1995 1992	49 49 48 47 47	1779 1776 1773 1770 1767	9 9 8 8 8	1554 1551 1548 1545 1542	1 1 1 1
							2229 2226 2223 2220 2217 2214	90 90 90 89 89 89 89	2004 2001 1998 1995 1992 1989	49 49 48 47 47 47	1779 1776 1773 1770 1767 1764	9 9 8 8 8 8 7	1554 1551 1548 1545 1542 1539	1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211	90 90 90 89 89 89 89 89	2004 2001 1998 1995 1992 1989 1986	49 49 48 47 47 46 46	1779 1776 1773 1770 1767 1764 1761	9 9 8 8 8 7 7 7	1554 1551 1548 1545 1542 1539 1536	1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208	90 90 90 89 89 89 89 88 88	2004 2001 1998 1995 1992 1989 1986 1983	49 49 48 47 47 46 46 46 45	1779 1776 1773 1770 1767 1764 1761 1758	9 9 8 8 8 7 7 7 7	1554 1551 1548 1545 1542 1539 1536 1533	1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2208	90 90 90 89 89 89 88 88 88 88	2004 2001 1998 1995 1992 1989 1986 1983	49 49 48 47 47 46 46 46 45	1779 1776 1773 1770 1767 1764 1761 1758	9 9 8 8 8 7 7 7 7	1554 1551 1548 1545 1542 1539 1536 1533	1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2205	90 90 90 89 89 89 89 88 88 88 88 88	2004 2001 1998 1995 1992 1989 1986 1983 1980	49 49 48 47 47 46 46 46 45 44	1779 1776 1773 1770 1767 1764 1761 1758 1755	9 9 8 8 7 7 7 7 7 6	1554 1551 1548 1545 1542 1539 1536 1533 1533	1 1 1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2205 2202	90 90 99 89 89 89 88 88 88 88 88 88 87 87	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977	49 49 48 47 47 46 46 46 45 45 44 44	1779 1776 1773 1770 1767 1764 1761 1758 1755 1755	9 9 8 8 7 7 7 7 6 6	1554 1551 1548 1545 1542 1539 1536 1533 1533 1530 1527	1 1 1 1 1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2202 2202 2199	90 90 90 89 89 89 88 88 88 87 87 87	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974	49 49 48 47 47 46 46 46 45 44 44 43	1779 1776 1773 1770 1767 1764 1761 1758 1755 1755 1752 1749	9 9 8 8 8 7 7 7 7 6 6 6	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524	1 1 1 1 1 1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2205 2202 2199 2196	90 90 90 89 89 88 88 88 88 87 87 87 87 87 87	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974	49 49 48 47 47 46 46 46 45 44 44 43 42	1779 1776 1773 1770 1767 1764 1761 1768 1755 1755 1752 1749 1746	9 9 8 8 7 7 7 7 6 6 6 6	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524	1 1 1 1 1 1 1 1 1 1 1 1
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2205 2205 2202 2199 2196 2192	90 90 89 89 88 88 88 88 87 87 87 87 87	2004 2001 1998 1995 1992 1989 1986 1983 1986 1977 1974 1971	49 49 48 47 47 46 46 46 45 44 44 43 42	1779 1776 1773 1770 1767 1764 1761 1768 1765 1755 1755 1752 1749 1746	9 9 8 8 7 7 7 6 6 6 6 6 6	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1521 1521	
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2202 2199 2196 2193	90 90 89 89 89 88 88 88 87 87 87 87 87 87 86 86	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1977 1974	49 49 48 47 47 46 46 45 44 44 43 42 42 42	1779 1776 1773 1770 1767 1764 1761 1758 1755 1755 1752 1749 1746 1743	9 9 8 8 7 7 7 6 6 6 6 6 6 5	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1521 1518	
							2229 2226 2223 2217 2214 2211 2208 2208 2205 2202 2199 2196 2193 2190	90 90 89 89 88 88 88 88 87 87 87 87 87 87 87 86 86 86	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1971 1968 1965	49 49 48 47 47 46 46 45 45 44 44 43 42 42 42 41	1779 1776 1773 1770 1767 1764 1764 1761 1758 1755 1755 1752 1749 1746 1743 1740	9 9 8 8 7 7 7 6 6 6 6 6 5 5 5	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1521 1518 1515	
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2205 2205 2202 2199 2196 2193 2190 2187	90 90 89 89 88 88 88 88 87 87 87 87 86 86 86 85	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1977 1974 1971 1968 1965	49 49 48 47 47 46 46 45 44 43 42 42 42 42 41 40	1779 1776 1773 1770 1767 1764 1761 1768 1765 1755 1755 1755 1752 1749 1746 1743 1740 1737	9 9 8 8 7 7 7 7 6 6 6 6 6 5 5 5	1554 1551 1548 1545 1542 1539 1536 1533 1533 1530 1527 1524 1521 1518 1515 1512	
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2202 2199 2196 2193 2190 2187 2184	90 90 89 89 89 88 88 88 87 87 87 87 87 86 86 86 86 85 85	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1977 1974 1971 1968 1965 1965	49 49 48 47 47 46 46 45 44 44 43 42 42 42 41 40 40	1779 1776 1773 1770 1767 1764 1761 1758 1755 1752 1755 1752 1749 1746 1743 1740 1737	9 9 8 8 7 7 7 6 6 6 6 5 5 5 5 5 5	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1524 1521 1518 1515 1512 1512	
							2229 2226 2223 2217 2214 2211 2208 2205 2202 2199 2196 2193 2190 2187 2184	90 90 89 89 88 88 88 87 87 87 87 87 87 87 87 85 86 86 86 85 85	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1977 1974 1971 1968 1965 1965 1962	49 49 48 47 47 46 46 45 44 45 44 43 42 42 41 40 40 39	1779         1776         1773         1770         1767         1764         1755         1755         1755         1752         1749         1743         1740         1737         1734	9 9 8 8 7 7 7 6 6 6 6 6 5 5 5 5 5 5 5	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1521 1518 1515 1512 1509	
							2229 2226 2223 2220 2217 2214 2211 2208 2205 2202 2199 2196 2193 2196 2193 2190 2187 2184 2181 2181	90 90 90 89 89 88 88 87 87 87 87 87 86 86 86 85 85 85 85	2004 2001 1998 1995 1992 1989 1986 1983 1980 1977 1974 1977 1974 1977 1974 1977 1968 1965 1965	49 49 48 47 47 46 46 45 44 43 42 42 42 42 41 40 40 39	1779         1776         1773         1770         1767         1764         1761         1755         1752         1749         1746         1743         1731         1734         1731	9 9 8 8 7 7 7 6 6 6 6 6 5 5 5 5 5 5 5	1554 1551 1548 1545 1542 1539 1536 1533 1530 1527 1524 1521 1518 1515 1512 1512 1509 1506	



#### PERCENTILE RANKS ON THE SSAT

SSA	T Perce	entile	Scaled	SSA	T Perce	ntile	Scaled		Scaled		Scaled		Scaled	
V	0	R	Score	V	0	R	Score	%ile	Score	%ile	Score	%ile	Score	%ile
00	00	00	647	36	23	30	0.400	00	0175	77	1050	01	1705	0
33	00	00	047	05	20	00	2400	99	21/5	//	1950	31	1/25	3
96	93	99	644	35	22	36	2397	99	2172	76	1947	31	1722	3
96	91	99	641	34	21	35	2394	99	2169	76	1944	30	1719	3
95	90	99	638	32	20	33	2391	99	2166	75	1941	29	1716	2
95	89	98	635	31	18	30	2388	99	2163	75	1938	29	1713	2
91	88	98	632	30	17	29	2000	00	2100	70	1005	20	1710	2
00	00	07	002	00	17	23	2385	99	2100	74	1935	28	1/10	2
93	87	97	629	28	16	27	2382	99	2157	/3	1932	28	1/07	2
93	85	97	626	27	15	26	2379	99	2154	73	1929	27	1704	2
92	84	97	623	26	15	24	2376	99	2151	72	1926	26	1701	2
91	83	97	620	25	14	23	2373	00	2149	72	1023	26	1609	2
01	00	06	617	24	12	20	2373	33	2140	72	1925	20	1030	2
91	02	90	01/	24	13	21	2370	99	2145	/1	1920	25	1695	2
90	80	96	614	23	12	20	2367	99	2142	70	1917	25	1692	2
89	79	96	611	21	11	19	2364	99	2139	70	1914	24	1689	2
88	78	95	608	20	10	17	2361	98	2136	69	1911	24	1686	1
87	76	95	605	19	10	15	2358	98	2133	69	1908	23	1683	1
86	75	01	602	19	0	14	2000	00	2100	60	1005	20	1000	1
00	75	34	500	10	3	14	2300	98	2130	08	1905	23	1080	1
85	74	94	599	16	8	13	2352	98	2127	68	1902	22	1677	1
84	72	94	596	15	7	12	2349	98	2124	67	1899	22	1674	1
83	71	93	593	14	7	11	2346	97	2121	67	1896	21	1671	1
82	70	93	590	13	6	10	2343	97	2118	66	1893	21	1668	1
21	60	00	597	10	6	0	2040	07	2110	65	1000	20	1000	1
00	00	32	507	12	0	9	2340	97	2115	05	1890	20	1005	
80	66	91	584	11	5	8	2337	97	2112	65	1887	20	1662	1
79	65	91	581	10	5	7	2334	97	2109	64	1884	19	1659	1
78	63	91	578	10	4	7	2331	97	2106	64	1881	19	1656	1
77	62	89	575	9	4	6	2328	96	2103	63	1878	18	1653	1
75	60	20	570	9	3	5	2020	06	2100	62	1075	10	1650	1
75	50	00	5/2	0	3	5	2325	90	2100	03	18/5	10	1050	
74	59	86	569	/	3	5	2322	96	2097	62	1872	17	1647	1
73	58	84	566	6	3	4	2319	95	2094	61	1869	17	1644	1
71	56	83	563	6	2	3	2316	95	2091	61	1866	16	1641	1
70	55	81	560	5	2	3	2313	95	2088	60	1863	16	1638	1
60	52	00	557	5	2	2	2010	05	2000	50	1000	10	1000	1
00	55	80	557	5	2	3	2310	95	2085	59	1860	10	1035	1
67	52	//	554	4	2	2	2307	94	2082	59	1857	15	1632	1
66	51	75	551	4	1	2	2304	94	2079	58	1854	15	1629	1
64	49	73	548	3	1	1	2301	94	2076	58	1851	14	1626	1
63	47	71	545	3	1	1	2298	93	2073	57	1848	14	1623	1
61	46	60	540	2	1	1	2200	02	2070	EC	10.45	12	1620	1
01	40	03	542	2	1	1	2290	93	2070	50	1040	13	1020	1
60	44	67	539	2	1	1	2292	93	2067	50	1842	13	1017	1
58	42	65	536	2	1	1	2289	92	2064	55	1839	13	1614	1
56	41	63	533	1	1	1	2286	92	2061	54	1836	12	1611	1
55	40	61	530	1	1	1	2283	92	2058	54	1833	12	1608	1
53	30	50	527	1	1	1	2280	01	2055	53	1930	12	1605	1
55	20	55	527		1	1	2200	01	2000	50	1000	12	1000	1
51	38	5/	524		1	1	2277	91	2052	53	1827	11	1602	1
50	36	55	521	1	1	1	2274	91	2049	52	1824	11	1599	1
49	35	53	518	1	1	1	2271	90	2046	51	1821	10	1596	1
47	33	51	515	1	1	1	2268	90	2043	51	1818	10	1593	1
46	32	19	512	1	1	1	2265	90	2040	50	1815	10	1590	1
40	02	40	512		1	1	2200	00	2040	10	1010	10	1500	
44	30	48	509				2262	89	2037	49	1812	10	1587	1
42	28	46	506	1	1		2259	89	2034	49	1809	9	1584	1
41	27	44	503	1	1	1	2256	88	2031	48	1806	9	1581	1
39	26	42	500	1	1	1	2253	88	2028	48	1803	9	1578	1
38	24	40					2250	88	2025	47	1800	9	1575	1
50	24	40					2230	07	2023	46	1707	0	1573	1
							2247	87	2022	40	1/9/	0	1572	
							2244	87	2019	46	1/94	8	1569	1
							2241	87	2016	45	1791	8	1566	1
							2238	86	2013	45	1788	7	1563	1
							2235	86	2010	44	1785	7	1560	1
							2200	95	2007	43	1790	7	1557	1
							2232	00	2007	45	1782	7	1557	1
							2229	85	2004	42	1//9	/	1554	1
							2226	85	2001	42	1776	6	1551	1
							2223	84	1998	41	1773	6	1548	1
							2220	84	1995	40	1770	6	1545	1
							2217	84	1002	40	1767	5	15/12	1
							221/	07	1000	20	176.4	5	1520	1
							2214	03	1989	39	1/04	5	1539	
							2211	83	1986	38	1761	5	1536	1
							2208	82	1983	38	1758	5	1533	1
							2205	82	1980	37	1755	5	1530	1
							2200	82	1977	36	1752	1	1527	1
							2202	02	1077	30	17.52	4	1527	1
							2199	81	1974	30	1/49	4	1524	
							2196	81	1971	36	1746	4	1521	1
							2193	80	1968	35	1743	4	1518	1
							2190	80	1965	34	1740	4	1515	1
							2197	79	1962	33	1727	1	1512	1
							2107	75	1002	00	1737	4	1512	1
							2184	79	1959	33	1/34	3	1509	
							2181	78	1956	32	1731	3	1506	1
							2178	78	1953	31	1728	3	1503	1
													1500	1



#### PERCENTILE RANKS ON THE SSAT

SSA	l Perce	entile	Scaled	SSA	T Percer	ntile	Scaled		Scaled		Scaled		Scaled	
V	0	R	Score	V	0	R	Score	%ile	Score	%ile	Score	%ile	Score	%ile
00			0.47		00	07	50010		30010		Score		Jeone	
99	99	99	64/	38	20	37	2400	99	2175	79	1950	29	1725	2
98	95	99	644	36	19	35	2397	99	2172	79	1947	28	1722	2
97	94	99	641	35	18	33	2394	99	2169	78	1944	27	1719	2
97	93	99	638	34	17	30	2391	99	2166	78	1941	27	1716	2
97	92	99	635	32	16	28	2388	99	2163	77	1938	26	1713	2
96	Q1	90	632	30	14	27	2000	00	2100	77	10.35	25	1710	2
0.0	00	00	600	00	14	27	2365	99	2100	77	1935	25	1710	2
90	90	98	629	29	14	25	2382	99	2157	/6	1932	25	1/07	2
96	88	98	626	27	13	23	2379	99	2154	75	1929	24	1704	2
95	87	98	623	26	12	22	2376	99	2151	75	1926	24	1701	2
94	85	97	620	24	11	20	2373	99	2148	74	1923	23	1698	1
9/	84	97	617	23	10	18	2070	00	2140	74	1020	20	1000	1
00	07	07	017	20	10	17	2370	99	2145	74	1920	23	1095	
93	83	97	614	22	10	17	2367	99	2142	/3	1917	22	1692	1
92	82	96	611	21	9	16	2364	99	2139	73	1914	22	1689	1
91	80	96	608	20	8	15	2361	99	2136	72	1911	21	1686	1
90	79	96	605	18	7	14	2358	99	2133	72	1908	21	1683	1
89	77	95	602	17	7	13	2355	99	2130	71	1905	20	1680	1
00	76	05	500	16	7	11	2000	00	2100	70	1000	20	1000	1
00	70	90	599	10	/	11	2352	99	2127	70	1902	20	1677	
87	74	94	596	15	0	11	2349	98	2124	/0	1899	19	1674	1
86	72	94	593	14	6	9	2346	98	2121	69	1896	19	1671	1
85	71	93	590	13	5	9	2343	98	2118	68	1893	18	1668	1
84	69	93	587	12	5	8	2340	98	2115	68	1890	18	1665	1
82	68	92	584	11	5	7	2337	98	2110	68	1887	18	1662	i
02	66	02	504	10	0	6	2007	00	2112	00	1007	10	1002	1
02	00	92	581	10	4	0	2334	98	2109	6/	1884	17	1659	1
81	64	91	578	9	4	6	2331	98	2106	66	1881	17	1656	1
80	63	90	575	8	3	5	2328	97	2103	65	1878	16	1653	1
78	61	88	572	8	3	4	2325	97	2100	64	1875	16	1650	1
77	59	85	569	7	3	4	2320	97	2007	63	1870	15	1647	1
76	53	0.0	505	6	2	3	2022	07	2097	63	10/2	14	16.4.4	1
70	57	84	000	0	3	3	2319	9/	2094	63	1869	14	1044	1
/4	56	82	563	6	2	3	2316	96	2091	62	1866	14	1641	1
73	54	79	560	6	2	2	2313	96	2088	62	1863	14	1638	1
72	52	78	557	5	1	2	2310	96	2085	61	1860	13	1635	1
71	51	77	554	5	1	2	2307	96	2082	60	1857	13	1632	1
60	10	75	551	1	1	2	2304	96	2070	59	1854	13	1629	i
67	49	75	501	4	1	2	2004	50	2079	50	1054	10	1029	1
0/	46	12	548	4			2301	95	2076	59	1851	12	1626	1
66	45	71	545	3	1	1	2298	95	2073	58	1848	12	1623	1
64	42	69	542	3	1	1	2295	95	2070	57	1845	12	1620	1
63	41	67	539	3	1	1	2292	95	2067	57	1842	12	1617	1
61	30	64	536	2	1	1	2280	95	2064	56	1830	11	1614	1
50	27	60	500	2	1	1	2209	0.4	2004	55	1039	11	1611	1
29	37	02	533	2			2260	94	2001	55	1836	11	1011	1
58	36	60	530	2	1	1	2283	94	2058	54	1833	10	1608	1
57	34	58	527	1	1	1	2280	94	2055	53	1830	10	1605	1
55	33	56	524	1	1	1	2277	94	2052	53	1827	9	1602	1
53	31	54	521	1	1	1	2274	93	2049	52	1824	9	1599	1
51	30	52	519	1	1	1	2271	03	2046	51	1821	9	1596	1
50	30	52	510		1		22/1	00	2040	51	1021	0	1500	1
50	28	49	515				2268	93	2043	51	1818	8	1593	1
49	27	48	512	1	1	1	2265	92	2040	50	1815	8	1590	1
47	26	46	509	1	1	1	2262	92	2037	49	1812	8	1587	1
45	25	44	506	1	1	1	2259	91	2034	48	1809	8	1584	1
43	24	42	503	1	1	1	2256	91	2031	48	1806	7	1581	1
10	24	42	503		1		2230	01	2031	40	1000	7	1501	,
42	23	41	500				2203	91	2028	4/	1803	/	1578	
40	21	38					2250	90	2025	46	1800	6	1575	1
							2247	90	2022	46	1797	6	1572	1
							2244	89	2019	45	1794	6	1569	1
							2241	89	2016	44	1791	6	1566	1
							2238	89	2013	43	1788	5	1563	1
							2230	80	2010	43	1705	5	1560	1
							2235	00	2010	43	1785	5	1500	1
							2232	88	2007	42	1/82	5	1557	1
							2229	87	2004	41	1779	5	1554	1
							2226	87	2001	41	1776	5	1551	1
							2223	86	1998	40	1773	5	1548	1
							2220	86	1995	39	1770	4	1545	1
							2220	95	1000	20	1767	4	1540	1
							221/	85	1992	38	1/6/	4	1542	
							2214	85	1989	37	1/64	4	1539	
							2211	84	1986	37	1761	4	1536	1
							2208	84	1983	36	1758	4	1533	1
							2205	83	1980	36	1755	4	1530	1
							2200	03	1000	25	1750	-	1500	1
							2202	83	1977	35	1/52	3	1027	1
							2199	83	1974	35	1/49	3	1524	
							2196	83	1971	34	1746	3	1521	1
							2193	82	1968	33	1743	3	1518	1
							2190	82	1965	32	1740	3	1515	1
							2100	91	1060	31	1727	3	1510	1
							2107	01	1902	31	1737	3	1512	1
							2184	81	1959	31	1/34	3	1509	
							2181	80	1956	30	1731	3	1506	1
							2178	80	1953	29	1728	2	1503	1
													1000	



#### PERCENTILE RANKS ON THE SSAT

Q         Q           9         94           9         94           9         94           9         94           9         94           9         94           9         94           9         94           9         94           9         94           9         95           9         93           9         94           9         93           9         94           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93           9         93	Q 99 98 97 995 95 95 93 992 91 90 88 87 86 88 87 86 88 87 79 72 70 65 62 55 7 74 77 70 66 62 55 55 55 55 55 52 55 52 55 52 52 52 53 33 31 29 29 29 29 29 20 33 33 31 29 22 22 22 22 22 22 22 22 22 22 22 22
9       99         9       99         9       96         99       95         99       95         99       95         99       95         99       95         99       95         99       92         99       93         99       94         99       95         92       93         93       94         94       95         95       95         97       84         83       85         77       84         84       74         95       76         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95         90       95	99 98 97 96 95 95 95 92 91 90 88 87 86 84 81 87 86 84 81 87 70 70 65 57 54 55 55 55 55 55 55 52 55 50 49 47 44 33 31 29 29 29 22 22 22 24 22
9       9         9       5         9       9         9       9         9       9         9       9         9       9         9       9         9       9         9       9         9	98 97 96 95 95 93 92 91 90 88 87 97 88 88 87 90 88 87 86 88 87 90 88 87 76 77 70 70 65 65 57 54 55 55 55 55 55 52 55 50 49 33 33 33 33 33 33 33 33 33 33 33 33 33
9     94       9     97       9     97       9     97       9     97       9     97       9     97       9     97       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       8     88       8     88       8     86       8     86       8     86       8     86       9     97       9     97       9     97       9     97       9     97       9     97       9     97       9     97       9     93       9     37       9     37       9     37       9     37       9     37       9     37       9     37       9     37       9     37       9     37       8     94       1 <td>98 97 995 995 995 993 992 91 90 88 87 86 88 88 88 88 88 88 88 79 67 65 52 52 50 97 77 77 70 66 55 52 55 52 55 52 55 52 52 52 52 52 52</td>	98 97 995 995 995 993 992 91 90 88 87 86 88 88 88 88 88 88 88 79 67 65 52 52 50 97 77 77 70 66 55 52 55 52 55 52 55 52 52 52 52 52 52
9       97         9       96         9       95         9       95         9       95         9       95         9       95         9       95         9       95         9       95         9       95         9       95         9       97         83       83         83       83         7       84         65       80         65       76         65       76         66       79         65       76         7       84         65       55         7       56         7       56         7       56         7       56         7       56         7       56         7       56         7       56         7       56         7       56         7       56         7       53         54       44         53       32         34	97 96 95 95 93 92 99 90 88 87 86 84 81 80 76 74 87 70 70 65 65 57 54 55 55 55 55 55 52 55 50 49 47 43 31 29 29 29 20 22 22 22 24 22
9       96         9       96         9       95         9	96 95 95 93 92 91 90 88 87 78 88 88 87 79 70 70 69 67 65 62 59 57 54 52 55 57 54 52 55 50 49 47 43 33 31 29 22 6 22 24 22
9       95         9       95         9       95         9       92         9       93         9       93         9	95 95 93 92 91 90 88 87 86 84 81 80 79 76 67 67 65 57 54 55 52 50 49 47 43 41 40 37 36 29 29 22 52 24 22 25 24 22
3       3         3       9         9       9         9       9         9       9         9       9         9       9         9       9         8       86         7       84         6       86         7       84         6       80         6       75         7       84         6       80         6       75         7       50         5       55         3       54         1       52         5       55         3       54         1       52         5       55         3       54         1       52         5       35         3       43         4       45         5       35         5       35         6       34         3       43         4       29         5       35         3       43         4       38	95 93 92 91 90 88 87 86 88 88 88 88 88 88 88 88 88 88 88 88
9     9       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     93       9     7       84     74       44     73       22     72       7     56       7     55       55     57       9     50       33     54       9     37       8     43       1     44       9     37       8     36       6     34       9     37       8     36       6     34       9     37       8     36       6     34       9     37       8     36       6     34       9     37       8     36       9<	93 93 92 91 90 88 87 86 84 81 80 79 76 86 84 81 80 79 76 67 65 57 57 52 55 50 93 91 90 88 87 86 84 81 80 79 76 67 65 55 55 55 55 52 55 52 55 52 52 52 52 52
9       93         90       91         91       91         92       92         93       90         83       88         84       88         83       87         7       86         65       80         65       80         65       70         66       80         65       79         65       70         65       70         65       70         65       55         7       55         7       55         7       55         7       55         7       55         7       55         7       55         7       56         7       56         7       56         7       56         8       49         9       50         53       34         41       29         53       33         44       32         1       29         37       33	93 92 99 90 88 87 86 84 81 80 76 74 86 84 81 80 77 70 70 65 65 57 54 55 55 55 55 55 55 52 55 50 49 47 43 41 40 337 36 33 31 29 22 6 25 22 24 22
9       92         9       92         9       93         83       96         84       86         85       86         86       86         86       86         86       86         86       86         86       86         86       86         86       86         86       86         86       87         90       70         90       66         38       62         91       50         93       36         64       43         10       44         93       37         38       66         34       29         37       38         38       36         34       29         37       38         38       24         93       37         38       24         39       32         32       22         36       24         38       24         38       26	92 91 90 88 87 86 88 87 86 88 87 74 77 70 70 69 67 65 62 59 57 54 52 55 55 49 47 45 43 31 29 29 20 22 24 22
9       9       9         9       9       9         83       83         84       83         7       84         7       84         7       84         5       76         4       73         2       72         1       70         0       66         0       66         0       67         55       55         55       55         55       55         55       55         3       42         9       50         50       52         9       50         50       52         9       50         50       52         9       50         50       33         44       48         4       48         3       42         9       37         8       36         5       33         44       28         9       37         8       36         5       32	9] 90 88 87 86 84 81 80 79 76 67 67 67 67 67 67 67 67 67 67 67 65 52 55 52 55 52 55 52 50 49 47 43 41 40 33 31 29 22 6 25 22 4 22
5       5         8       90         8       90         8       86         7       84         6       86         7       84         6       76         4       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       72         7       50         5       55         8       66         7       52         9       50         5       55         3       43         4       45         3       43         4       32         4       32         5       33         44       29         33       32         32 <t< td=""><td>90 88 87 86 88 87 79 76 74 73 70 70 69 67 64 52 55 55 55 55 55 55 55 55 55</td></t<>	90 88 87 86 88 87 79 76 74 73 70 70 69 67 64 52 55 55 55 55 55 55 55 55 55
3       90         3       90         8       8         8       8         8       8         7       86         7       86         8       8         6       8         6       8         6       8         6       8         6       8         6       8         6       8         6       7         9       7         9       5         5       5         5       5         6       8         8       6         8       6         8       6         8       6         7       55         5       5         7       55         5       5         8       4         8       4         8       3         9       3         7       5         8       3         8       3         9       3         3       4	90 88 87 87 86 84 81 80 79 76 74 73 72 70 70 69 67 65 52 55 75 54 55 25 50 49 47 445 43 41 40 39 37 36 33 31 29 22 62 54 22
8       88         8       88         7       86         6       89         6       80         6       70         6       80         6       80         6       79         6       80         6       79         6       79         7       84         6       80         6       79         5       70         6       90         6       50         5       55         5       55         6       44         7       54         9       50         5       55         3       43         4       44         5       33         4       44         5       33         4       43         5       33         44       38         36       34         37       38         38       36         5       33         44       32         5	88 87 88 88 80 79 76 77 70 70 69 65 59 57 54 52 55 62 49 47 43 41 40 337 36 33 31 29 26 25 22 42 22
8       87         8       87         8       86         8       86         8       86         8       86         8       86         8       86         8       86         8       86         8       80         5       76         9       50         9       50         9       50         9       37         8       49         5       55         3       54         4       45         3       54         3       54         5       37         8       42         9       37         8       36         5       33         4       33         34       29         32       22         33       24         33       24         33       24         33       24         35       24         33       24         33       24         34	$\begin{array}{c} 87\\ 86\\ 84\\ 80\\ 79\\ 76\\ 77\\ 77\\ 70\\ 69\\ 67\\ 65\\ 59\\ 57\\ 54\\ 55\\ 55\\ 55\\ 55\\ 55\\ 55\\ 55\\ 55\\ 55$
7       86         7       86         7       86         8       86         8       86         8       86         8       86         8       86         8       86         9       76         9       55         55       55         55       55         55       55         55       55         55       55         55       55         55       55         55       55         55       55         56       57         83       42         94       45         95       37         88       36         36       34         41       48         99       37         88       36         34       28         90       26         36       32         36       24         37       38         38       36         39       37         36       32	86 88 84 81 80 77 70 70 67 65 57 77 70 69 67 65 57 54 52 55 57 54 55 55 55 57 54 43 41 40 37 37 36 33 31 29 26 25 24 22
7       86         7       84         6       86         86       86         86       86         86       87         55       76         4       73         22       72         1       70         00       65         38       65         35       55         33       54         1       52         33       54         1       52         33       54         1       52         33       54         1       52         34       42         90       56         36       44         44       42         90       33         38       36         66       34         33       24         33       24         33       25         32       26         32       22         33       25         32       22         33       25         32       25	864 81 80 79 76 74 77 70 70 69 67 65 62 59 57 54 52 55 54 52 55 54 49 47 45 43 31 29 29 20 25 24 22
7       84         7       84         6       86         6       86         6       86         6       86         6       86         7       55         7       55         7       55         5       57         8       65         5       57         3       54         1       52         0       52         3       54         3       43         43       43         44       48         3       43         5       57         5       33         44       48         3       43         5       33         44       48         3       34         41       29         32       24         34       33         44       29         34       24         35       33         44       29         32       24         34       33         44 </td <td>84 81 80 79 76 77 72 70 69 67 65 52 50 49 47 45 52 50 49 70 67 65 52 52 50 49 47 43 33 31 29 26 25 22 24 22</td>	84 81 80 79 76 77 72 70 69 67 65 52 50 49 47 45 52 50 49 70 67 65 52 52 50 49 47 43 33 31 29 26 25 22 24 22
65       86         86       80         65       79         65       76         44       73         2       72         1       70         00       69         55       55         56       55         56       55         57       56         58       54         1       52         90       50         38       49         50       33         44       45         36       34         37       36         38       36         37       33         38       36         37       33         38       36         37       33         38       36         39       37         38       26         38       24         38       24         38       24         38       24         38       25         20       26         26       24         38       25	81 80 79 76 77 70 69 65 52 55 55 55 55 55 55 55 55 55 55 52 55 50 49 47 43 31 29 26 25 24 22
6       80         6       80         6       79         5       76         7       74         4       74         4       74         4       74         4       74         4       74         4       74         4       74         4       74         5       57         5       57         5       57         3       54         5       50         5       50         3       54         5       57         3       54         5       50         5       50         5       57         3       43         5       33         4       43         5       33         4       33         5       33         4       34         2       26         3       24         3       25         3       24         3       24         3	80 79 76 74 73 72 70 69 67 65 65 55 55 55 55 55 55 55 55 55 55 55
6       79         5       76         4       72         1       70         5       55         5       55         5       55         5       55         5       55         5       55         3       52         3       52         3       43         4       48         3       43         4       48         3       43         4       48         3       43         5       35         3       33         4       48         3       42         5       33         4       48         3       42         5       33         4       28         5       33         4       29         3       34         4       29         3       34         4       29         5       33         4       29         5       32         5	79 79 76 74 72 70 69 67 65 59 55 55 55 55 55 55 55 55 55 55 55 52 55 55
5       78         5       76         74       72         72       72         1       70         0       70         0       65         3       64         7       55         5       57         5       57         5       57         5       57         3       54         1       52         5       57         3       54         3       54         3       44         44       45         3       43         4       43         4       33         3       44         29       33         38       36         66       34         3       26         3       26         3       25         32       26         32       26         32       25         24       25         25       22	79 76 74 73 72 70 70 69 65 65 59 57 54 52 52 52 52 52 52 52 54 43 30 33 33 33 33 33 33 33 33 29 26 25 22 22
5       76         7       5         7       70         7       55         5       57         5       57         5       57         5       57         5       57         5       57         3       54         3       43         5       47         4       48         3       43         5       47         4       48         3       43         5       37         5       55         5       57         8       42         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       37         9       3	76 74 73 72 70 69 67 65 59 57 54 43 41 40 39 37 36 33 31 29 26 25 24 22
4       74         44       74         72       72         1       70         00       65         38       62         7       55         55       57         3       54         1       52         9       56         34       33         34       33         35       34         36       36         37       38         38       36         34       33         35       33         44       49         37       38         38       36         34       33         34       33         34       33         35       36         36       36         37       38         38       26         39       26         20       26         21       22         38       24         38       25         38       26         24       25         25       22 <td>74 73 72 70 70 69 65 62 59 55 55 55 55 55 55 40 49 47 45 43 41 40 39 37 36 33 33 33 33 33 33 29 22 6 25 22 24 22</td>	74 73 72 70 70 69 65 62 59 55 55 55 55 55 55 40 49 47 45 43 41 40 39 37 36 33 33 33 33 33 33 29 22 6 25 22 24 22
4       73         2       72         1       70         0       72         1       70         0       65         0       65         5       57         3       54         0       50         5       57         3       54         0       40         0       38         3       43         4       45         3       37         3       36         5       33         4       44         0       40         0       38         39       37         38       36         5       33         44       29         39       37         38       36         5       33         44       29         34       31         44       29         0       20         20       20         25       22         36       24         5       25         30 <td>73 72 70 69 67 65 59 57 54 45 52 55 52 55 52 55 52 55 52 49 47 45 43 41 40 337 36 33 33 31 29 22 6 25 22 22 22</td>	73 72 70 69 67 65 59 57 54 45 52 55 52 55 52 55 52 55 52 49 47 45 43 41 40 337 36 33 33 31 29 22 6 25 22 22 22
13       13         2       72         1       70         0       68         0       65         3       63         5       55         3       54         1       52         9       50         8       49         5       37         8       3         1       41         0       39         3       43         1       41         0       39         3       43         1       44         4       45         3       43         1       44         2       36         3       33         44       45         3       43         3       43         36       34         33       44         2       2         6       34         3       33         44       2         5       33         44       2         5       33         44       <	72 70 70 69 65 59 55 55 55 55 55 55 55 55 55 55 40 49 47 43 37 36 33 33 31 29 26 25 22 24 22
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1       70         0       70         0       65         0       65         3       65         5       55         3       54         1       52         2       50         3       42         3       43         4       48         3       42         3       33         4       48         3       42         3       33         4       48         3       42         5       33         4       48         3       42         5       33         4       48         3       34         3       34         3       34         3       25         3       25         3       25         3       25         3       25         3       25         3       25         3       25         3       25         3       25         3	70 70 69 65 55 55 55 55 55 55 55 55 55 55 55 55
0       70         0       60         0       65         3       64         7       55         5       57         3       54         1       52         3       54         3       54         4       43         4       43         4       43         3       36         66       34         5       33         44       29         3       36         66       34         5       33         44       29         1       20         20       20         38       36         66       34         3       32         1       29         3       20         20       20         38       22         5       24         38       25         32       22         5       24         5       24         5       24         5       24         5	70 69 67 65 55 52 52 52 52 52 43 47 45 43 39 37 36 33 31 29 26 25 24 22 22
1       4         2       4         3       43         4       48         3       43         4       48         3       43         4       48         3       43         4       48         3       43         4       48         5       37         5       37         5       37         5       37         5       37         5       37         5       33         4       48         3       42         5       33         34       38         36       34         31       4         29       37         38       36         34       31         4       29         0       20         26       24         5       22         6       24         5       22	69 67 65 59 57 54 45 52 55 50 49 47 45 43 41 40 37 36 33 31 29 26 25 24 22
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D       67         S       66         S       67         S       55         S       54         D       52         D       50         S       43         4       45         D       36         D       36         D       36         D       36         S       37         S       36         S       37         S       36         S       37         S       36         S       37         S       37         S       38         S       33         44       29         D       20         D       20         S       25         S       25         S       25         S       25         S <td< td=""><td>67 65 59 57 54 52 55 50 49 47 45 43 41 40 39 37 36 33 31 29 26 25 24 22</td></td<>	67 65 59 57 54 52 55 50 49 47 45 43 41 40 39 37 36 33 31 29 26 25 24 22
B       65         B       62         7       55         55       57         3       54         1       52         5       57         3       54         1       52         3       44         4       48         1       41         0       40         0       39         35       36         4       29         37       38         38       36         34       29         35       33         44       29         37       33         44       29         37       33         44       29         36       36         37       43         38       36         39       37         44       29         34       29         35       24         36       24         37       25         20       20         26       24         36       24	65 62 59 57 54 52 52 55 50 49 47 43 41 40 337 36 333 31 29 26 25 24 22
3       62         7       58         5       57         3       54         1       52         9       50         3       44         4       49         3       43         1       44         0       400         0       37         3       36         66       34         5       33         44       39         3       42         9       37         3       36         66       34         5       33         44       32         1       29         3       20         3       36         66       34         5       33         44       32         1       29         3       20         3       20         3       22         3       24         3       24         3       24         3       24         3       24         3	62 59 57 52 52 52 50 49 47 45 43 39 37 36 33 31 32 9 26 25 24 22 22
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7       58         5       57         3       54         1       52         3       54         1       52         3       54         3       54         3       44         44       48         3       43         1       41         0       400         0       33         3       36         66       34         5       33         44       29         1       200         200       200         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220         3       220	59 57 54 52 52 50 49 47 45 43 41 40 39 37 36 33 41 40 39 37 36 33 41 29 26 25 24 22 22
5       57         3       54         9       50         9       50         3       43         6       47         4       48         3       43         1       40         0       38         99       37         83       36         65       34         5       33         44       29         99       37         83       36         65       34         55       33         34       29         0       20         0       20         26       22         66       24         5       22	57 54 52 55 50 49 47 45 43 41 40 39 37 36 33 33 31 29 26 25 24 22
3       54         1       52         0       52         9       56         3       43         1       41         0       36         3       43         1       41         0       36         3       43         1       41         0       39         3       36         36       34         38       366         34       31         44       31         42       29         1       29         1       29         1       29         1       29         1       29         1       29         1       29         1       29         1       29         2       2         3       29         3       29         3       29         3       29         3       29         3       29         3       29         3       29         3	54 52 55 49 47 45 43 41 40 39 37 36 34 33 33 33 33 33 29 22 6 25 24 22
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32         33       43         34       48         35       47         44       48         33       43         1       44         48       3         10       40         00       38         36       34         37       37         38       36         35       33         44       28         1       29         00       26         36       24         31       25         32       25         34       28         34       28         35       22         36       24         36       24         36       24         37       25         38       26         39       25         30       25         30       25         31       24         32       25         33       24         34       33         35       24         36       24         3	52 55 50 49 47 45 43 41 40 39 37 36 34 33 37 36 34 33 31 29 29 26 25 24 22
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9       50         8       49         6       44         4       45         3       43         1       4         0       40         0       39         37       37         38       36         65       34         5       33         4       29         1       29         0       20         20       20         28       25         25       22	50 49 47 45 43 41 40 39 37 36 34 33 37 29 29 26 25 24 22
3       49         4       49         3       43         4       49         3       43         1       41         40       39         35       36         36       34         35       35         35       35         44       39         35       35         44       31         29       35         35       35         44       31         29       35         36       34         31       29         35       35         36       34         37       29         38       26         00       26         26       24         36       24         37       29         38       29         39       29         39       35         30       29         31       29         32       29         33       24         34       29         35       29      <	49 47 45 43 41 40 39 37 36 34 33 33 31 29 29 26 25 22 4 22
3     43       4     48       3     43       1     41       0     40       0     39       3     36       6     34       5     33       4     29       1     29       20     20       20     20       20     20       20     20       25     22	47 45 43 41 40 39 37 36 34 33 33 33 31 29 29 26 25 24 22
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4       45         3       43         1       44         0       40         0       37         3       36         66       34         5       33         4       33         4       29         1       290         20       26         3       26         2       20         26       24	45 43 41 40 39 37 36 34 33 31 29 29 29 26 25 24 22
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4     4       0     44       0     39       33     36       6     34       34     31       4     29       1     29       0     29       38     29       6     24       5     33       4     31       4     29       0     29       38     29       5     22	40 39 37 36 34 33 31 29 29 26 25 24 22
40 0 35 3 37 3 36 3 37 3 37 3 36 4 37 4 29 1 29 0 20 3 25 6 24 5 22	40 39 37 36 34 33 31 29 29 26 25 24 22
0     389       38     366       4     31       4     29       1     29       0     26       33     25       66     24	<ol> <li>39</li> <li>37</li> <li>36</li> <li>34</li> <li>33</li> <li>31</li> <li>29</li> <li>29</li> <li>26</li> <li>25</li> <li>24</li> <li>22</li> </ol>
9     37       8     36       5     33       5     33       4     31       4     29       1     29       0     26       8     25       25     22	37 36 34 33 31 29 29 26 25 24 22
3       36         5       33         4       33         4       29         0       29         0       20         3       25         6       24         5       23         5       24	36 34 33 31 29 29 26 25 24 22
30     30       31     34       32     31       4     29       1     29       0     20       33     25       63     24       5     22	34 33 31 29 29 26 25 24 22
34     33       4     31       4     29       1     290       26     246       38     25       26     242	34 33 31 29 26 25 24 22
5       33         5       33         4       31         4       29         1       29         0       26         8       25         65       22	33 31 29 29 26 25 24 22
4     31       4     29       1     29       0     26       8     25       6     24       5     22	31 29 29 26 25 24 22
1     29       1     29       2     20       3     25       5     22	29 29 26 25 24 22
1 29 0 20 8 25 5 22	29 29 26 25 24 22
290 200 B 255 22	29 26 25 24 22
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2       2       2       2       2       2       2       2       2       2       2       2	24 22
5 22	22
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### **Appendix B:**

#### **SSAT Means and Standard Deviations**

The means and standard deviations on the following table are based on first-time test takers who tested at a United States or Canadian Standard administration of the Secondary School Admission Test from August 1, 2019, through July 31, 2023. If a student tested multiple times, only the first test scores were used to calculate the means. They are not representative of students in general throughout the country, nor are they representative of all students enrolled in independent schools. EMA now provides only scores based on mixed gender scores.



#### MEANS AND STANDARD DEVIATIONS ON THE SSAT

Based on United States and Canadian First Time Test Takers August 2019-July 2023

Verbal	Middle			Upper			
Grade	05	06	07	08	09	10	11
Total Test Takers	6283	4847	3579	30185	5070	1771	382
Mean Scaled Score	603	624	636	667	674	670	650
Standard Deviation	46	47	47	65	69	66	59

Quantitative	Middle			Upper			
Grade	05	06	07	08	09	10	11
Total Test Takers	6283	4847	3579	30185	5070	1771	382
Mean Scaled Score	603	627	641	682	701	704	698
Standard Deviation	46	46	45	66	67	62	62

Reading	Middle			Upper			
Grade	05	06	07	08	09	10	11
Total Test Takers	6283	4847	3579	30185	5070	1771	382
Mean Scaled Score	597	616	630	659	666	668	651
Standard Deviation	46	48	48	53	56	54	51

Total	Middle			Upper			
Grade	05	06	07	08	09	10	11
Total Test Takers	6283	4847	3579	30185	5070	1771	382
Mean Scaled Score	1803	1867	1907	2008	2041	2041	1999
Standard Deviation	123	126	123	163	168	156	147



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