

The SAT is going all-digital starting with the US class of 2025 (and the international class of 2024)! Here's our latest intel on what the new computer-based test will look like (we call it the dSAT):

- 1) The dSAT is *adaptive*<sup>1</sup> with these special features and tools:
  - Built-in on-screen Desmos graphing calculator (you can still use your own calculator)
  - Timer at top of screen helps with time management (hide it if you like) – with an alert when time is almost up
  - Easy movement between questions
  - Math reference formulas accessible any time
  - An annotation & highlighting tool (or use scrap paper)
  - An answer choice elimination tool
  - A mark-for-review feature
  - Ability to zoom in and out on figures/graphs
- 2) Shorter test: just over two hours:
  - Long reading passages are gone!
  - Questions more concise, straightforward
  - More time per question
  - Fewer questions
  - Calculator allowed for all math questions
  - Scores available in days, not weeks!

Timeline for Administering the Digital SAT Suite

International SAT SAT Related Assessments

Spring 2023

Fall 2023

Spring 2024

Digital Paper and Pencil

All tests within the dSAT Suite – SAT, PSAT/NMSQT, PSAT 10, and PSAT 8/9 – have similar designs, with appropriate allowances for differences in students' age and attainment across grades.

#### **Timeline**

The dSAT debuts outside of the U.S. in March 2023. Its first U.S. appearances will be the October 2023 PSAT followed by the March 2024 SAT. Scores for this first dPSAT will be available in early November for tests submitted by October 14 and in mid-November for test submitted later in October. The class of 2025 will be the first U.S. cohort to prepare for the new test. Nearly all students in the U.S. class of 2024 will have completed college admission testing before the new digital SAT becomes standard.

#### **Adaptive Format**

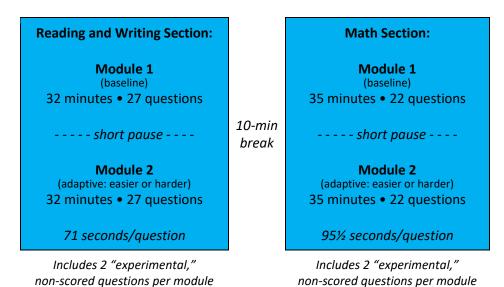
"Adaptive," in general, means that the order of questions or sections is dynamic, adjusting to the test-taker's performance on previous questions (see footnote). Because the dSAT is "Section Adaptive" as opposed to "Question Adaptive," performance on the first "stage" (or module) of a section determines the difficulty level of the second "stage." We use the terms "stage" and "module" interchangeably. There are two Reading and Writing modules followed by two Math modules. Your neighbor's screen for any module may have completely different questions than yours! Everyone's first module spans the same range of question difficulty. At the end of the first module, you'll be presented with a second module of the appropriate level of difficulty based on your performance on the first module. There is more than one version of module 1, allowing students to start the SAT at different times, and there are two different versions of module 2 that could follow your first module: a harder one and an easier one.

<sup>&</sup>lt;sup>1</sup> Adaptive testing, officially known as Computerized Adaptive Testing (or CAT for short) is the latest development in test administration. Question difficulty adapts to the responses of the test-taker, getting harder or easier following a correct or incorrect answer (or series of answers). A famous example of an adaptive test is the GMAT (Graduate Management Admission Test), typically used for entry into graduate business schools.



#### **Adaptive Format (continued)**

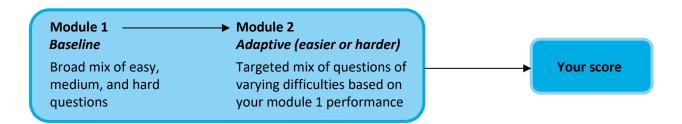
According to College Board, each dSAT is "designed and developed such that each student is administered a highly comparable but unique version of the test."



With the new test's *multistage adaptive test design* (MST), each module within a section is timed separately; there's a short pause (not break) between modules. Your performance on the first module is vital in determining your potential – only students who receive the more difficult second module can achieve a top score. Essentially, the number of questions and the specific questions you answer correctly in the first "baseline" module determine the second "adaptive" module you'll get (easier or harder) as well as your final SAT score *range* for the section; the number of questions and the specific questions you answer correctly in the second module determine your *exact* SAT score for that section.

Each question has its own weighting; that is, getting certain questions wrong will impact your score more (not all questions count the same). Questions within each Reading and Writing module increase in difficulty within "content domain" (see page 12); questions within each Math module increase in difficulty through each module. Thus, there is no longer a conversion chart aligning the number of correct answers with a specific score.

Each of the four modules contains two questions that are not scored; we refer to them as "experimental" questions, but College Board calls them "pretest" questions.



College Board will eventually release a manual explaining the new, complex scoring system.

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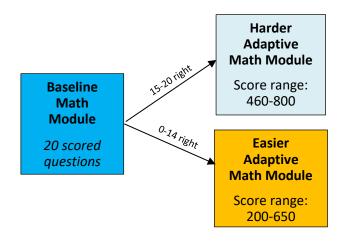
#### THE DIGITAL SAT: THE SAT IS CHANGING - AGAIN!

#### **Adaptive Format (continued)**

You can think of your baseline module as an anchor. Once you acquire anchor points in the baseline, you can't lose them. Points missed are also factored in. Your second module is bracketed by your baseline performance. For example, if you correctly answer, say, 10 questions in the baseline, you've locked in those points. Even if you miss every question in the adaptive module, you've locked in a minimum score. Performance on the baseline determines which level of difficulty you'll receive in the adaptive module – and your maximum potential score is capped.

#### Here's a graphic representation:

On a practice dSAT that our colleague took, he found that correctly answering 15+ of the 20 scored math questions in the baseline module was the threshold to advancing to the harder adaptive math module – ultimately for a score in the 460-800 range. Conversely, he learned that answering fewer than 15 scored math questions correctly in the baseline module led to the easier adaptive math module next – for a max math score of 650. Similarly, in the Reading and Writing section, correctly answering about ½ of the baseline-module questions leads into the harder adaptive module.



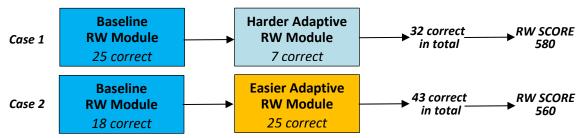
It seems that a student who misses 6 or more scored Math questions in module 1 is sent to the easier module 2 and is capped at a score of 650. On the other hand, a student who correctly answers at least 15 scored Math questions in module 1 is sent to the harder module 2 and earns a score of at least 460.

In that same practice test, our colleague found a noticeable difference in difficulty between the easier and harder adaptive modules:

- Easier module: 16 of the 22 questions fell into the easy or medium range
- Harder module: only 5 questions fell into the easy or medium range

#### **Scoring**

We suspect that the points you earn on each module reflect the number of questions you answer correctly and incorrectly and how many points each question is worth. As we await College Board's indepth description of scoring, we suspect that a student will lose more points for an incorrect answer to an easier question, and, conversely, the student will gain more points for a correct answer to a hard question. So, the ultimate score essentially reflects a "blend" of which questions you got right/wrong, not just how many questions you got right/wrong – just as it will dictate which 2<sup>nd</sup> module you get. Here's our colleague's analysis of scoring on the Reading and Writing section of that practice dSAT:



Although he answered more questions correctly when he got the easier adaptive module (case 2), he received a lower score!



#### **Scoring (continued)**

The dSAT retains the 1600 scale, with the new scores equivalent to the current paper-based test – and still comparable to the ACT. You'll use the existing SAT-ACT concordance table to compare dSAT and ACT scores. You'll get your dSAT score back within days of taking the test, but you'll have to adjust to scoring that weights questions based on difficulty rather than scoring that simply counts right answers. Gone are the current SAT's fifteen sub-scores (that nobody cared about anyway!).

# dSAT Practice Test 1: Scoring Based on Perfect Baseline Module Note: Scoring scales vary slightly from test to test!

READING AND WRITING					
# Correct Module 1	# Correct Module 2	Total # Correct	dSAT Score		
27	27	54	800		
27	25	52	740		
27	23	50	720		
27	21	48	680		
27	18	45	650		
27	16	43	640		
27	14	41	630		
27	12	39	610		
27	10	37	590		
27	8	35	580		
27	6	33	580		
27	4	31	560		

МАТН					
# Correct Module 1	# Correct Module 2	Total # Correct	dSAT Score		
22	22	44	800		
22	21	43	790		
22	20	42	770		
22	18	40	740		
22	16	38	710		
22	15	37	680		
22	13	35	680		
22	12	34	660		
22	11	33	660		
22	9	31	640		
22	7	29	620		
22	5	27	590, 600*		
22	3	25	590		
22	1	23	570		

A perfect baseline module puts you in the 560-800 range

A perfect baseline module puts you in the 570-800 range

<sup>\*</sup> Illustrates that not all questions count the same – that some questions will have more of an impact on your score than others.



#### **Time**

Because test scores on the dSAT are determined more efficiently, the dSAT takes only 2 hours and 24 minutes to complete – including a 10-minute break after the 2<sup>nd</sup> Reading and Writing module – instead of the current SAT's 3 hours. You may not return to a previous module once you've started another module. This shortened test provides significantly more time to answer each question than the current SAT does.

	Reading and Writing	Math
Current SAT	R: ≈75 seconds/question W: ≈48 seconds/question	≈83 seconds/question
dSAT	≈71 seconds/question	≈95½ seconds/question

When you take the dSAT, you must sit through the entire length of time and cannot move on to the next module early nor can you leave early.

#### Content

The content of the dSAT and current SAT is largely the same, but the dSAT is more student friendly. Within each module, different question types appear in blocks, rather than at random, allowing you to get into a rhythm and move through each dSAT module with an organized, problem-solving mindset. For example, you may see several consecutive Math graphing questions, or a group of "vocabulary in context" questions followed by a group of grammar questions in a Reading and Writing module.

*Math:* The skills and topics tested on the dSAT are the same as those tested on the current SAT. They will not be expanded to include concepts like logarithms, vectors, conics, matrices, or limits. The dSAT Math section has fewer words per question than the current SAT, and the wording is more straightforward on the new test; the dSAT Math's questions are also less reading-intensive than the ACT's. Only 30% of the Math questions are in the context of science or social studies or real-world applications; the remaining 70% are "pure" math questions.

Math Content	Current SAT	dSAT
Algebra	32%	35%
Advanced Math	29%	35%
Problem Solving & Data Analysis	28%	15%
Geometry & Trigonometry	10%	15%

← Decreased the most



You may use a calculator – either your own or the one that's part of the Bluebook app, the <u>Desmos graphing calculator</u> – on all math questions (assuming it's useful). The calculator opens and closes with a single click and can remain open throughout the test; it's right there on the screen, immediately adjacent to the question itself, extremely convenient for problem-solving. In fact, if you know how to use a graphing calculator, you can use it to answer many dSAT Math questions, often by plugging in equations and seeing where functions intersect on the graph. If you'd rather use your own calculator, that's fine.

Question format is a combination of multiple-choice questions with four answer choices (75%) and student-produced responses (25%). While the current SAT provides four "slots" in which to record your answer (0 to 9999), the dSAT provides five "slots" and also allows for negative answers (-9999 to 99999).

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#### **Content (continued)**

Reading and Writing: The Reading and Writing section pretty much tests the same material as the current SAT, with the exception of the change to shorter reading passages. The current SAT's Evidence-Based Reading and Writing section has nine extended passages with several multiple questions tied to each. The dSAT's Reading and Writing section contains 54 short passages with one question associated with each; some are paired passages with one question associated with both passages. Some questions include informational graphics, just as some now do. Don't be fooled: shorter passage length doesn't signal that it's an easier passage.

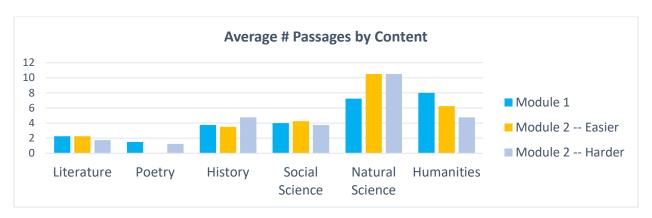
The shift to shorter passages vastly increases the range and diversity of topics that you'll be exposed to, making it more likely that the passages will be interesting and relevant to you. If you struggle with longer reading passages and their many associated questions, you won't have that problem on the dSAT: just give your best answer to each question and move on. One poorly grasped passage won't have an outsize impact on your overall score. Students who took the dSAT during pilots and research commented that this short-passage format felt less stressful and helped them to pace themselves.

Here's what else we know about this blended Reading and Writing section:

- Short (but tough) passages of 25-150 words:
   1 passage/1 question
- Range of content: literature (e.g., Shakespeare, Austen), science-oriented (lots!), humanities, poetry (new to the test, but very little of it; 1900's and earlier)
- Far less grammar, but more vocabulary (in context) than on the current SAT (see below)
- Idioms and sentence placement will no longer be tested
- More diversity of ideas and tones than the current SAT
- More humanities passages than before
- More emphasis on tenses, separation of clauses, quotations, and logical transitions
- Rhetorical synthesis questions: A bulleted list of info that you'll be asked to use to accomplish a specific task, like summarizing a key point or drawing an appropriate inference
- Question types are grouped in the same order on every test – so practice will really pay off!

The dSAT has lots more vocabulary than the current SAT, but it's tested only in context. You won't need to study flash cards, but you will have to carefully tune into the way in which words are used in the context of a passage. There are 3 tiers of vocabulary, and the dSAT seems to focus on tier-2 words – words common in writing, but less common in day-to-day speaking – rather than more esoteric words.

As its name implies, the Reading and Writing section blends Reading and Writing questions into a single section. There is no longer a separation into one section/one score for each Reading and Writing. In fact, some Reading questions now feel like Writing "expression of ideas" questions.





#### The Bluebook App: The Official dSAT & Practice dSATs

The <u>Bluebook app</u> is the digital platform on which you'll take the official dSAT and dPSAT as well as digital practice tests. Download the <u>Bluebook app</u> to your tablet, laptop, or Chromebook. Once it's installed on your device, you can access practice dSATs as well as a test preview with 15 practice questions (but no answers). Use the preview to help familiarize yourself with the functionality of the digital testing app. Bluebook has four official dSAT practice tests with another four coming later in summer 2023, fully representative in all ways of the official tests (exception: ability to end sections early, no lockdown browser). You'll also find one practice dPSAT NMSQT/dPSAT 10 and one practice dPSAT 8/9.

Here's what will happen on <u>test day</u>, assuming you've downloaded the <u>Bluebook digital testing app</u> to your device in advance:

- Bring your device charged! to the testing center (or request a device from College Board when you register for the test).
- You're given three pieces of scratch paper and can bring a pen or pencil. Your scratch paper is collected at the end of the test.
- You may bring your own calculator (as long as it's on <u>College Board's list of approved calculators</u>).
- Enter the start code provided by the proctor to unlock and activate a previously downloaded official dSAT.
- Bluebook blocks other apps from running on your device, so you won't have access to them.
- During testing, you can go back and forth to questions within a given module before time runs out. Your on-screen timer (which you can hide if you like) will let you know when the next module starts.
- You can access section-specific directions from any testing screen.
- Every one of your keystrokes will be time-stamped. You won't lose any work if WiFi goes out.
- As far as connectivity goes, you need only one minute to start and one minute at the end. College
  Board specifically designed the app to account for variations in WiFi strength and continuity. If the
  internet disconnects during testing, you'll still be able to progress through the test without
  disruption. If you lose your internet connection during the test, you're able to continue testing
  without interruption and submit once you've reconnected. You won't lose testing time or your work
  if your connection drops.

Four full-length linear (non-adaptive) paper-and-pencil practice tests (longer than the dSAT) are available from College Board as <u>downloadable PDFs</u>. While these forms are recommended only for students who require paper-based accommodations on test day, we see no reason not to practice with them.

This <u>website</u> contains 33 practice questions, including the 15 questions in Bluebook's test preview. Answers and answer explanations are provided for all 33 questions.

College Board has also made available an <u>SAT Suite Question Bank</u> with more than 3,500 practice questions. This free digital resource will allow you to search through a repository of released SAT Suite test questions and select and download ones to use for practice, test familiarization, and question-level review. The bank's contents are filterable along many dimensions, making it easy for you to find exactly the questions you want.

The Official SAT Study Guide (print book) offers insights and advice regarding taking the dSAT as well as paper-based linear (non-adaptive) tests with which you can practice. For most test-takers, we recommend prioritizing practice on the BlueBook App for a more realistic test-day experience.



The existing **Question & Answer Service** release of tests will be replaced by the periodic release of additional practice tests.

#### **Testing Dates & Locations**

The dSAT will be offered at national testing sites on seven weekends/year, just as it is now. However, there will be more date choices for School Day testing. Starting in 2024, states, schools, and districts can choose their test day or days within a testing window of several weeks to administer the School Day dSAT. Along with School Day testing's broad testing windows, student testing can be staggered throughout the day or across the testing window. There will be make-ups for absences, but limits to retesting within a window. Students may test only once during a School Day window.

College Board provides technology only for weekend testing at national testing sites (when you register, you'll be asked if you want to use a device supplied by College Board or use your own); schools must supply their own devices for School Day testing. You'll be allowed to use your own computers or tablets or those provided by the test center. Testing will **not** be offered at home (unlike those at-home AP exams early in the pandemic). The Question & Answer Service (the opportunity for you to get back a copy of the test you took, your answers, and the correct answers) will no longer be offered because College Board will re-use some questions in the future.

College Board is funding the role of a "technology coordinator" for each testing site. That person will make sure students and staff can access WiFi and that all devices are working properly; the coordinator will also help students and staff troubleshoot common issues. Each test center will have a dedicated help room where the coordinator can assist students without disrupting others.

#### Use It (the "old" format) or Lose It

The summer between sophomore and junior year is a popular time to begin thinking about the SAT and ACT. There may be a rush of students in the class of 2025 who want to take the current paper test just as there was last time the SAT was about to change format. Keeping in mind that switching SAT formats midway through junior year is inadvisable, here's our advice for the class of 2025:

- If you want to take the paper-based SAT, you should begin SAT prep right after Spring Break of sophomore year, leveraging the summer before junior year for prep. Take the SAT during first semester of junior year with your final SAT in December 2023.
- If you're excited by the idea of taking a dSAT, start your prep in the beginning of junior year, first for the PSAT and then transition to the SAT. Take your first dSAT in March 2024.
- Don't like either of the above ideas? Choose the ACT for a consistent testing experience – and supported by many real tests available for practice. Take your first ACT in December 2023. When you register for that test, request the Test Information Release: after you get your scores, ACT will send you a copy of the test you took, your answers, and the correct answers – a great tool for learning from your mistakes!
- Younger students (class of 2026 and beyond) who want more tests with which to practice should most likely plan on the ACT.



#### **BigFuture School**

College Board is releasing this app through which students can access their test scores, percentiles, knowledge & readiness assessments, college readiness assessments, and "interest from colleges." It appears that colleges will be able to market directly to students through this app.

#### **Accommodations & Learning Differences**

Existing accommodations will continue, and most will be provided in the digital adaptive format. Students with extended time will not be allowed to end a section early to advance. Reading accommodations include changing contrast, color, font size, and using text-to-speech capability. Students getting extra testing time will get support for their device's power needs (e.g., more than a 3-hour charge) from the technology coordinator or proctor.

For accommodations that cannot be provided digitally (e.g., Braille), students will take a longer linear (non-digital and non-adaptive test) without any "experimental" questions:

The Longer Paper-Based SAT for Accommodations that Cannot be Provided Digitally				
Section Time/Module # Questions/Module				
Reading and Writing	39 minutes	33		
Math 43 minutes		27		
TOTAL	164 minutes (2 hours & 44 minutes)	120		

Potential pros of the impact of the digital test on students with learning disabilities:

- Shorter test benefits students with ADHD
- Computer-based testing eliminates the difficulty some students have with tracking
- More time per question benefits students who process information more slowly
- Shorter reading passages benefit those with reading challenges
- Ability to zoom in, alter colors, background, and make other viewing adjustments for increased readability
- On-screen calculator (or student's own) helps students with calculation difficulties
- Math formulas are available, reducing the need for memorization
- Highlighter tool to mark text or answer options and "strikethrough" to eliminate answers (but scrap paper may be easier/faster)
- Flagging tool to mark questions you'd like to return to
- Timing administered by computer rather than proctor, ensuring reliable timing
- Better time management with on-screen clock to count down time and give 5-minute warning

#### **Potential Cons:**

- Some test-takers find the dSAT's annotation tool hard to use, and you can't circle, highlight, or label specific portions of a chart or figure.
- Adaptive testing could cause anxiety/distraction for students who try to figure out the level of
  questions they see
- Using an unfamiliar computer could be a disadvantage

Overall, the new dSAT has the potential to improve the testing experience for students with learning differences.



#### **Stage Adaptive: The Technicalities**

Adaptive tests use a form of scoring called *Item Response Theory*. Questions can have different weights under IRT. They can even have different weights based on score level. The digital test will be better at knowing how well a given question distinguishes one skill level from another and how to value that. IRT can produce an optimized picture of which problems and weightings best place a student into a particular score range. A simple right/wrong tally does not make sense on an adaptive test, which means students will never find out how many questions they got right or wrong. Students will not know exactly how their score was determined. A published scale makes little sense when everyone has taken a different exam.

#### **Technology**

Students testing together will encounter differing versions of the test. While the test draws from a large pool of questions, the created question sets will meet the same content standards and provide an equivalent experience.

Students at the same site can be started at different times, since there is a greatly reduced risk of sharing problems within a room or during breaks.

The test will be administered in a locked-down app; you won't be able to open other applications while testing.

You'll be expected to arrive with fully charged devices and the testing app pre-installed. Test centers *may* provide power to standard-timed examinees and *must* provide it to those with extended time.

Bandwidth requirements are minimal. The entire test is cached and encrypted, so an internet disruption should not prevent the completion of an exam. If a power issue stops the test, it can be restarted with proctor authorization. Deliberately powering down and restarting is cheating and not allowed.

Because you'll have your own timer in the app, the problem of mistiming by proctors should be eliminated.



#### **Overall Test Specifications**

You'll find College Board's official test specifications here:

- <a href="https://satsuite.collegeboard.org/media/pdf/digital-sat-test-spec-overview.pdf">https://satsuite.collegeboard.org/media/pdf/digital-sat-test-spec-overview.pdf</a>
- <a href="https://satsuite.collegeboard.org/media/pdf/assessment-framework-for-digital-sat-suite.pdf">https://satsuite.collegeboard.org/media/pdf/assessment-framework-for-digital-sat-suite.pdf</a>

Characteristic	Reading and Writing (RW) Section	Math Section	
Administration	<ul> <li>Two-stage adaptive test design:</li> <li>One Reading and Writing section administered via two separately timed modules</li> </ul>	<ul> <li>Two-stage adaptive test design:</li> <li>One Math section administered via two separately timed modules</li> </ul>	
Test length (# questions)	<ul> <li>1<sup>st</sup> module: 25 operational (scored) and 2 pretest (non- scored) questions</li> <li>2<sup>nd</sup> module: 25 operational (scored) and 2 pretest (non- scored) questions</li> </ul>	<ul> <li>1<sup>st</sup> module: 20 operational (scored) and 2 pretest (non- scored) questions</li> <li>2<sup>nd</sup> module: 20 operational (scored) and 2 pretest (non- scored) questions</li> </ul>	
Time per module	1 <sup>st</sup> module: 32 minutes	1 <sup>st</sup> module: 35 minutes	
Time per module	2 <sup>nd</sup> module: 32 minutes	2 <sup>nd</sup> module: 35 minutes	
Total number of questions	54 questions (27 questions/module)	44 questions (22 questions/module)	
Total time allotted	64 minutes (32 minutes/module)	70 minutes (35 minutes/module)	
Average time per question	1.19 minutes	1.59 minutes	
Scores reported		score Vriting • Section score for Math	
Question types	Four-option multiple-choice	<ul> <li>Four-option multiple-choice         (≈75%)</li> <li>Grid-in (≈25%) ← called "Student         Produced Responses" by College         Board</li> </ul>	
Subject	Literature, history/social studies,	Science, social studies, real-world	
areas	humanities, science	topics	
Word count	25-150 words per passage	≈30% are word problems (CB calls them "questions in context"), most with 50 words or fewer	
Informational graphics	Yes; tables, bar graphs, line graphs	Yes	
Text complexity bands	Passages characterized as Grades 6-8, Grades 9-11, and Grades 12-14 (not on PSAT 8/9)	Not applicable	



#### **Content Domains – Reading and Writing Section**

Questions on the Reading and Writing section represent one of four content domains. Each question is classified as belonging to a single content domain. The first two domains primarily address reading skills, while the second two domains primarily address writing skills and knowledge. Questions from all four domains appear in each test module and are sequenced as shown below; questions testing similar skills and knowledge appear together. Within each content domain except Standard English Conventions, questions are ordered first by skill/knowledge element and then by question difficulty. Standard English Conventions questions are ordered from easiest to hardest irrespective of skill/knowledge element tested.

Content Domain	Domain Description	Skill/Knowledge Testing Points	Operational Question Distribution	
Craft and Structure	Students use comprehension, vocabulary, analysis, synthesis, reasoning skills, and knowledge to use and determine the meaning of high utility academic words and phrases in context, evaluate texts rhetorically, and make supportable connections between multiple topically related texts.	<ul> <li>Words in context</li> <li>Text structure &amp; purpose</li> <li>Cross-text connections</li> </ul>	≈28% 13-15 questions	
Information and Ideas	Students use comprehension, analysis, reasoning skills, knowledge, and what is stated and implied in texts (including in any accompanying informational graphics) to locate, interpret, evaluate, and integrate information and ideas.	<ul> <li>Central ideas &amp; details</li> <li>Command of evidence         <ul> <li>Textual</li> <li>Quantitative</li> </ul> </li> <li>Inferences</li> </ul>	≈26% 12-14 questions	
Expression of Ideas	Students use revision skills & knowledge to improve the effectiveness of written expression in accordance with specified rhetorical goals.	<ul><li>Rhetorical Synthesis</li><li>Transitions</li></ul>	≈20% 8-12 questions	
Standard English Conventions	Students use editing skills & knowledge to make text conform to core conventions of Standard English sentence structure, usage, and punctuation.	Boundaries     Form, structure & sense	≈26% 11-15 questions	



#### **Content Domains - Math Section**

Questions on the Math section represent one of four content domains. Each question is classified as belonging to a single content domain. Questions from all four domains appear in each module and are ordered by difficulty.

Content Domain	Domain Description	Skill/Knowledge Testing Points	Operational Question Distribution
Algebra	Students interpret, create, use, represent & solve problems using linear representations & make connections between different representations of linear relationships.	<ul> <li>Linear equations in one variable</li> <li>Linear equations in two variables</li> <li>Linear functions</li> <li>Systems of two linear equations in two variables</li> <li>Linear inequalities in one or two variables</li> </ul>	≈35% 13-15 questions
Advanced Math	Students interpret, rewrite, solve, make strategic use of structure & create absolute value, quadratic, exponential, polynomial, rational, radical & other nonlinear equations & make connections between different representations of a nonlinear relationship between two variables.	<ul> <li>Equivalent expressions</li> <li>Nonlinear equations in one variable and systems of equations in two variables</li> <li>Nonlinear functions</li> </ul>	≈35% 13-15 questions
Problem- Solving & Data Analysis	Using quantitative reasoning, students solve problems using percentages, proportional relationships, ratios, rates, and units; analyze & interpret distributions of data; use various representations of data to find relative frequency, probabilities & conditional probabilities; fit models to data & compare linear and exponential growth; calculate, compare & interpret mean, median, range & standard deviation, understand basic study design & interpret margin of error.	<ul> <li>Ratios, rates, proportional relationships &amp; units</li> <li>Percentages</li> <li>One-variable data: distributions &amp; measures of center &amp; spread</li> <li>Two-variable data: models &amp; scatterplots</li> <li>Probability &amp; conditional probability</li> <li>Inference from sample statistics &amp; margin of error</li> <li>Evaluating statistical claims: observational studies &amp; experiments</li> </ul>	≈15% 5-7 questions



# **Content Domains – Math Section (continued)**

Content Domain	Domain Description	Skill/Knowledge Testing Points	Operational Question Distribution
Geometry & Trigonometry	Students solve problems associated with length, area, volume & scale using geometric figures; determine congruence, similarity & sufficiency using concepts & theorems about vertical angles, triangles & parallel lines; solve problems using the Pythagorean theorem, right triangle & unit circle trig & properties of special right triangles; use properties & theorems relating to circles.	<ul> <li>Area &amp; volume</li> <li>Lines, angles &amp; triangles</li> <li>Right triangles &amp; trigonometry</li> <li>Circles</li> </ul>	≈15% 5-7 questions



#### Math Section Content Specifications Summary – by Testing Program

	Digital SAT Suite Testing Program		
Feature	SAT	PSAT/NMSQT & PSAT 10	PSAT 8/9
# Operational (scored) Questions	40	40	40
Questions by Format			
<ul> <li>Multiple-Choice</li> </ul>	≈75% / 28-32	≈75% / 28-32	≈75% / 28-32
Grid-In	≈25% / 8-12	≈25% / 8-12	≈25% / 8-12
Questions in Context	≈30% / 10-14	≈30% / 10-14	≈30% / 10-14
Questions by Content Domain			
<ul> <li>Algebra</li> </ul>	≈35% / 13 <b>-</b> 15	≈35% / 13 <b>-</b> 15	≈42½% / 14-16
Advanced Math	≈35% / 13 <b>-</b> 15	≈32½ % / 12-14	≈20% / 7-9
<ul> <li>Problem-Solving &amp; Data Analysis</li> </ul>	≈15% / 5-7	≈20% / 7-9	≈25% / 9-11
Geometry & Trigonometry	≈15% / 5-7	≈12½% / 4-6	≈12½% / 4-6 (only Geometry)
<b>Embedded Pretest (non-scored) Questions</b>		•	
Per module	2	2	2
Per test form	4	4	4

Digital SAT				Problem- Solving &		
Suite Testing	Question		Advanced	Data	Geom &	
Program	Format	Algebra	Math	Analysis	Trig*	Total
SAT	Multiple-Choice	10-11	10-11	4-5	4-5	28-32
SAI	Grid In	3-4	3-4	1-2	1-2	8-12
PSAT/NMSQT	Multiple-Choice	10-11	10-11	5-6	3-4	28-32
& PSAT 10	Grid In	3-4	2-3	2-3	1-2	8-12
PSAT 8/9	Multiple-Choice	14-15	5-6	6-7	3-4	28-32
P3A1 8/9	Grid In	2-3	2-3	3-4	1-2	8-12

<sup>\*</sup> Only Geometry on PSAT 8/9

The content of the Math section varies to some extent by testing program:

- Rational and radical equations (Advanced Math) are not tested on the PSAT 8/9
- Trigonometry is not tested on the PSAT 8/9
- Circles (Geometry and Trigonometry) are tested only on the SAT

#### Emphasis:

- Algebra: most prominent on PSAT 8/9 and decreases slightly at higher program levels
- Advanced Math: weighting increases by program level
- Problem-Solving and Data Analysis: weighting decreases slightly by program level
- Geometry and Trigonometry/Geometry: weighting remains largely consistent by level