



CONNECTICUT STATE DEPARTMENT OF EDUCATION

# **Connecticut SAT School Day**

**Mastery Examination Committee**

**July 20, 2016**

# Connecticut SAT School Day

- Approved for use by the CSBE on October 7, 2015
- Reduced testing time for Grade 11 students
- Provides opportunity for students to use state assessment results for college admissions purposes
- Administered for the first time on March 2, 2016 to Grade 11 students



# Connecticut SAT School Day

- The College Board completed a redesign of the SAT
- The March administration of Connecticut SAT School Day marked the first administration of the redesigned SAT
- CSDE conducted independent study of test content alignment to the Connecticut Core Standards.

*“In both ELA and Mathematics, the majority of the Connecticut Core Standards have a strong or moderate match to the Connecticut SAT School Day.”*

- SAT Reading alignment is solid.
- SAT Writing (without the essay) addresses most standards.
- SAT Math is strong in Number & Quantity, Algebra, and Statistics & Probability but has some gaps in Functions and Geometry.



# 8 Key Changes to the SAT



Words in Context



Command of Evidence



Essay Analyzing a Source



Math that Matters Most



Problems Grounded in Real-World Contexts



Analysis in Science and in History/Social Studies



U.S. Founding Documents and the Great Global Conversation



No Penalty for Guessing



# 8 Key Changes to the SAT



**Relevant words  
in context**

Students will need to:

Interpret meaning based on context

Master relevant vocabulary

Engage in close reading



# 8 Key Changes to the SAT



## **Command of evidence**

Students will be asked to:

Interpret, synthesize, and use evidence found in a wide range of sources

Support the answers they choose

Integrate information conveyed through both reading passages and informational graphics

# 8 Key Changes to the SAT



## Essay analyzing a source

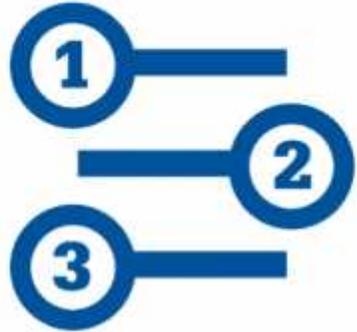
The redesigned essay will:

More closely mirror college writing assignments

Cultivate close reading, careful analysis, and clear writing

Promote the practice of reading a wide variety of arguments and analyzing an author's work

# 8 Key Changes to the SAT



## Math focused on three key areas

Current research shows that three key areas most contribute to readiness for college and career training:

Problem Solving and Data Analysis  
(quantitative literacy)

Heart of Algebra (mastery of linear equations)

Passport to Advanced Math (familiarity with more complex equations)



# 8 Key Changes to the SAT



## **Problems grounded in real-world contexts**

Students will engage with questions that:

Directly relate to the work performed in college and career

Include charts, graphs, and passages likely to be encountered in science, social science, and other majors and careers

Feature multistep applications to solve problems in science, social science, career scenarios, and other real-life contexts

# 8 Key Changes to the SAT



## **Analysis in science and social studies**

Students will apply their reading, writing, language, and math skills to answer questions in science, history, and social studies contexts.

# 8 Key Changes to the SAT



**Founding documents  
and great global  
conversation**

The redesigned SAT will include one of the following:

An excerpt from one of the Founding Documents

A text from the ongoing Great Global Conversation about freedom, justice, and human dignity

No prior knowledge of the text will be required.

# 8 Key Changes to the SAT



No Penalty for  
Guessing

One point for each correct answer

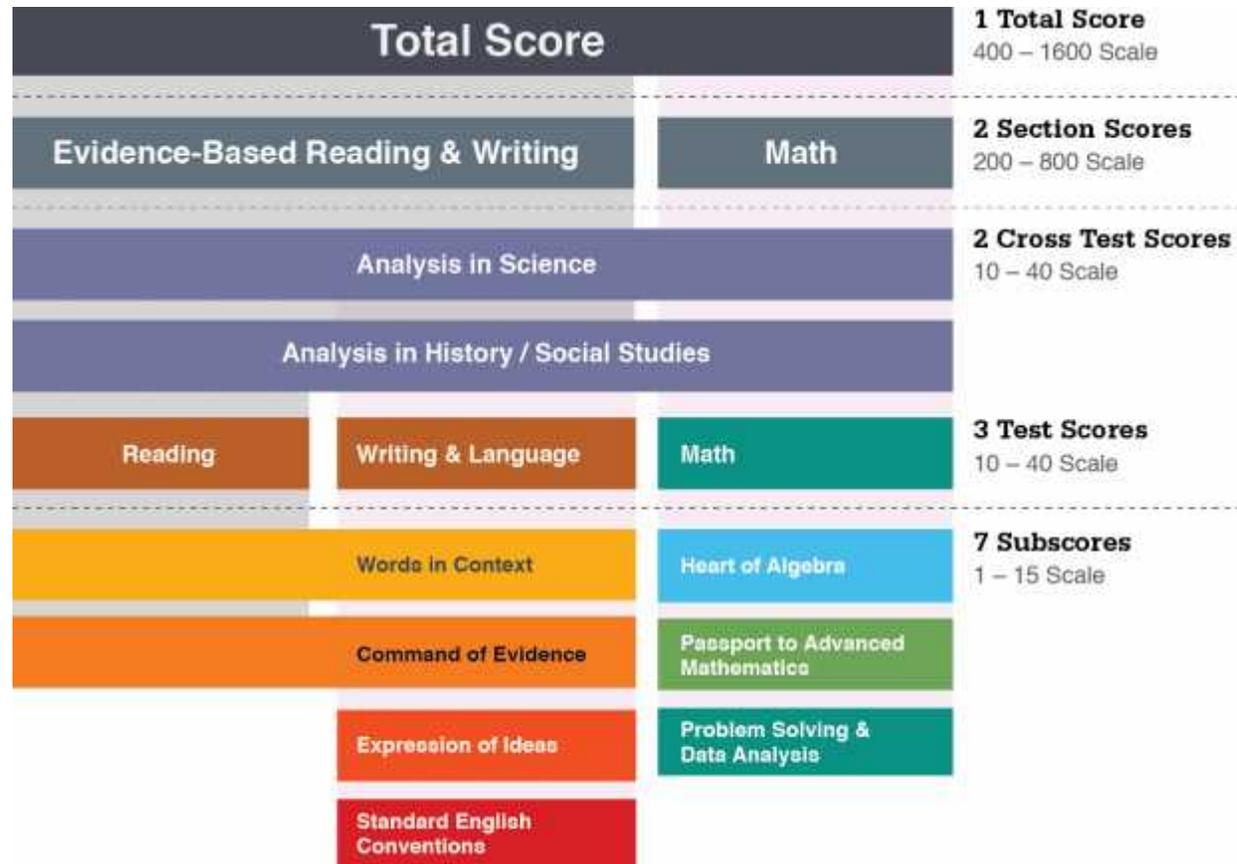
Zero points for unanswered items

Zero points for wrong answers

Four answer choices instead of five

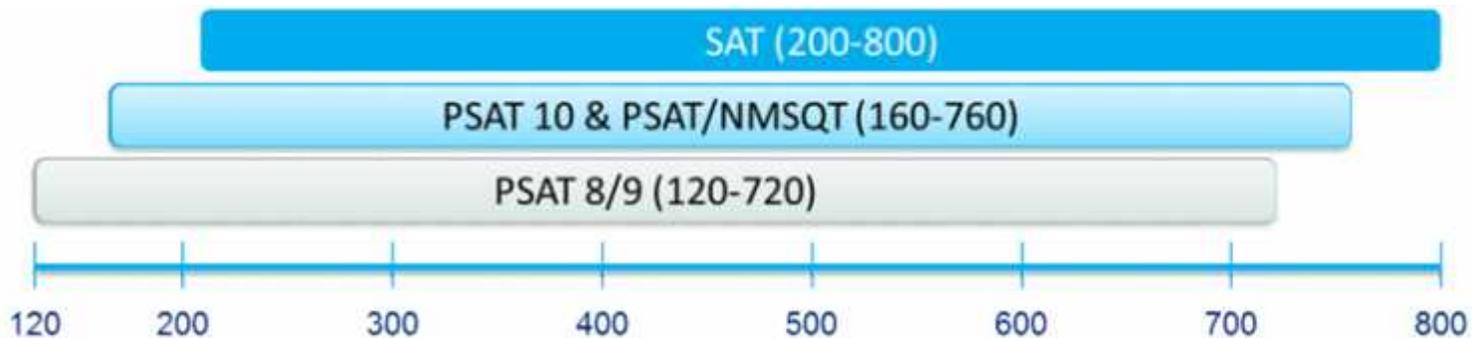


# SAT Scores & Subscores



# Longitudinal Progress Monitoring

Total score and section scores will be placed on a vertical scale.



CSDE strongly recommends that this vertical scale be treated as extremely preliminary.



# Reading Test Specs

## SAT READING TEST CONTENT SPECIFICATIONS

	NUMBER	PERCENTAGE OF TEST
<b>Time Allotted</b>	65 minutes	
<b>Passage Word Count</b>	3,250 words total from 4 single passages and 1 pair; 500–750 words per passage or paired set	
<b>Total Questions</b>	52 questions	100%
Multiple Choice (4 options)		100%
Passage Based		100%
<b>Contribution of Items to Subscores and Scores</b> (Percentages do not add up to 100%)		
Words in Context (Across Reading and Writing and Language Tests)	10 questions (2 questions per passage/pair)	19%
Command of Evidence (Across Reading and Writing and Language Tests)	10 questions (2 questions per passage/pair)	19%
Analysis in History/Social Studies (Across Math, Reading, and Writing and Language Tests)	21 questions(all history/social studies questions)	40%
Analysis in Science (Across Math, Reading, and Writing and Language Tests)	21 questions(all science questions)	40%
<b>Passage Contents</b>		
U.S. and World Literature	1 passage; 10 –11 questions	20%
History/Social Studies	2 passages, or 1 passage and 1 pair; 10– 11 questions each	40%
Science	2 passages, or 1 passage and 1 pair; 10 –11 questions each	40%
<b>Graphics</b>		
	1–2 graphics in 1 History/Social Studies and in 1 Science passage	
<b>Text and Graphical Complexity</b>		
Text Complexity	A specified range from grades 9–10 to postsecondary entry across 4 passages and 1 pair	
Graphical Data Representations (tables, graphs, charts, etc.)	Somewhat challenging to challenging (moderate to moderately high data density, few to several variables, moderately challenging to moderately complex interactions)	



# Former SAT Question-Critical Reading - Determining Meaning of Words

In young children, some brain cells have a \_\_\_\_\_ that enables them to take over the functions of damaged or missing brain cells.

- (A) fragility
- (B) reminiscence
- (C) perniciousness
- (D) whimsicality
- (E) plasticity



# Former SAT Question: Critical Reading – Sentence Completion

Because their behavior was ----- , Frank and Susan served as ----- models for the children under their excellent care.

- (A) incorruptible . . pernicious
- (B) lamentable . . flawed
- (C) commendable . . exemplary
- (D) erratic . . unimpeachable
- (E) reputable . . imperfect



# Redesigned SAT Sample Item: Relevant Words in Context (Reading Test)

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[ . . . ] The coming decades will likely see more **intense** clustering of jobs, innovation, and productivity in a smaller number of bigger cities and city-regions. Some regions could end up bloated beyond the capacity of their infrastructure, while others struggle, their promise stymied by inadequate human or other resources.

Adapted from Richard Florida, *The Great Reset*.  
©2010 by Richard Florida.

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As used in line 55, “intense” most nearly means

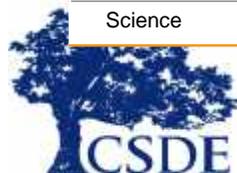
- A) emotional.
- B) concentrated.
- C) brilliant.
- D) determined.



# SAT Writing and Language Test Content Specifications

## SAT WRITING AND LANGUAGE TEST CONTENT SPECIFICATIONS

	NUMBER	PERCENTAGE OF TEST
<b>Time Allotted</b>	35 minutes	
<b>Passage Word Count</b>	1700 words total from 4 passages; 400–450 words per passage	
<b>Total Questions</b>	44 questions	100%
Multiple Choice (4 options)		100%
Passage Based		100%
<b>Contribution of Items to Subscores and Scores</b>		
Expression of Ideas	24 questions	55%
Standard English Conventions	20 questions	45%
Words in Context (Across Reading and Writing and Language Tests)	8 questions (2 questions per passage)	18%
Command of Evidence (Across Reading and Writing and Language Tests)	8 questions (2 questions per passage)	18%
Analysis in History/Social Studies (Across Math, Reading, and Writing and Language Tests)	6 questions (all Expression of Ideas questions in history/social studies)	14%
Analysis in Science (Across Math, Reading, and Writing and Language Tests)	6 questions (all Expression of Ideas questions in science)	14%
<b>Passage Contents</b>		
Careers	1 passage; 11 questions	25%
History/Social Studies	1 passage; 11 questions	25%
Humanities	1 passage; 11 questions	25%
Science	1 passage; 11 questions	25%



# Former SAT: Writing – Improving Sentences

As one travels inland, the details of the landscape become harsh, brutal, and it can frighten people.

- (A) become harsh, brutal, and it can frighten people
- (B) become harsh, brutal, and frightening
- (C) when they become harsh, brutal, and frightening
- (D) becoming harsh and brutal, and frightening to people
- (E) become harsh, brutal, and it can frighten one



# SAT Writing & Language Test: Features

- Passage based
- Cross-disciplinary contexts:
  - Humanities
  - History/social studies
  - Science
  - Careers
- Informational graphics
- Multiple text types: argument, informative, nonfiction narrative
- Focus on:
  - Expression of ideas
  - Standard English conventions
  - Words in context
  - Command of evidence



# SAT Math

- The overall aim of the SAT Math Test is to assess fluency with, understanding of, and ability to apply the mathematical concepts that are most strongly prerequisite for and useful across a wide range of college majors and careers.
- The Math Test has two portions:
  - Calculator Portion (38 questions)      55 minutes
  - No-Calculator Portion (20 questions)    25 minutes
- Total Questions on the Math Test: 58 questions
  - Multiple Choice (45 questions)
  - Student-Produced Response (13 questions)



# SAT Math- Calculator/No Calculator

- The Calculator portion:
  - gives insight into students' capacity to use appropriate tools strategically.
  - includes more complex modeling and reasoning questions to allow students to make computations more efficiently.
  - includes questions in which the calculator could be a deterrent to expedience.
    - students who make use of structure or their ability to reason will reach the solution more rapidly than students who get bogged down using a calculator.
- The No-Calculator portion:
  - allows the redesigned SAT to assess fluencies valued by postsecondary instructors and includes conceptual questions for which a calculator will not be helpful.



# Grid-in Questions

Student-produced response questions, or grid-ins:

- The answer to each student-produced response question is a number (fraction, decimal, or positive integer) that will be entered on the answer sheet into a grid such as the one shown below.
- Students may also enter a fraction line or a decimal point.

Answer:  $\frac{7}{12}$

Write answer in boxes. →

	7	/	1	2
			7	
	0	0	0	0
1	1		1	
2	2	2		
3	3	3	3	
4	4	4	4	
5	5	5	5	
6	6	6	6	
	7	7	7	
8	8	8	8	
9	9	9	9	

← Fraction line

Grid in result.

Answer: 2.5

	2	.	5
	7	7	
	0	0	0
1	1	1	1
2		2	2
3	3	3	3
4	4	4	4
5	5	5	
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

← Decimal point



# SAT Math Test Specs

SAT Math Test Question Types	
Total Questions	58 questions
Multiple Choice (four answer choices)	45 questions
Student-Produced Responses (SPR or grid-ins)	13 questions
Contribution of Questions to Subscores	
Heart of Algebra	19 questions
Problem Solving and Data Analysis	17 questions
Passport to Advanced Math	16 questions
Additional Topics in Math*	6 questions
Contribution of Questions to Cross-Test Scores	
Analysis in Science	8 questions
Analysis in History/Social Studies	8 questions



# SAT Math Test Domains

Four Math Domains:

1. Heart of Algebra

- a. Linear equations
- b. Fluency

2. Problem Solving and Data Analysis

- a. Ratios, rates, proportions
- b. Interpreting and synthesizing data

3. Passport to Advanced Math

- a. Quadratic, exponential functions
- b. Procedural skill and fluency

4. Additional Topics in Math

- a. Essential geometric and trigonometric concepts



## How Does The Math Test Relate to Instruction in Science, Social Studies, and Career-Related Courses?

- Math questions contribute to **Cross-Test Scores**, which will include a score for Analysis in Science and Analysis in History/Social Studies. The Math Test will have eight questions that contribute to each of these Cross-Test Scores.
  - Question content, tables, graphs, and data on the Math Test will relate to topics in science, social studies, and career.
- On the Reading Test and Writing and Language Test, students will be asked to analyze data, graphs, and tables (no mathematical computation required).



# Heart of Algebra (Calculator)

When a scientist dives in salt water to a depth of 9 feet below the surface, the pressure due to the atmosphere and surrounding water is 18.7 pounds per square inch. As the scientist descends, the pressure increases linearly. At a depth of 14 feet, the pressure is 20.9 pounds per square inch. If the pressure increases at a constant rate as the scientist's depth below the surface increases, which of the following linear models best describes the pressure  $p$  in pounds per square inch at a depth of  $d$  feet below the surface?

A)  $p = 0.44d + 0.77$

B)  $p = 0.44d + 14.74$

C)  $p = 2.2d - 1.1$

D)  $p = 2.2d - 9.9$



# Heart of Algebra (Calculator)

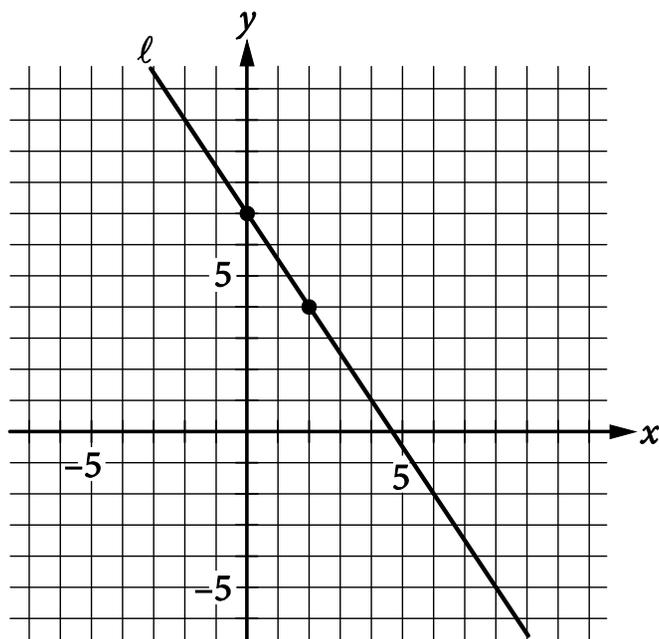
Choice B is correct. To determine the linear model, one can first determine the rate at which the pressure due to the atmosphere and surrounding water is increasing as the depth of the diver increases. Calculating this gives

$$\frac{20.9-18.7}{14-9} = \frac{2.2}{5} \text{ or } 0.44$$

Then one needs to determine the pressure due to the atmosphere or, in other words, the pressure when the diver is at a depth of 0. Solving the equation  $18.7 = 0.44 ( 9 ) + b$  gives  $b = 14.74$ . Therefore, the model that can be used to relate the pressure and the depth is  $p = 0.44 d + 14.74$ .



# Heart of Algebra (No Calculator)



1. If line  $l$  is translated up 5 units and right 7 units, then what is the slope of the new line?

- A)  $-\frac{2}{5}$
- B)  $\frac{3}{2}$
- C)  $\frac{2}{8}$
- D)  $-\frac{11}{14}$



# Problem Solving and Data Analysis: Sample Question (Calculator)

A typical image taken of the surface of Mars by a camera is 11.2 gigabits in size. A tracking station on Earth can receive data from the spacecraft at a data rate of 3 megabits per second for a maximum of 11 hours each day. If 1 gigabit equals 1,024 megabits, what is the maximum number of typical images that the tracking station could receive from the camera each day?

- A) 3
- B) 10
- C) 56
- D) 144



# Problem Solving and Data Analysis: Sample Question (Calculator)

Choice B is correct. The tracking station can receive 118,800 megabits each day

$$\left( \frac{3 \text{ megabits}}{1 \text{ second}} \times \frac{60 \text{ seconds}}{1 \text{ minute}} \times \frac{60 \text{ minutes}}{1 \text{ hour}} \times 11 \text{ hours} \right), \text{ which is about 116}$$

gigabits each day

If each image is 11.2 gigabits, then the number of images that can be received each day is     Since the question asks for the maximum number of typical images, rounding the answer down to 10 is appropriate because the tracking station will not receive a complete 11<sup>th</sup> image in one day.



# Accommodations

	College Reportable Accommodations	Connecticut Specific Accommodations
Students with Disabilities	Used for accountability and college admission	Used for accountability purposes only
	<ul style="list-style-type: none"> <li>• Braille Booklets</li> <li>• Text-to-Speech for all test content (CB MP3 audio)</li> <li>• Large Print Booklet</li> <li>• Color Overlay</li> <li>• Noise Buffering</li> <li>• Magnification Device</li> <li>• Computer Response</li> <li>• Scribe</li> <li>• Speech-to-Text (CB Assistive Technology)</li> <li>• Specialized Calculator</li> <li>• Abacus</li> <li>• Multiplication table</li> <li>• Time Extension</li> <li>• Separate Setting</li> <li>• American Sign Language (ASL)- test directions only</li> <li>• Signed Exact English -test directions and test content</li> </ul>	<ul style="list-style-type: none"> <li>• Sign Language – test content</li> <li>• Sign Language – student responses</li> </ul>
English Learners	Used for accountability and college admission	Used for accountability purposes only
	<ul style="list-style-type: none"> <li>• Written Directions in Spanish, Arabic, Portuguese, Polish, Mandarin and Haitian-Creole</li> <li>• Native Language Reader – test directions only</li> </ul>	<ul style="list-style-type: none"> <li>• Time Extension</li> <li>• Bilingual Dictionary Word-to-Word Translation</li> </ul>

# Testing Time

Testing time with breaks included is 3 hours, 30 minutes plus an additional 30 minutes of pre-administration time.

SAT Sections	Time (in minutes)
Reading	65
Break	10
Writing and Language	35
Math (no calculator)	25
Break	5
Math (with calculator)	55
Book collection	15
Total (hours, minutes)	3h, 30m



# Khan Academy Resources

- Khan Academy is designed to engage students in 30 minutes of productive practice on a daily basis.
  - All questions in the Khan platform meet SAT test specifications.
  - Four full-length SAT practice tests are available.
- Practice is focused on priority areas.
  - Khan question format and design mirrors the design/format of the online SAT.
  - Each question will provide answer explanations, step-by-step solution, and hints.



# Khan Academy Features

Feature	Description
Practice questions	Thousands of practice questions for math, reading, and writing co-developed with the College Board
Practice tests	Four full-length practice redesigned SATs written by the College Board with answer explanations
Diagnostic quizzes	Brief diagnostic quizzes for math, reading, and writing to gauge starting skill levels
Recommendations	Customized skills and tutorial recommendations based on your skill level and the proportion that topics are tested
Skills analysis	Summary of skills for math, reading, and writing and current performance and level on each skill
Tutorials	Customizable exercises and videos that allow you to review concepts and focus your practice



# Score Reporting

- Students receive their Connecticut SAT test results through their online College Board account
- Districts can access the test results through the College Board online score report portal
- Summary results will be posted on CSDE's EdSight system.



# Sending Scores to Colleges

- All students who take the SAT are eligible for 4 free “score sends”.
- To send scores, student/family must expressly authorize (through the online account) the colleges or scholarship organizations to which they want to send the scores.



# Score Choice

- Students will choose to have the College Board send scores to the institutions identified.
- For student who have only taken the SAT once, that will be the only score that is sent to colleges/universities.
- For students, who have taken the SAT multiple times, they can use Score Choice and select which scores, by test date for the SAT, to send to colleges.
- If students do not use Score Choice, all scores will be sent. However, it is up to a student/family to understand the Higher Ed institutions policies. Some institutions will require all scores to be sent if the student has taken more than one SAT.



# Score Cancellation

- Students who take the test and will receive college reportable scores have the option to cancel their scores; however the scores will still be provided to CSDE for accountability purposes.
- If cancelled, the university will not receive any score; however the state will still receive the score.



# Standard Setting

- Connecticut standards were set for the CT SAT School Day during a multi-state standard setting process held in June 2016
- Standards and state test summary data will be released in August 2016
- College Board released [preliminary benchmarks](#)



# College Board Resources

[www.collegereadiness.collegeboard.org](http://www.collegereadiness.collegeboard.org)

- 6 Training Modules
- Sample full length tests
- Test Specifications



# 2017 Test Dates

Connecticut SAT School Day Testing Date

**April 5, 2017**

Make-up Dates:

**April 25 and 26, 2017**

