

# 10 ACT & SAT Myths

*A debunking presentation by...*

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# Myth 1: The SAT requires Algebra II

## Algebra I includes:

- 1- & 2-variable equations
- Linear equations & slope
- Powers & roots
- Quadratics & polynomials
- Factoring

## Algebra II includes:

- Matrices
- Inverse functions
- Complex numbers
- Logarithms
- Exponential growth & decay
- Asymptotes
- Conic sections

Algebra II topics are **not** tested on the SAT.



# Myth 2: The ACT mimics high school curricula

The ACT is a standardized test.

Since high school math curricula are not standardized, the ACT does not mimic high school curricula.



# Myth 3: Certain ACT & SAT dates attract stronger testers

It is widely believed that competition is stiffer on the ACT & SAT during certain months, and that students should therefore avoid testing during these months.

This commonly-held view is false. Even if high-caliber students tend to take the SAT/ACT on a certain date, students are not graded against their cohort but against a whole year's worth of data.



# Myth 4: It's best to study shortly before the test

For score maximization, we recommend 15 to 35 hours of preparation over 2 to 4 months.

The data from educational psychology strongly support this position. Cognitive scientists discovered over half a century ago that “spaced learning” is significantly superior to cramming.<sup>1</sup>

Two of the best study seasons are the *summer after sophomore year* and the *summer after junior year*.

1. Cain & Willey (1939). “The effect of spaced learning on the curve of retention.” *Journal of Experimental Psychology*, 25, 209-214.



# Myth 5: The ACT is a substitute for the SAT & SAT subject tests

Many people believe that the ACT replaces *both* the SAT I and the SAT subject tests (formerly known as SAT IIs).

44 colleges *require* SAT subject tests.

Of these, 25 **do not** let the ACT replace subject tests.

(e.g. Harvard, Princeton, Georgetown, and all UC schools)

26 colleges *recommend* SAT subject tests.

Of these, 23 **do not** let the ACT replace subject tests.

(e.g. Northwestern, Stanford, and Emory)

37 colleges *accept* SAT subject tests.

Of these, 36 **do not** let the ACT replace subject tests.

(e.g. Oberlin, William & Mary, and Georgetown)

Note that some schools that officially require, recommend, or accept Subject Tests allow students to skip such tests *provided they apply early action (e.g. Georgetown) or early decision (e.g. Dartmouth).*



# Myth 6: The PSAT is a good SAT predictor

The SAT is 70% longer than the PSAT.

The SAT has an essay, while the PSAT does not.

The SAT has more difficult math questions, including a “stumper” question.



# Myth 7: The PLAN/PSAT report is highly useful

The PSAT score report provides a crude diagnosis of students' mistakes. In the math section, for instance, the score report distinguishes *only four* types of questions: algebra, data analysis, geometry, and arithmetic.

The score report also provides a few tips (usually 5). These tips tend to be vague and unhelpful. Common tips include the following:

**Verbal:**

- "Understand the author's purpose."
- "Understand complex sentences."

**Math:**

- "Review geometry and coordinate geometry."
- "Make connections among mathematical topics."

**Writing:**

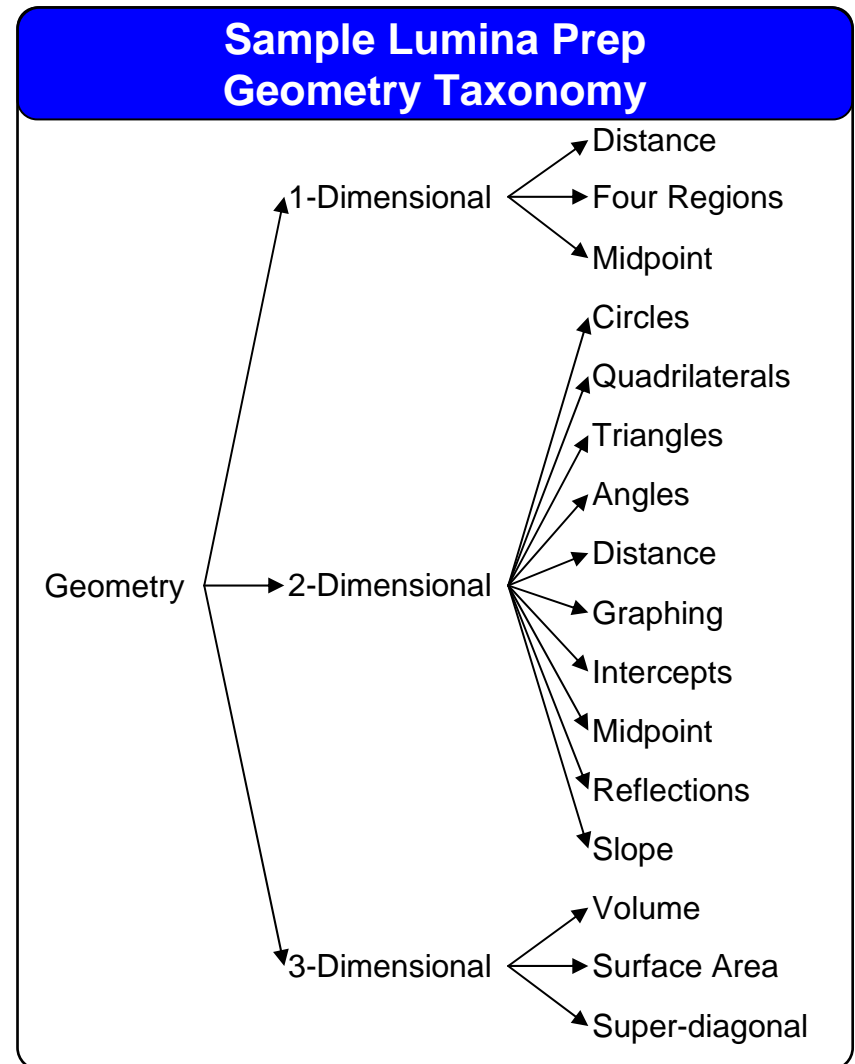
- "Be precise and clear."
- "Recognize logical connections within sentences."



# Myth 7: The PLAN/PSAT report is highly useful

The PLAN score report is *even more imprecise* than the PSAT score report. It distinguishes two types of verbal questions, two types of math questions, and one type of science question.

A much more fine-grained analysis of students' knowledge gaps can be obtained through the diagnostic systems of test prep companies.



# Lumina Prep's

## Math Profile

- First column describes concepts.
- Second column provides a broad qualitative assessment of student's knowledge.
- Third column suggests a calendar to review concepts.
- Fourth column represents the value of each concept.
- Fifth column represents the number of points student is projected to score on each concept.

	Concept Status	Review Date	Potential Value	My Projected Score
 <b>General</b>	<b>Master</b>	<b>05-07-08</b>	<b>0</b>	<b>0</b>
 <b>Arithmetic</b>	<b>Master</b>	<b>04-16-08</b>	<b>80</b>	<b>60</b>
Introduction to Arithmetic		04-16-08	0	0
Special Integers		not assigned	20	20
Factors, Multiples, Remainders		not assigned	30	20
Other Integers		not assigned	30	20
 <b>Algebra</b>	<b>Apprentice</b>	<b>04-16-08</b>	<b>210</b>	<b>150</b>
Introduction to Algebra		04-16-08	20	10
Algebra with One Equation		not assigned	50	40
Powers & Roots		not assigned	30	20
Algebra with Multiple Equations		not assigned	30	20
Introduction to Functions		not assigned	30	20
Advanced Functions		not assigned	30	20
Proportionality & Equivalence		not assigned	20	20
 <b>Geometry</b>	<b>Master</b>	<b>04-16-08</b>	<b>250</b>	<b>200</b>
Introduction to Geometry		04-16-08	0	0
Geometry in One Dimension		not assigned	30	30
Angles & Triangles		not assigned	90	50
Circles, Quadrilaterals, Mixed Figures		not assigned	60	50
Intro to Cartesian Geometry		not assigned	10	10
Advanced Cartesian Geometry		not assigned	50	50
Geometry in Three Dimensions		not assigned	20	10
 <b>Probability &amp; Statistics</b>	<b>Apprentice</b>	<b>04-23-08</b>	<b>60</b>	<b>40</b>
Statistics		04-16-08	30	20
Possibility & Probability		04-23-08	30	20
 <b>Sequences &amp; Logic</b>	<b>Master</b>		<b>30</b>	<b>20</b>
Sequences & Series		not assigned	20	10
Logic		not assigned	10	10
 <b>Word Problems</b>	<b>Apprentice</b>	<b>05-14-08</b>	<b>170</b>	<b>110</b>
Introduction to Word Problems		05-14-08	100	70
Interpreting Figures		not assigned	50	30
Ratios, etc.		not assigned	20	10
<b>Totals:</b>			<b>800</b>	<b>580</b>

# Myth 8: ACT scores are automatically reported

## **SAT score reporting:**

- Students cannot see their scores before deciding whether to cancel them.
- If any scores are reported to a school, all scores are reported to that school.
- Schools often mix-and-match to give students the best possible score.

## **ACT score reporting:**

- Student can see scores before deciding whether to cancel them.
- If any scores are reported to a school, all scores *from the same test* are reported to that school. *A student need not send scores from a poor test.*
- Schools often mix-and-match to give students the best possible score.



# Myth 9: Certain ACT & SAT test dates are harder than others

The ACT and SAT are carefully designed by psychometric experts to be uniform across test administrations.

Each question is carefully vetted multiple times and in multiple ways.

Any variation in difficulty between months is purely random and accidental. There *are no patterns* of difficulty variance.



# Myth 10: It's important to take the SAT when the booklet is offered

The Question-and-Answer (QAS) service is available for the October, January, and May tests.

Students who sign up for QAS receive a copy of the test, a list of the correct answers, and a list of their own actual answers.

While marginally helpful, QAS is not in itself a reason to take the test in October, January, or May.



# Contact us with your further questions!

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