

Strategies to Prepare SAT in an Effective Way

What You Need to Know the Aptitude of SAT Aspirants

SAT Preparation
Guidance and Tips

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SAT Overview

- ❖ The SAT is a high school standardized test considered by most of the colleges and universities in the process of admission.
- ❖ The purpose of the SAT is to measure a high school student's readiness for college, and provide colleges with one common data point that can be used to compare all applicants.
- ❖ The SAT is a standardized test that assesses a student's skills in four core areas: **Reading, Writing & Language, Math, and Essay (optional)**.
- ❖ Students of all 4 years from 9th-12th grade take the SAT so that they can submit their scores to colleges as part of the college application process. Usually 11th and 12th grade students take the SAT.
- ❖ SAT scores are valid for 5 years, from the date that they are taken.

Source: <https://collegereadiness.collegeboard.org/sat/inside-the-test>

Exam Details

SAT Sections	Duration (in min.)	Questions	Content/Skills Covered	Question Types
1. Reading	65	52	Passages or pairs of passages (literature, historical documents, social sciences, and natural sciences)	Multiple-choice
2. Writing & Languages	35	44	Grammar, vocabulary in context, and editing skills.	Multiple-choice
3. Math (Math Calc + Math No Calc)	80	58	Algebra I and II, geometry, and some trigonometry etc.	Multiple-choice + Grid-in
--3.1 Math Calculator	25	38		30 Multiple-choice + 8 Grid-in
--3.2 Math No Calculator	55	20		15 Multiple-choice + 5 Grid-in
4. Essay* (Optional)	50	01	Read a passage and explain how the author builds a persuasive argument	Essay prompt

Table 1: Content and curriculum coverage of each subject of SAT.

- * If you take the SAT with Essay, your essay will not factored into the Total or Section scores.
- Source: <https://collegereadiness.collegeboard.org/sat/inside-the-test/reading>

SAT Scoring System

	Reading	Writing & Language	Math	Essay* Reading	Essay* Writing	Essay* Analysis	ERBW	Math Composite	SAT Total
Total # of Points	52	44	58	8	8	8	96	58	154
Scaled Score	10-40	10-40	10-40	2-8	2-8	2-8	200-800	200-800	400-1600
Time/Question (Approx.)	1 Min. 25 Sec.	79 Sec.	1 Min. 37 Sec.	16 Min. 66 Sec.	16 Min. 66 Sec.	16 Min. 66 Sec.	NA	NA	NA
Question Type	Multiple Choice	Multiple Choice	Multiple Choice + Grid-in	Essay Prompt	Essay Prompt	Essay Prompt	NA	NA	NA

Table 2: SAT Scoring System.

- **Test/Subject Score:** There are 4 subjects scaled score.
- **Section/Grouped Score:** EBRW- Evidence Based Reading and Writing (Reading + Writing & Language) and Math Composite (Math).
- **SAT Total Score:** $\{(Reading\ Scale\ Score + Writing\ \&\ Language\ Scale\ Score) * 10 + Math * 20\}$ **or** (EBRW + Math) Section Scores.

* If you take the SAT with essay, your essay will not factored into the Total or Section scores.

NA - Not Applicable

Understanding SAT Score Report Calculation

- **Test/Scaled Score:**
 - The raw score of **Reading and Writing** are converted into the scale score on the 10-40 using the table provided by the College Board.
 - **To get in the scale score range of 10-40 for Math**, simply convert your raw score to final section score using the table then divide it by 20.

SAT Reading = 22

SAT Writing & Language = 27

SAT Math = 26

- **Section Score:**
 - **EBRW** (Reading + Writing & Language) : Using the Scale Score of 10-40 multiplied by 10 to get in the range of 200-800.
 - **Math**: Using the Math Scale Score of 10-40 multiplied by 20 to get in the range of 200-800.

EBRW = 490

Math = 520

- **Raw Score:**

Total number of **correct questions** in each subject.

- **Marking System:**

1 point for each correct answer **no negative marking** for incorrect answer.



Figure 1: Sample SAT Report of College Board

Diagnostic Report for Student,1

Big Picture — Your Scores, Practice History, and Trends

Performance Summary

	Reading	Writing & Language	Math	Essay Reading	Essay Writing	Essay Analysis	Total	Math Composite	EBRW
	10-40	10-40	10-40	2-8	2-8	2-8	400-1600	200-800	200-800
2019-12-09	32	33	36	7	6	7	1370	720	650
Points to Improve	8	7	4	1	2	1	230	80	150

Practice Summary

		Reading	Writing & Language	Math	Essay Reading	Essay Writing	Essay Analysis	Total	EBRW	Math Composite
		10-40	10-40	10-40	2-8	2-8	2-8	400-1600	200-800	200-800
2019-12-09	■ April 2019 - E-Book for SAT April 2019	32	33	36	7	6	7	1370	650	720
Best		32	33	36	7	6	7	1370	650	720

Figure 2: Subject-wise Performance Summary of Student

Smart Strategy for Preparation: Case Study

- Strategy:**
- Step1: Take a mock-up test
 - Step 2: Find the strong subjects.
 - Step 3: Setting the SAT targeted score.
 - Step 4: Subject Area & Topic-Wise Analysis to Improve Total Points.

Step 1: Finding your strong subjects

- You take the mock-up test without preparation with any institutes or online tools like Socrato, which provides the diagnostic/analytical reports etc.

Step 2: Finding your strong subjects

- For example, shown in figure-2 subject scores are :

SAT Reading = 32, ←
SAT Writing & Language = 33, ←
SAT Math = 36. ←

- Inference:** As you can observe, as per the subject score *Math and Writing & Language are stronger than Reading*. Which indicates student's natural strengths are Math and Writing & Language.

Effective Way to Achieve the Targeted SAT Total Score: Case Study

Step 3: Setting the targeted score.

- To figure out your **SAT target score**, look up the score range requirements of colleges.
- Usually on an average score range requirements of many colleges are **1500-1600**.
- For example:
 - Assume, you are targeting for **1500**
 - And your **Baseline SAT Total Score = 1370** as per mock up Test.
 - Score difference between Targeted score and Mock up test score.

SAT Total and Baseline SAT Total i.e. **1500-1370 = 130**
more scale points are needed to achieve your goal.

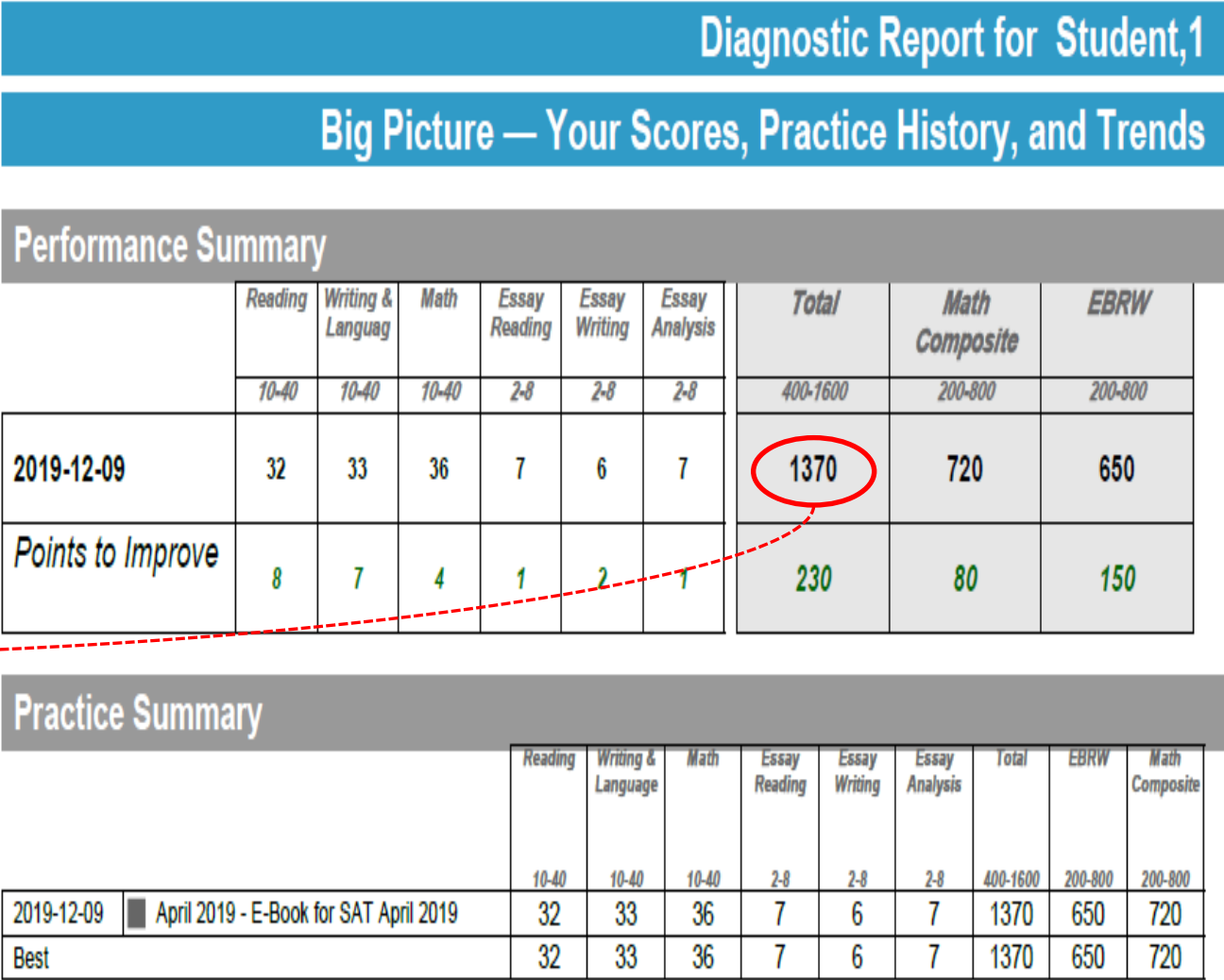


Figure 3: Performance Summary of Student in Mock Test 7

Subject Area Analysis to Improve Total Points: Case Study

Step 4: Subject Area & Topic-Wise Analysis to Improve Total Points.

- For example, score scored in the mock test are shown in table 3.

Subject	Actual Correct Question	Equivalent Scaled Score
Reading	43	32
Writing & Language	40	33
Math	52	36
Total/Composite	135 (Total)	$(31+33)*10+36*20=1370$ (SAT Total)

Table 3: Actual Score of Mock Test

- To get 1500 scaled score - we need to adjust 09 points to increase 130 total score = $1370+130 = 1500$ SAT total (target score).

Subject	Points to Improve	Expected Correct Question	Equivalent Scaled Score	Scale Points Improved
Reading	2	45	34	2
Writing & Language	3	43	38	5
Math	4	56	39	3
Total/Composite	09	144 (Total)	$(34+38)*10+39*20=1500$ (SAT Total)	$(2+5)*10+3*20=130$ (SAT Total)

Table 4: Expected Score of Test

Current Test Analysis — SAT April 2019 CollegeBoard Test									
Subject Area & Question Type Analysis									
Question Type	Correct	Wrong	Omit	Total	Raw	% Correct	% Raw	Point Cost	
Essay Reading	1	0	0	1	7.0				
Written Essay	1	0	0	1	7.0	88%	88%		
Essay Analysis	1	0	0	1	7.0				
Written Essay	1	0	0	1	7.0	88%	88%		
Essay Writing	1	0	0	1	6.0				
Written Essay	1	0	0	1	6.0	75%	75%		
Reading	43	9	0	52	43.0	82%	82%	8	
Reading Passage – Single	34	8	0	42	34.0	81%	81%	7.1	
Reading Passage – Paired	9	1	0	10	9.0	90%	90%	0.9	
Writing & Language	40	4	0	44	40.0	90%	90%	7	
Usage/Mechanics	21	4	0	25	21.0	84%	84%	7.0	
Rhetorical Skills	19	0	0	19	19.0	100%	100%	0.0	
Math	52	6	0	58	52.0	89%	89%	4	
Math - Algebra and	31	5	0	36	31.0	86%	86%	3.3	
Math - Num + Operator	9	1	0	10	9.0	90%	90%	0.7	
Math - Data, Stats +	8	0	0	8	8.0	100%	100%	0.0	
Math - Geometry and	4	0	0	4	4.0	100%	100%	0.0	

Figure 4: Subject Area and Question Type Analysis

Subject Area Analysis to Improve Total Points: Case Study Contd..

Topic-wise analysis to gain 2 points in Reading:

- As shown in figure-5, topic-wise performance summary of Reading :
- There are 52 questions in **Passage Single** and **Passage Paired** and student got 43 out of 52.
 - Within in **Passage Single** there are 10 questions in **Fictions** and student got 04 out of 10- **Fiction** is not the strength and will require lot of effort.
- Student got = 09/10 in topic – **Passage Paired** then medium chance i.e. more chances to get 100% over here to get all correct.
- Within **Passage Single & Passage Paired**, **Vocabulary** = 08/09 then high chances i.e. more chances to get 100% over here to get all correct.
- Inference:** To get more marks in the less time, you should first focus in the **vocabulary** withing **Passage Single & Passage Paired** topic.

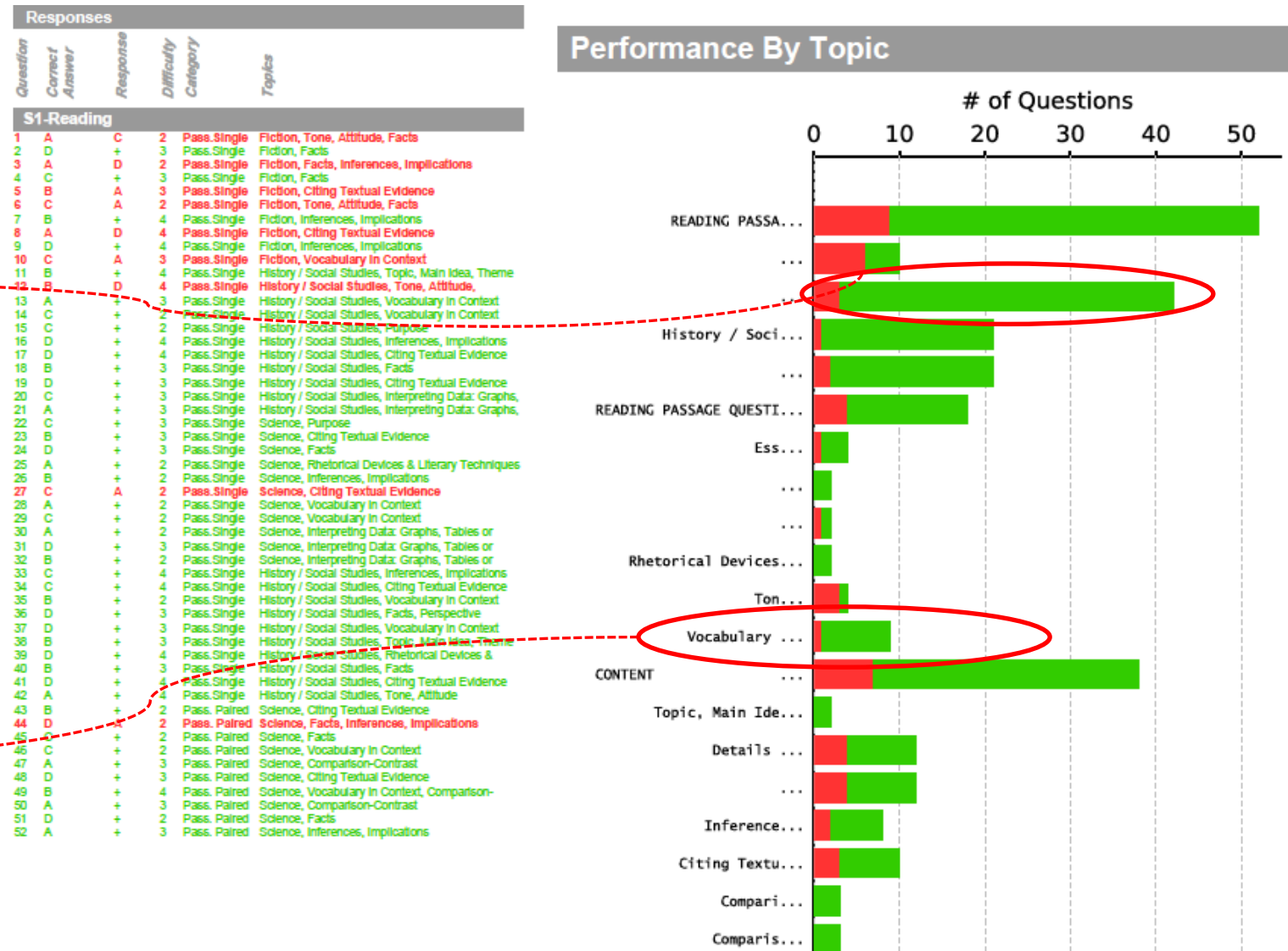


Figure 5: Topic-wise performance summary of student for subject Reading

Subject Area Analysis to Improve Total Points: Case Study Contd..

Topic-wise analysis to gain 3 points in Writing & Language :

Language :

- As shown in figure-6, topic-wise performance summary of Math :
- There are 44 questions in **Writing UM & RH** and student got 40 out of 44.
 - Within **Writing UM** there are 07 questions in **Punctuation** and student got 05 out of 07- **Punctuation** is not the strength and will require lot of effort.
- Student got = 15/15 in topic – **Clear & Concise Writing** then 90% chances that you will get same every time.
- Student got = 07/08 in topic – **Word Choice** then high chances i.e. more chances to get 100% over here to get all correct.
- Inference:** To get more marks in the less time, you should first focus in the **Word Choice** topic.

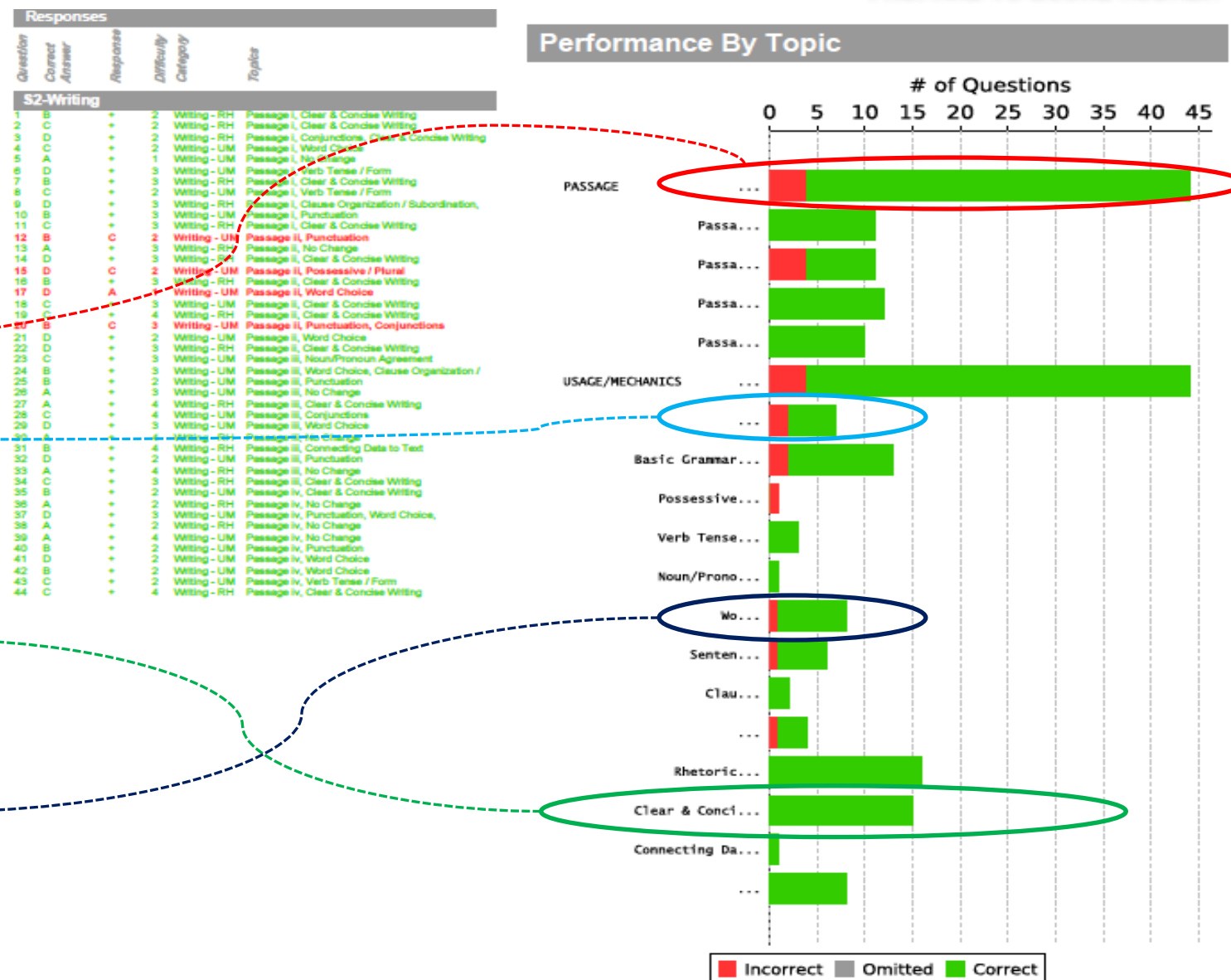


Figure 6: Topic-wise Performance Summary of Student for subject Writing & Language 10

Subject Area Analysis to Improve Total Points: Case Study Contd..

Topic-wise analysis to gain 4 points in Math

- As shown in figure-7, topic-wise performance summary of Science :

- Student got = 10/12 in topic – **Operations** then then **medium chances** i.e. more chances to get 100% over here to get all correct.

- Student got = 01/02 & 30/31 in topics – **Angel & Lines** and **Numerical Problems** respectively then then **high chances** i.e. more chances to get 100% over here to get all correct.

- Student got = 01/02 and 24/25 in topic – **Distance Between Points (DBP)** and **Word Problems** then **high chances** i.e. more chances to get 100% over here to get all correct.

- Inference:** You can work together on Angel & Lines, Numerical Problems, DBP, and Word Problem.

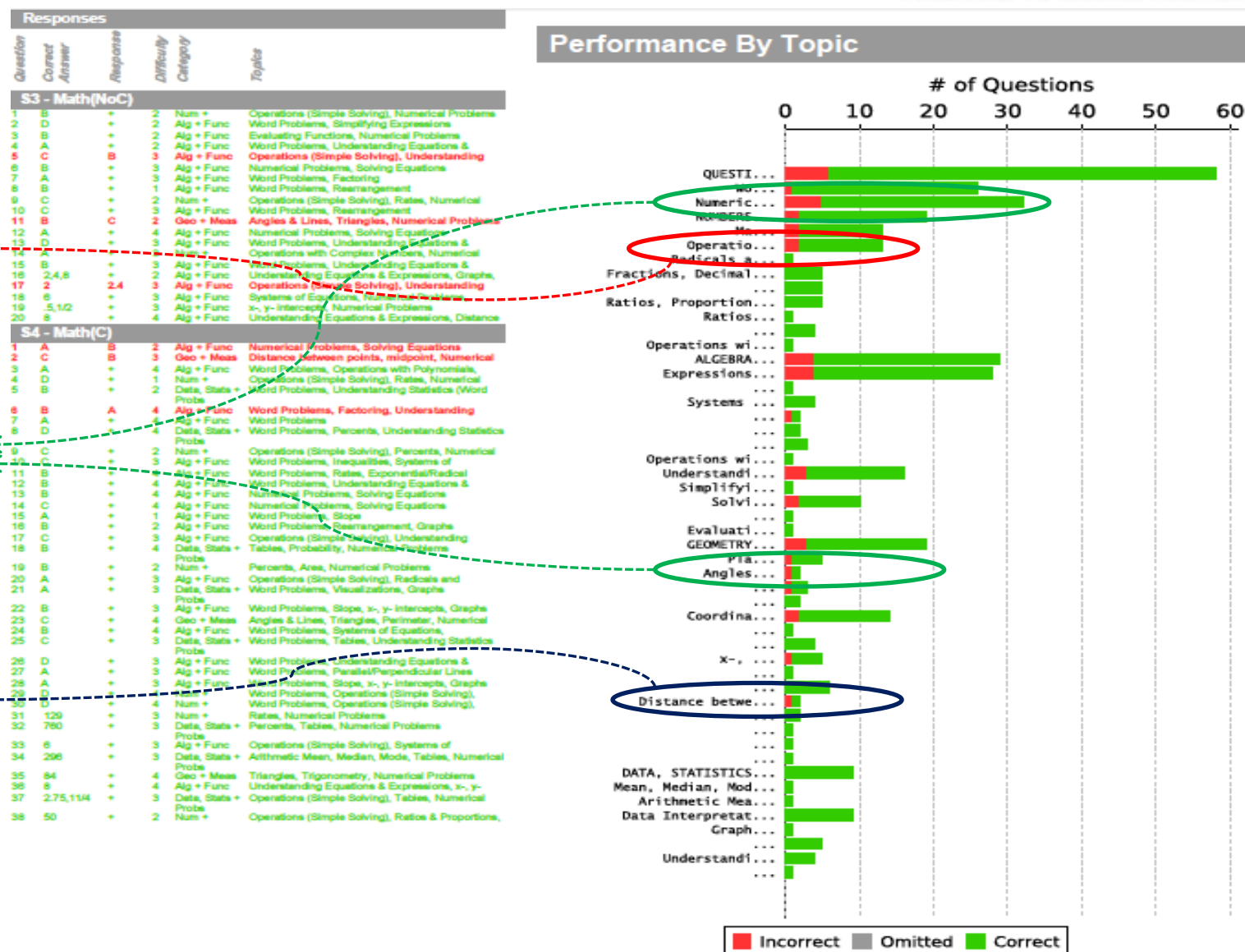


Figure 7: Topic-wise performance summary of student for subject Math

Preparation as per Priority

Based on the above subjects and topic analysis, student's priority of preparation should be:

- **Priority 1-** If you solve at least 04 more questions correctly in **Math** then your raw score will be 56 and Raw Score 56 \approx **Scaled Score 780**. ←
- **Priority 2-** If you solve at least 03 more questions correctly in **Writing & Language** then your Raw Score will be 43 and Raw Score 43 \approx **Scaled Score 38**. ←
- **Priority 3-** If you solve at least 02 more questions correctly in **Reading** then your Raw Score will be 45 and Raw Score 45 \approx **Scaled Score 34**. ←
- Final SAT Total Score will be $(780 + (38 + 34) * 10) = 1500$.

CONVERSION TABLES

Raw Score Conversion – Section and Test Scores (Paper Test)

Section and Test Scores

RAW SCORE CONVERSION TABLE 1

Raw Score (# of correct answers)	Math Section Score	Reading Test Score	Writing and Language Test Score
0	200	10	10
1	200	10	10
2	210	10	10
3	220	10	11
4	240	11	11
5	250	12	12
6	260	13	13
7	280	14	14
8	290	14	15
9	300	15	15
10	310	15	16
11	330	16	16
12	340	17	17
13	350	17	17
14	360	18	18
15	370	18	18
16	390	19	19
17	400	19	19
18	410	19	20
19	420	20	20
20	430	20	21
21	450	21	21
22	460	21	22
23	470	22	22
24	480	23	23
25	490	23	23
26	500	24	24
27	510	24	24
28	510	25	25
29	520	25	26

Raw Score (# of correct answers)	Math Section Score	Reading Test Score	Writing and Language Test Score
30	530	26	26
31	530	26	27
32	540	27	28
33	550	27	28
34	550	28	29
35	560	28	29
36	570	29	30
37	580	29	31
38	590	30	31
39	590	30	32
40	600	31	33
41	610	31	34
42	620	32	36
43	630	32	38
44	640	33	40
45	650	34	
46	660	34	
47	670	35	
48	680	36	
49	690	37	
50	700	38	
51	710	39	
52	720	40	
53	740		
54	750		
55	770		
56	780		
57	790		
58	800		

Figure 8: SAT Scale Score provided by College Board for April 2019. 12

As per the full analysis we reached to the conclusion, if we use these strategies there is a high possibility of achieving the targeted score.

Here is the final strategy:

- Decide the target score goal.
- Take the mock-up test.
- Find the difference between the Test score and Targeted score.
- Analyze the mock-up test.
- Identify the strong and areas of improvement in subject-wise and topic-wise.
- Prepare first high priority subject and topics.
- Take practice individual subject test to check the improvement.
- Take full length test before actual test.

Appendix: Resources

- **About College Board SAT**
<https://collegereadiness.collegeboard.org/sat>
- **Socrato's Brand New SAT Diagnostics Report**
https://www.socrato.com/websitecms/wp-content/uploads/2018/05/Sample-Student_1-CollegeBoard-rSAT-2016-Sample-Test-4-NR-2018.05.02-1.pdf
- **SAT Mock-up Test**
https://www.socrato.com/socrato/tests/tests/browse/?frm_advanced_search=1&exam_category=48
- **More Information about SAT**
<https://collegereadiness.collegeboard.org/pdf/test-specifications-redesigned-sat-1.pdf>

Thank You

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