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PREPARE TO SCORE HIGHER

Strategies to Prepare ACT in an Effective Way

What You Need to Know the Aptitude of ACT Aspirants

ACT Preparation
Guidance and Tips

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ACT Overview

- ❖ The **ACT** is a college entrance exam that many colleges and universities in the United States use as part of the *college admissions process*.
- ❖ The **ACT** is a standardized test that assesses a student's skills in five core areas: **English, Math, Reading, Science, and Writing (optional)**.
- ❖ Students of all 4 years from 9th-12th grade take the **ACT** so that they can submit their scores to colleges as part of the college application process. Usually 11th and 12th grade students take the ACT.
- ❖ **ACT scores are valid for 5 years**, from the date that they are taken.

Source: <https://www.act.org/content/act/en/products-and-services/the-act.html>

Exam Details

ACT Sections	Duration (in min.)	Questions	Content/Skills Covered	Question Types
English	45	75	Grammar & usage, punctuation etc.	Multiple-choice usage/mechanics and rhetorical skills
Math	60	60	Algebra, geometry, trigonometry etc.	Multiple-choice
Reading	35	40	Reading comprehension	Multiple-choice referring and reasoning
Science	35	40	Interpretation, analysis etc.	Multiple-choice data representation etc.
Essay* (Optional)	30	01	Writing skills	Essay prompt

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

- *** If you take the ACT with Writing, your essay will not factored into the composite score.**
- **Source:** <http://www.act.org/content/act/en/search.html#stq=syllabus>

ACT Scoring System

	English	Math	Reading	Science	Writing /Essay* (Optional)	ELA	STEM	Composite
Total # of Questions	75	60	40	40	1	115	100	215
Scaled Score	1-36	1-36	1-36	1-36	2-12	1-36	1-36	1-36
Time/Question	36 Sec.	60 Sec.	52.5 Sec.	52.5 Sec.	NA	NA	NA	NA
Question Type	Multiple Choice	Multiple Choice	Multiple Choice	Multiple Choice	Essay Prompt	NA	NA	NA

Table 2: ACT Scoring System.

- **Subject Score:** There are 4 subjects scaled score.
- **Grouped Score:** STEM (Math + Science) and ELA (English + Reading + Essay*).
- **Composite Score:** Average of all subjects (English + Math + Reading + Science) scaled score.

*** If you take the ACT with Writing, your essay will not factored into the composite score.**
NA - Not Applicable

Understanding ACT Score Conversion

- **Subject/Scaled Score:** The raw score of English, Math, Reading, Science, and Writing are converted into scale score on the 1-36 & 2-12 respectively **defined by ACT** organization.
- **Grouped Score:**
 - STEM = (Math + Science)/2 , score range between 1-36.
 - ELA = (English + Reading + Writing)/3, score range between 1-36.
- **Composite Score:** Average of all compulsory subject scores.
- **Percentile:** National distribution of cumulative percent for ACT.
- **Raw Score:** Total number of **correct questions** in each subject.
- **Benchmark:** are the minimum ACT® college readiness assessment scores bearing college courses.
- **Marking System:** 1 point for each correct answer, **no negative marking** for incorrect answer.

English = 24
 Math = 19
 Reading = 23
 Science = 18
 Writing = 08 (Optional)
 Composite = 21
 STEM = 19
 ELA = 24

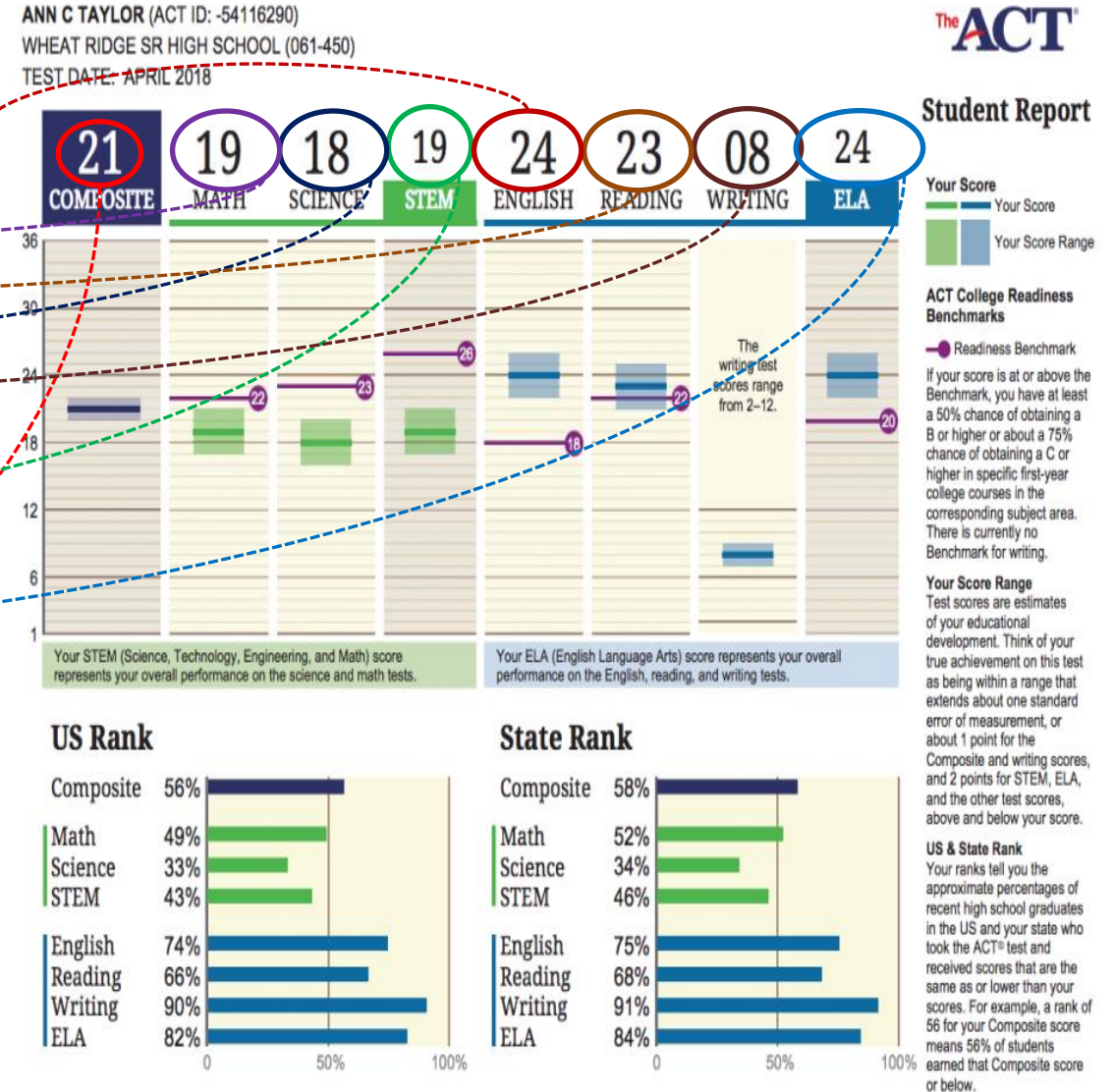


Figure 1: Sample ACT Student Report of the ACT Organization

Smart Strategy for Preparation: Case Study

Strategy:

- Step 1: Take a mock-up test
- Step 2: Find the strong subjects.
- Step 3: Setting the ACT targeted composite 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 :
 - English = 31,
 - Math = 32,
 - Reading = 30,
 - Science = 33
- Inference:** As you can observe, as per the subject score **Math and Science are stronger than other**. Which indicates student's natural strengths are Math and Science.

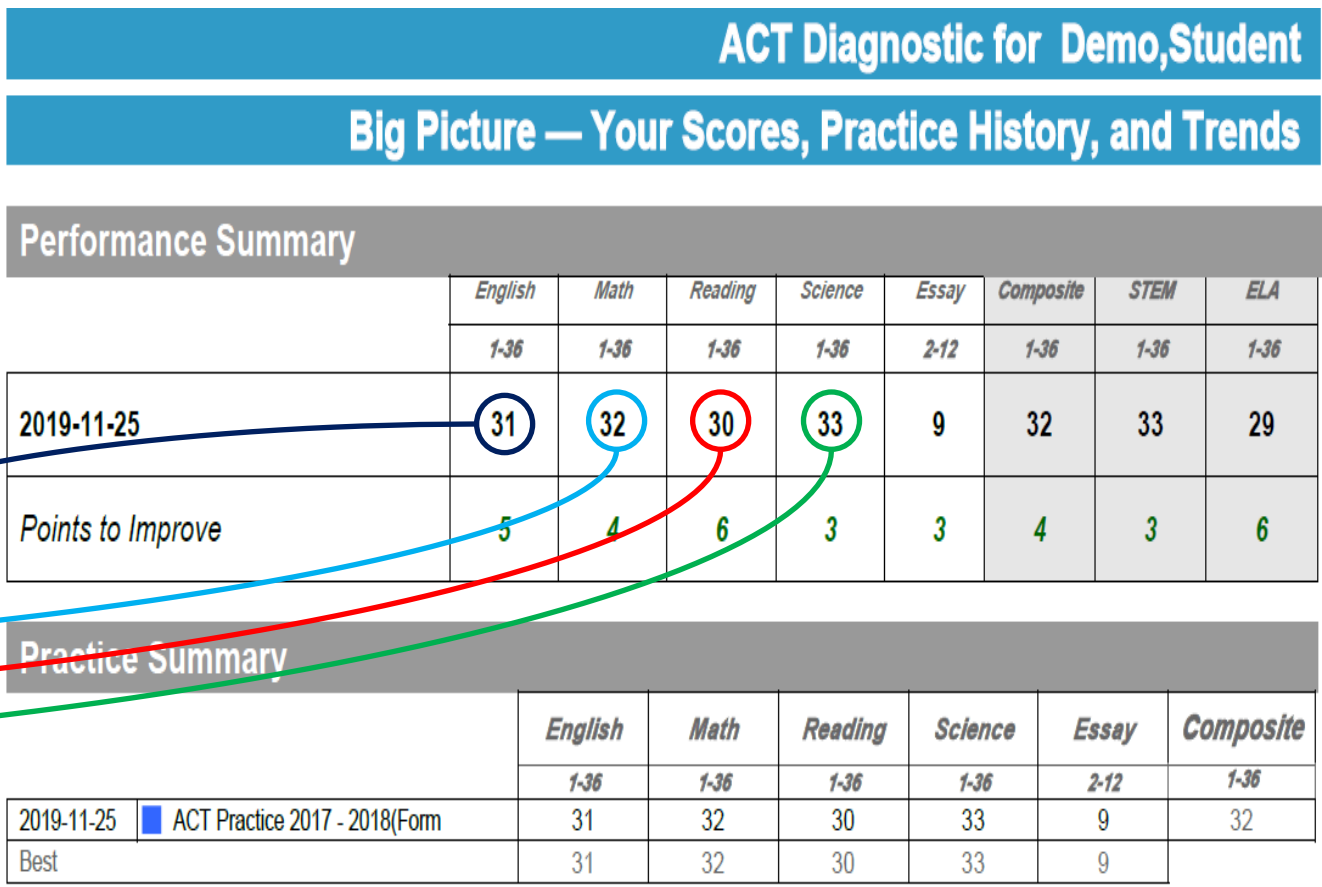


Figure 2: Subject-wise Performance Summary of a Student

Effective Strategy to Achieve the Targeted Composite Score: Case Study

Step 3: Setting the targeted composite score.

- To figure out your ACT target score, look up the score range requirements of colleges.
- Usually on an average score range requirements of many colleges are **34-36**.
- For example:
 - Assume, you are targeting for **34**
 - And your **Baseline ACT Composite Score = 32**, as per the mock-up test.
 - Score difference between targeted score and mock-up test score.

Difference between ACT Composite Score and Baseline ACT Composite Score i.e. $34-32=02$

Therefore, 2 more scale points are needed to achieve your goal.

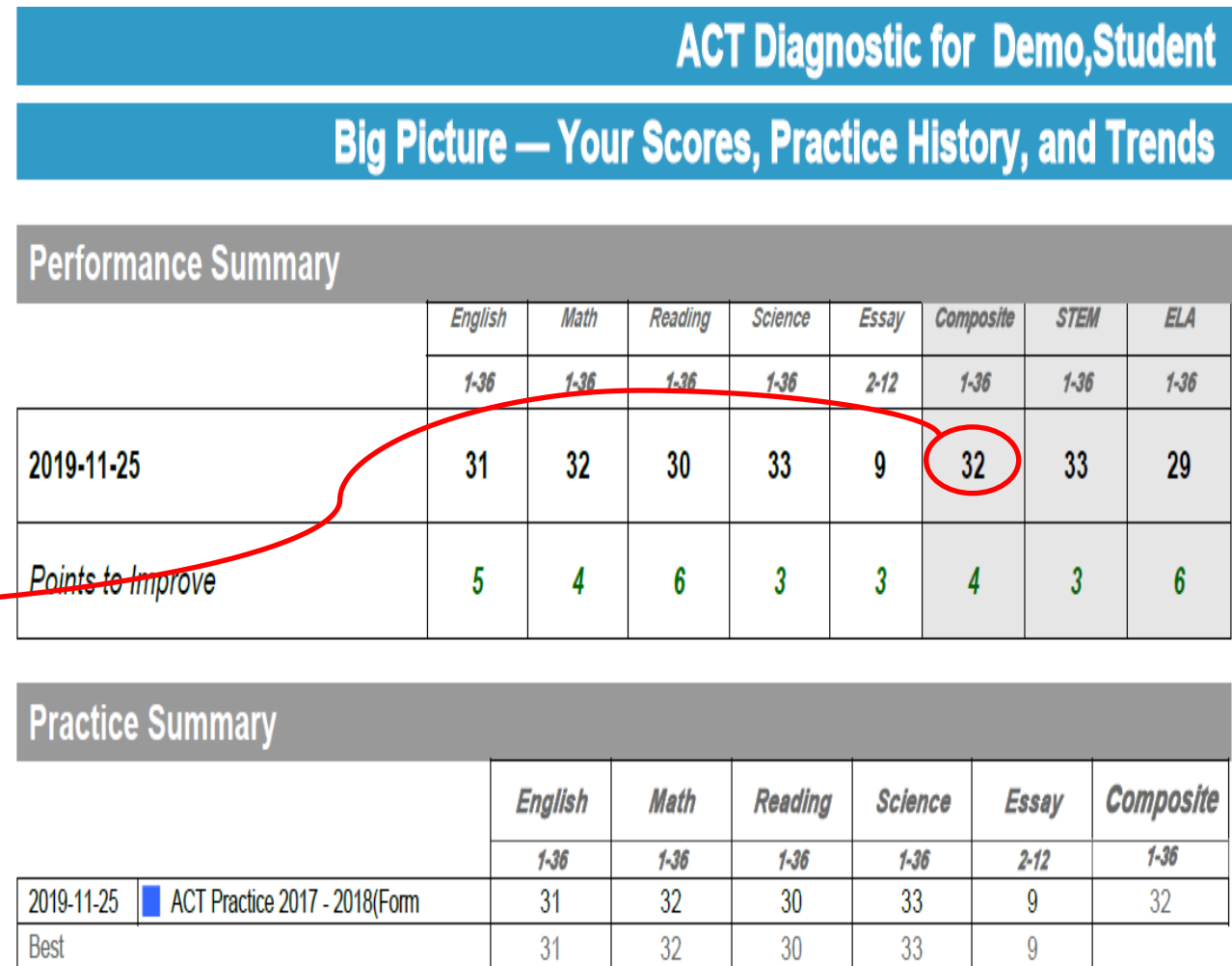


Figure 3: Performance Summary of a Student in Mock Test

Subject Area Analysis to Improve Total Points: Case Study

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

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

Subject	Actual Correct Question	Equivalent Scaled Score
English	67	31
Math	54	32
Reading	33	30
Science	37	33
Total/Composite	191 (Total)	$(31+32+30+33)/4=31.5$ ≈32 (Composite)

Table 3: Actual Score of the Mock-up Test

- To get 34 (targeted score) scaled score - we need to adjust 10 points to increase 2 composite points = $32+2 = 34$ composite.

Subject	Points to Improve	Expected Correct Question	Equivalent Scaled Score	Scale Points Improved
English	4	71	34	3
Math	4	58	35	3
Reading	0	33	30	0
Science	2	39	35	3
Total/Composite	10	201 (Total)	$(34+35+30+35)/4=33.5$ ≈ 34 (Composite)	$(3+3+0+3)/4=2.25$ (Composite)

Table 4: Expected Score for the Test

Current Test Analysis — ACT Practice 2016-2017 (Form1572C-)						
Subject Area & Question Type Analysis						
Question Type	Correct	Wrong	Omit	Total	%Correct	Scaled Score
English	67	8	0	75	89%	31
POW - Production of Writing	23	1	0	24	96%	
KLA - Knowledge of Language	9	2	0	11	82%	
CSE - Conventions of Standard	35	5	0	40	88%	
Math	54	6	0	60	90%	32
PHM - Number & Quantity	5	0	0	5	100%	
PHM - Algebra	6	2	0	8	75%	
PHM - Functions	8	0	0	8	100%	
PHM - Geometry	7	1	0	8	88%	
PHM - Statistics & Probability	6	1	0	6	83%	
IES - Integrating Essential Skills	23	2	0	25	92%	
MDL - Modeling	20	2	0	22	91%	
Reading	33	7	0	40	83%	30
KID - Key Ideas & Details	20	3	0	23	87%	
CS - Craft & Structure	10	4	0	14	71%	
IKI - Integration of Knowledge	3	0	0	3	100%	
Science	37	3	0	40	93%	33
IOD - Interpretation of Data	15	1	0	16	94%	
SIN - Scientific investigation	9	2	0	11	82%	
EMI - Evaluation of Models,	13	0	0	13	100%	

Figure 4: Subject Area and Question Type Analysis

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

Topic-wise analysis to gain 4 points in English:

As shown in figure-6, topic-wise performance summary of English :

- There are 32 questions in **USAGE/ MECHANICS** and student got 28 out of 32.
 - Within **USAGE/ MECHANICS** there are 14 questions in **Punctuation** and student got 10 out of 14- **Punctuation** is not the strength and will require lot of effort.
- Student got = 31/35 in topic – **RHETORICAL SKILLS** then medium chance i.e. more chances to get 100% over here to get all correct.
 - Within **RHETORICAL SKILLS** , **Clear & Concise Writing** = 03/09 and **Content**= 18/19 then medium chance 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 **RHETORICAL SKILLS** topic.

Responses					
Question	Correct Answer	Response	Difficulty	Category	
1-English					
1	A	+	1	CSE	No Change
2	J	+	1	POW	Clause Organization / Subordination
3	D	+	3	CSE	Fragment
4	H	+	2	CSE	Modifiers & Modification
5	B	+	1	CSE	Punctuation, Clear & Concise Writing
6	J	+	2	CSE	Possessive / Plural
7	B	+	3	POW	Content
8	J	+	2	CSE	Possessive / Plural
9	C	+	2	CSE	Punctuation
10	J	+	1	CSE	Fragment, Clear & Concise Writing
11	B	+	1	CSE	Adverb / Adjective Confusion
12	G	H	2	CSE	Punctuation
13	A	+	3	POW	Content
14	H	+	4	POW	Paragraph Organization
15	D	B	5	POW	Content
16	H	+	1	CSE	Modifiers & Modification
17	B	+	1	CSE	Verb Tense / Form
18	J	+	2	KLA	Clear & Concise Writing
19	C	+	2	CSE	Idioms & Word Choice
20	H	+	1	CSE	Clear & Concise Writing
21	A	+	2	CSE	No Change
22	F	+	2	CSE	No Change
23	B	+	3	POW	Content
24	H	+	2	CSE	Punctuation
25	C	+	2	CSE	Punctuation
26	F	+	4	POW	Content
27	D	+	2	POW	Clause Organization / Subordination
28	G	+	2	KLA	Content
29	A	+	4	POW	Paragraph Organization
30	F	+	5	POW	Content
31	B	+	2	CSE	Punctuation
32	H	+	1	CSE	Punctuation
33	B	+	2	CSE	Punctuation
34	H	+	4	POW	Content
35	A	+	2	CSE	Verb Tense / Form
36	F	+	3	POW	No Change
37	A	+	2	CSE	No Change
38	F	+	3	KLA	No Change
39	C	+	1	KLA	Clear & Concise Writing
40	J	G	2	CSE	Clear & Concise Writing
41	C	A	2	KLA	Content, Clear & Concise Writing
42	G	+	1	CSE	Ambiguous Pronoun
43	D	+	1	CSE	Pronoun Case
44	J	+	5	POW	Paragraph Organization
45	C	+	6	POW	Content
46	J	H	1	CSE	Punctuation
47	D	+	2	CSE	Verb Tense / Form
48	H	+	1	POW	Clause Organization / Subordination
49	B	+	2	CSE	Ambiguous Pronoun
50	F	G	1	CSE	Punctuation
51	D	+	4	POW	Content
52	J	+	2	KLA	Clear & Concise Writing
53	A	+	2	CSE	No Change
54	F	+	3	CSE	No Change
55	B	+	4	KLA	Content
56	G	+	4	POW	Content
57	C	+	5	POW	Paragraph Organization
58	F	+	2	POW	Content
59	D	A	3	KLA	Clear & Concise Writing
60	G	+	5	POW	Content
61	C	+	1	CSE	Idioms & Word Choice
62	G	H	2	CSE	Punctuation
63	D	+	1	CSE	Possessive / Plural, Noun/Verb Agreement
64	F	+	2	CSE	No Change
65	C	+	4	POW	Content

Performance By Topic



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

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

Topic-wise analysis to gain 4 points in Math:

- As shown in figure-6, topic-wise performance summary of Math :
- There are 18 questions in **Algebra & Functions** and student got 14 out of 18.
 - Within **Algebra & Functions** there are 07 questions in **Word Problems** and student got 04 out of 07- Word Problems is not the strength and will require lot of effort.
- Student got = 18/18 in topic – **Numbers & Operations** then 90% chances that you will get same every time.
- Student got = 18/21 in topic – **Geometry & Measurement** then medium chance i.e. more chances to get 100% over here to get all correct.
 - Within Geometry & Measurement , **Coordinate (Analytical) Geometry** = 04/06 and **Measurement** = 05/06 then medium chance 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 **Geometry & Measurement** topic.

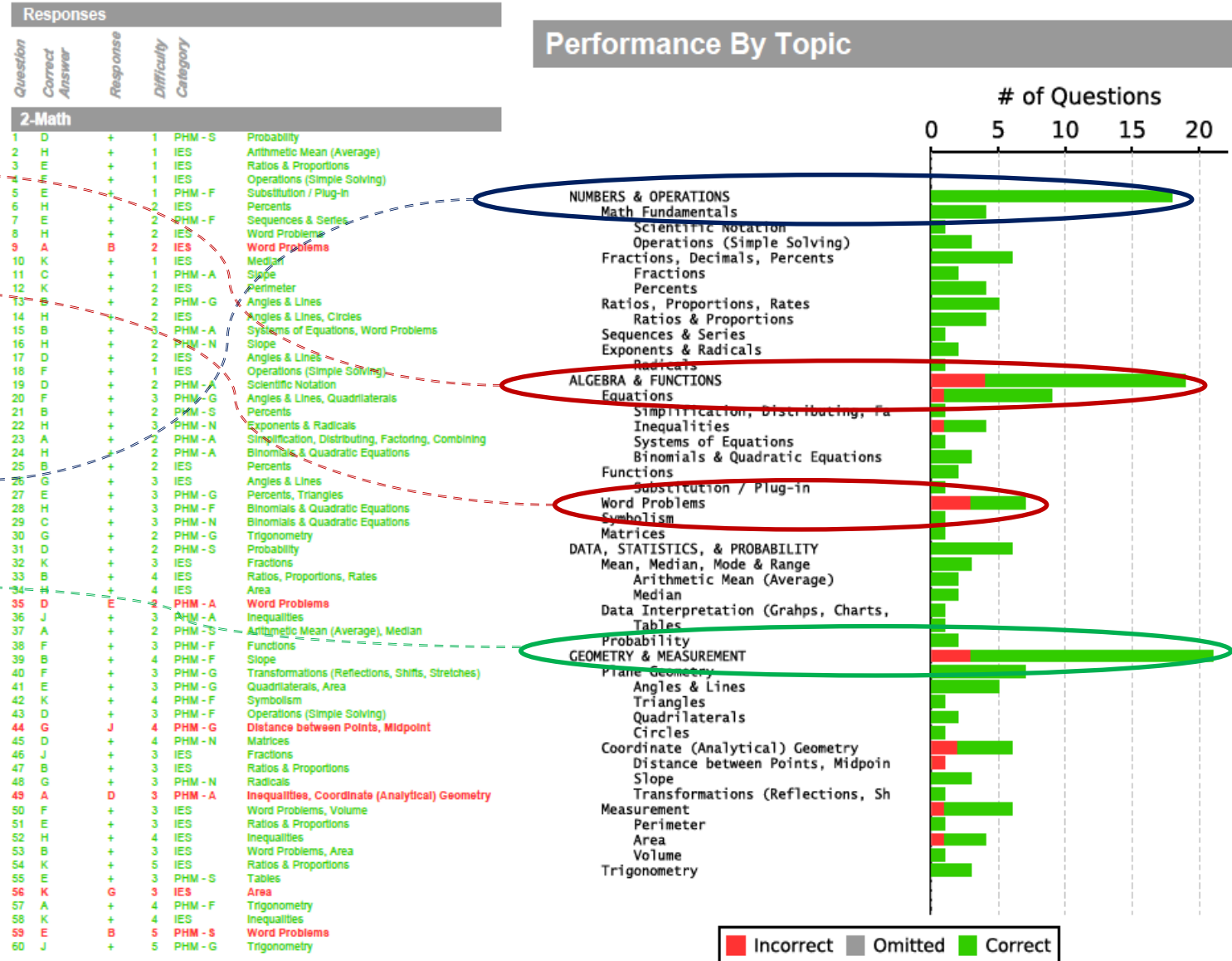


Figure 6: Topic-wise performance summary of a student for subject Math

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

Topic-wise analysis to gain 2 points in Science:

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

- Student got = 14/15 in topic – **Data Representations** then then medium chance i.e. more chances to get 100% over here to get all correct.

- Student got = 16/17 in topic – **Research Summary** then then medium chance i.e. more chances to get 100% over here to get all correct.

- Student got = 06/07 in topic – **Conflict View Points** then then medium chance i.e. more chances to get 100% over here to get all correct.

- Inference:** You can either work on Data Representations or Research Summary or Conflict View Points.

Responses				
Question	Correct Answer	Response	Difficulty	Category
4-science				
1	C	+	1	IOD
2	G	+	2	SIN
3	D	+	2	SIN
4	G	+	3	SIN
5	C	+	3	EMI
6	F	+	2	SIN
7	A	+	1	SIN
8	F	+	1	EMI
9	D	+	1	EMI
10	J	H	3	IOD
11	C	+	2	EMI
12	F	+	3	EMI
13	B	+	2	EMI
14	F	+	1	EMI
15	C	+	1	IOD
16	F	+	2	IOD
17	B	+	1	IOD
18	H	+	2	IOD
19	B	+	1	IOD
20	J	+	1	EMI
21	D	+	3	EMI
22	F	+	2	IOD
23	B	+	2	IOD
24	J	+	3	IOD
25	B	+	1	IOD
26	H	+	3	IOD
27	A	+	2	SIN
28	J	G	2	SIN
29	C	+	4	EMI
30	F	+	4	EMI
31	B	+	3	SIN
32	G	+	5	EMI
33	D	+	5	IOD
34	J	+	3	SIN
35	A	D	4	SIN
36	H	+	5	IOD
37	B	+	4	SIN
38	F	+	5	EMI
39	D	+	5	IOD
40	J	+	3	IOD

Performance By Topic

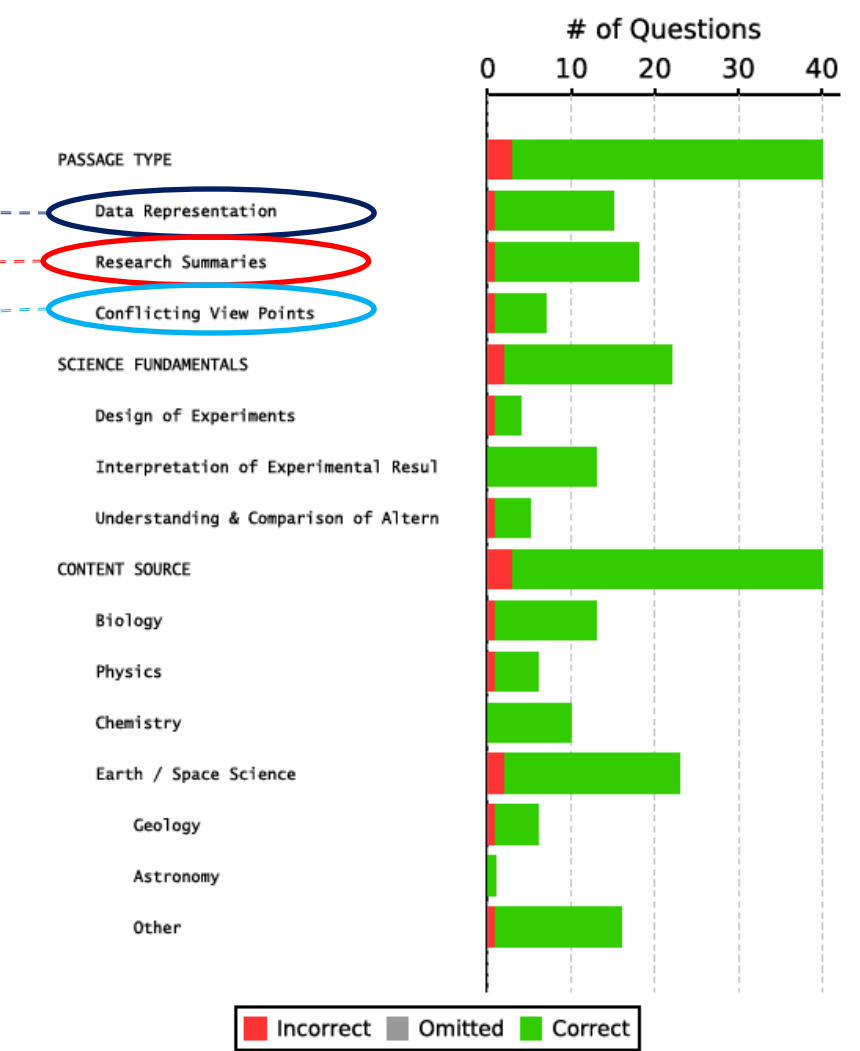


Figure 7: Topic-wise performance summary of a student for subject Science

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 02 more questions correctly in **Science** then your raw score will be 39 and Raw Score 39 \approx **Scaled Score 35**.
- Priority 2-** If you solve at least 04 more questions correctly in **Math** then your Raw Score will be 58 and Raw Score 58 \approx **Scaled Score 35**.
- Priority 3-** If you solve at least 04 more questions correctly in **English** then your Raw Score will be 71 and Raw Score 71 \approx **Scaled Score 34**.
- No need to put extra effort in **Reading**, since you can earn 10 points within Science, Math, and English as we discussed above.
- Then final Composite Scaled Score will be $(35+35+34+30)/4 = 33.5 \approx 34$.

Scale Score	Raw Scores				Scale Score
	Test 1 English	Test 2 Mathematics	Test 3 Reading	Test 4 Science	
36	75	60	40	40	36
35	72-74	58-59	39	39	35
34	71	57	38	38	34
33	70	55-56	37	37	33
32	68-69	54	35-36	—	32
31	67	52-53	34	36	31
30	66	50-51	33	35	30
29	65	48-49	32	34	29
28	63-64	45-47	31	33	28
27	62	43-44	30	32	27
26	60-61	40-42	29	30-31	26
25	58-59	38-39	28	28-29	25
24	56-57	36-37	27	26-27	24
23	53-55	34-35	25-26	24-25	23
22	51-52	32-33	24	22-23	22
21	48-50	30-31	22-23	21	21
20	45-47	29	21	19-20	20
19	43-44	27-28	19-20	17-18	19
18	41-42	24-26	18	16	18
17	39-40	21-23	17	14-15	17
16	36-38	17-20	15-16	13	16
15	32-35	13-16	14	12	15
14	29-31	11-12	12-13	11	14
13	27-28	8-10	11	10	13
12	25-26	7	9-10	9	12
11	23-24	5-6	8	8	11
10	20-22	4	6-7	7	10
9	18-19	—	—	5-6	9
8	15-17	3	5	—	8
7	12-14	—	4	4	7
6	10-11	2	3	3	6
5	8-9	—	—	2	5
4	6-7	1	2	—	4
3	4-5	—	—	1	3
2	2-3	—	1	—	2
1	0-1	0	0	0	1

1572CPRE

Figure 8: ACT Scale Score provided by ACT organization for 1572C PRE. 12

Conclusion

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 mock-up test composite score and targeted composite 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

- **ACT Information**
<https://www.act.org/>
- **Socrato Brand New ACT Report**
<https://www.socrato.com/socrato-reports/student-reports/>
- **More Information on the ACT**
<https://www.act.org/content/act/en/products-and-services/the-act-non-us/test-preparation.html>

Thank You

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