

SAT & ACT Analysis

GENERAL ASSEMBLY
PROJECT 1

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Background: What you need to know

SAT & ACT

To measure your readiness for college



One standardized score



Easy for colleges to compare all applicants



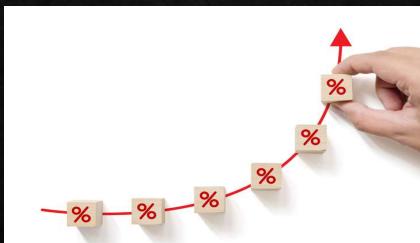
Higher score, more college options

Background: What you need to know

SAT & ACT



Mandatory for admittance
for some colleges



Increase your chance of admittance
(even if they are not compulsory)

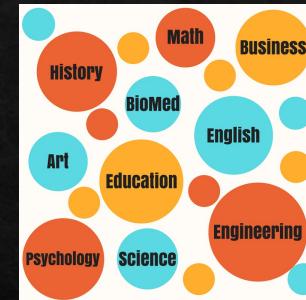
Problem Statement

Recommendations on what SAT/ACT score you should aim for

Ideal college



College major



- ❖ College score requirements
- ❖ Number of applicants
- ❖ Acceptance rate
- ❖ College major score requirements

Data Analysis for Schools

SAT vs ACT Scores

Acceptance Rate

Scores vs No. of Applicants

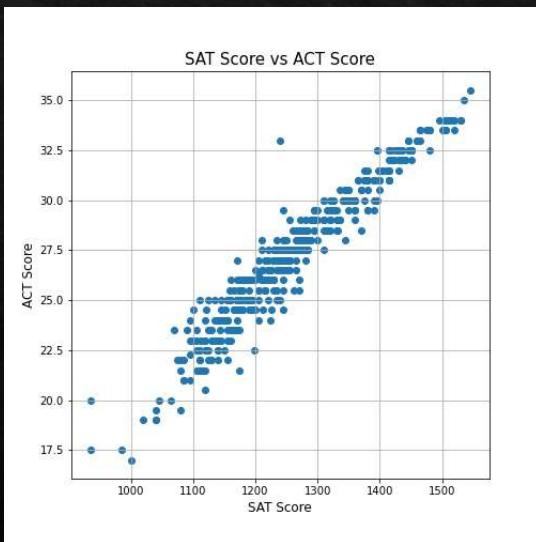
Top schools & Ivy League

Best non-Ivy schools in each state

Average Schools

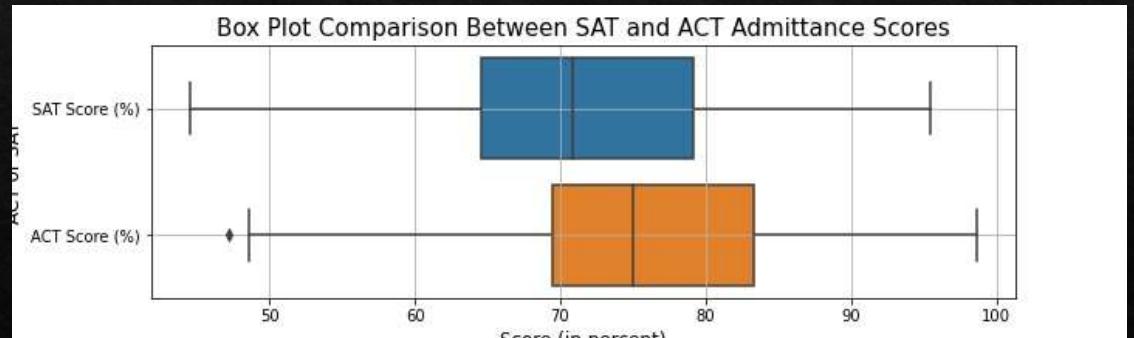


Data Analysis for Schools: SAT vs ACT Scores

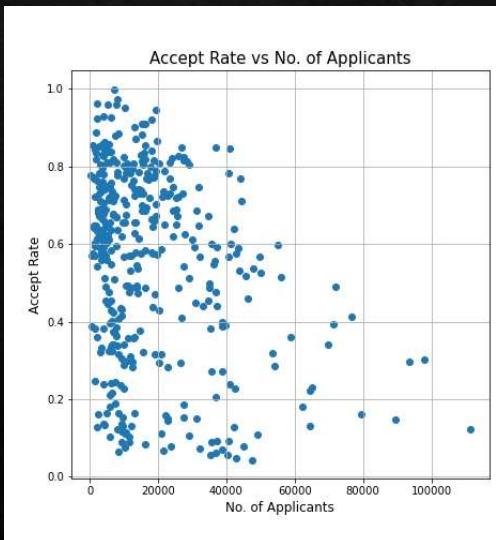


Correlation

- ❖ In general, schools require a higher ACT than SAT for admission
- ❖ ACT requirement ~3% higher mean score than SAT



Data Analysis for Schools: Acceptance Rate



Acceptance rate vs test score

- ❖ Negative correlation:
 - ❖ Higher the admission test scores, lower the acceptance rates

Acceptance rate vs number of applicants

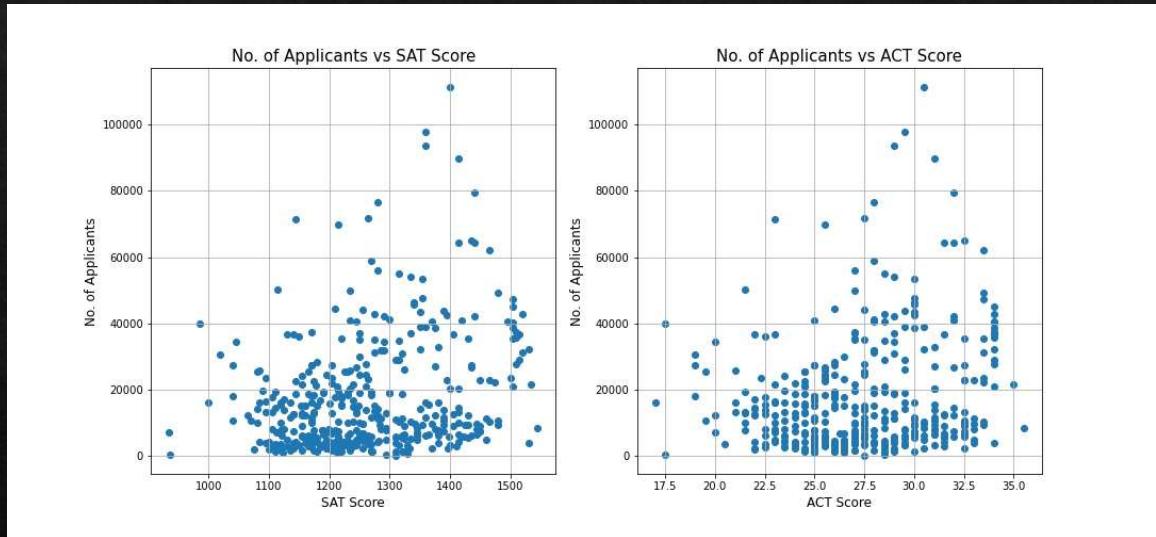
- ❖ Slight correlation:
 - ❖ School's acceptance rates lower, with increase in applicants



Data Analysis for Schools: Scores vs No. of Applicants

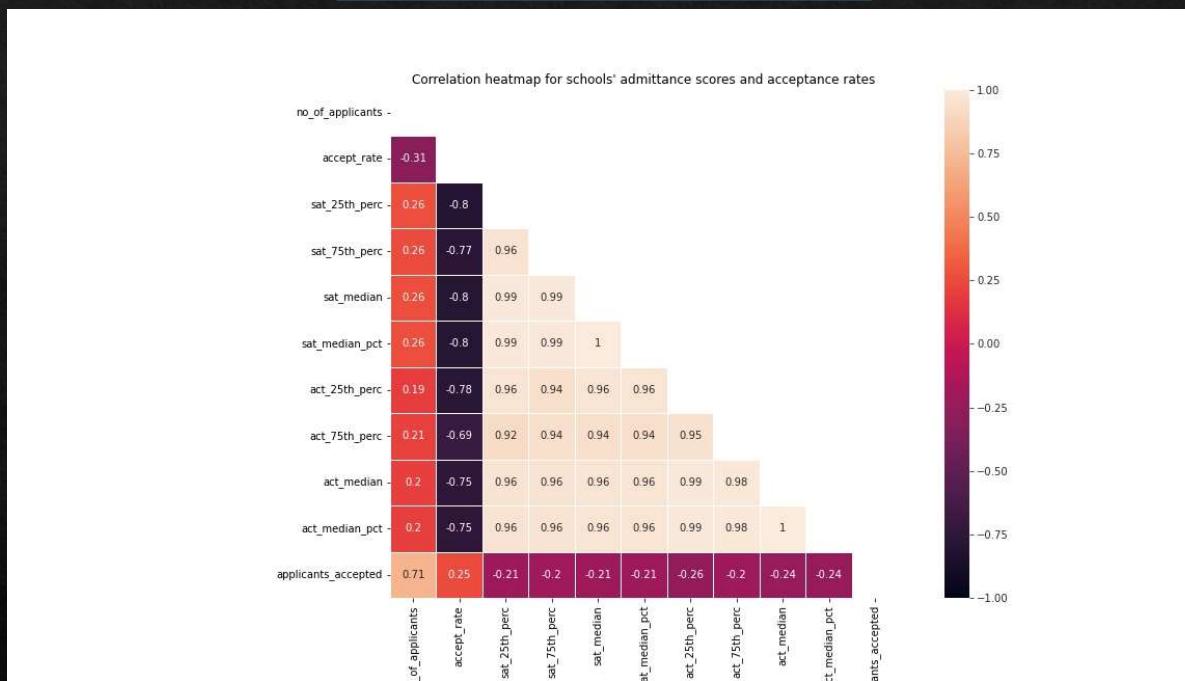
Slight correlation

- ❖ Schools' admittance scores increase with more applicants



Data Analysis for Schools

Correlation Summary



Higher the admission test scores, lower the acceptance rates

School's acceptance rates tend to lower as number of applicants increase

Admission scores tend to increase with number of applicants

Data Analysis for Schools: Top schools & Ivy League

- ❖ SAT 1400, ACT 32: Low chance of admittance to Ivy League schools
- ❖ Less than 3000 spots (except for Cornell University)
- ❖ Acceptance rates lower than 10% (except for Cornell University)
- ❖ Easiest Ivy League to enroll: Cornell University

school	no_of_applicants	accept_rate	sat_25th_perc	sat_median	sat_75th_perc	act_25th_perc	act_median	act_75th_perc	applicants_accepted
Stanford University	47452	0.043	1440.0	1505.0	1570.0	32.0	33.5	35.0	2040
Harvard College	42749	0.047	1460.0	1520.0	1580.0	33.0	34.0	35.0	2009
Princeton University	35370	0.055	1440.0	1505.0	1570.0	32.0	33.5	35.0	1945
Columbia University	40203	0.055	1450.0	1505.0	1560.0	33.0	34.0	35.0	2211
Yale University	36844	0.061	1460.0	1515.0	1570.0	33.0	34.0	35.0	2247
Massachusetts Institute of Technology	21706	0.067	1500.0	1535.0	1570.0	34.0	35.0	36.0	1454
Brown University	38674	0.071	1440.0	1505.0	1570.0	33.0	34.0	35.0	2745
University of Chicago	32283	0.073	1490.0	1530.0	1570.0	33.0	34.0	35.0	2356
University of Pennsylvania	44961	0.077	1450.0	1505.0	1560.0	33.0	34.0	35.0	3461
Dartmouth College	23650	0.079	1440.0	1500.0	1560.0	32.0	33.5	35.0	1868
Cornell University	49114	0.109	1400.0	1480.0	1560.0	32.0	33.5	35.0	5353

Data Analysis for Schools: Best non-Ivy schools in each state

- ❖ 25th percentile mean scores: SAT 1296, ACT 29
- ❖ Minimum scores for admittance for all non-Ivy best colleges in each state

school	no_of_applicants	accept_rate	sat_25th_perc	sat_median	sat_75th_perc	act_25th_perc	act_median	act_75th_perc	applicants_accepted
Washington University in St. Louis	31320	0.150	1470.0	1520.0	1570.0	32.0	33.5	35.0	4698
Johns Hopkins University	29129	0.106	1470.0	1515.0	1560.0	33.0	34.0	35.0	3087
Carnegie Mellon University	27634	0.154	1460.0	1510.0	1560.0	33.0	34.0	35.0	4255
Vanderbilt University	37310	0.091	1460.0	1510.0	1560.0	33.0	34.0	35.0	3395
Duke University	35767	0.089	1450.0	1510.0	1570.0	33.0	34.0	35.0	3183
Rice University	20923	0.111	1450.0	1505.0	1560.0	33.0	34.0	35.0	2322
Northwestern University	40585	0.091	1440.0	1495.0	1550.0	33.0	34.0	35.0	3693
University of Notre Dame	22200	0.158	1400.0	1475.0	1550.0	32.0	33.5	35.0	3507
Tufts University	22766	0.150	1390.0	1465.0	1540.0	32.0	33.0	34.0	3414
Grinnell College	7349	0.244	1370.0	1450.0	1530.0	30.0	32.0	34.0	1793
Carleton College	7382	0.190	1360.0	1450.0	1540.0	31.0	32.5	34.0	1402
Georgetown University	22872	0.145	1370.0	1450.0	1530.0	31.0	32.5	34.0	3316
Middlebury College	9754	0.154	1360.0	1445.0	1530.0	32.0	33.0	34.0	1502
Tulane University	42185	0.129	1360.0	1440.0	1520.0	31.0	32.0	33.0	5441
University of Southern California	64352	0.130	1350.0	1440.0	1530.0	30.0	32.0	34.0	8365
Case Western Reserve University	26642	0.293	1350.0	1435.0	1520.0	30.0	32.0	34.0	7806
Barnard College	9320	0.118	1340.0	1430.0	1520.0	31.0	32.5	34.0	1099
Bowdoin College	9332	0.088	1330.0	1425.0	1520.0	31.0	32.5	34.0	821
Reed College	5815	0.395	1325.0	1422.5	1520.0	30.0	32.0	34.0	2296
University of Virginia	40839	0.239	1340.0	1420.0	1500.0	30.0	32.0	34.0	9760

Data Analysis for Schools: Average schools

- ❖ These schools still require a relatively high score for admittance:
 - ❖ SAT 1250, ACT 27
- ❖ For high chances of admittance:
 - ❖ SAT 1350, ACT 30

school	no_of_applicants	accept_rate	sat_median	sat_median_pct	sat_75th_perc
Ithaca College	15278	0.685	1249.0	70.75	1338.0
Texas Christian University	19028	0.471	1250.0	70.83	1350.0
Rollins College	6167	0.583	1250.0	70.83	1340.0
University of Central Florida	35240	0.382	1250.0	70.83	1340.0
Creighton University	10112	0.714	1250.0	70.83	1350.0

school	no_of_applicants	accept_rate	act_median	act_median_pct	act_75th_perc
New School	9911	0.566	27.0	75.0	30.0
Transylvania University	1702	0.887	27.0	75.0	30.0
University of California Riverside	49788	0.567	27.0	75.0	30.0
St. Lawrence University	6998	0.424	27.0	75.0	30.0
Butler University	14891	0.732	27.0	75.0	30.0

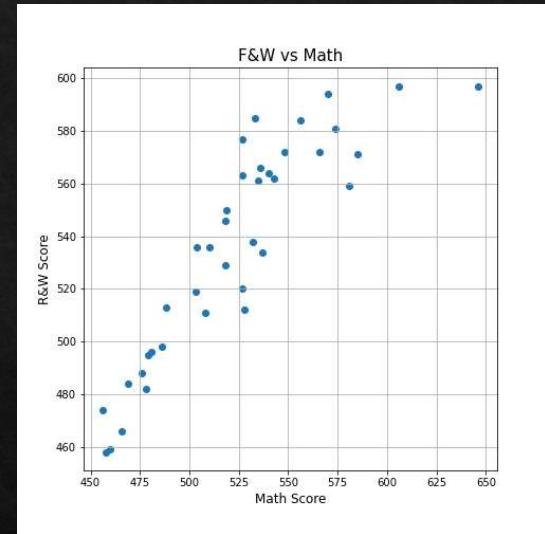
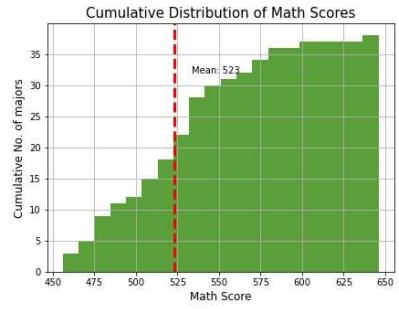
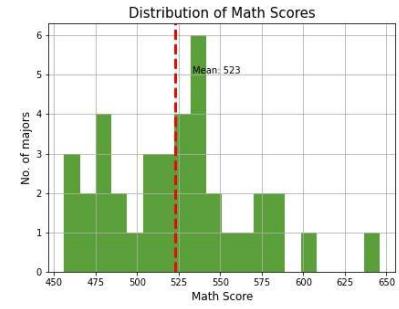
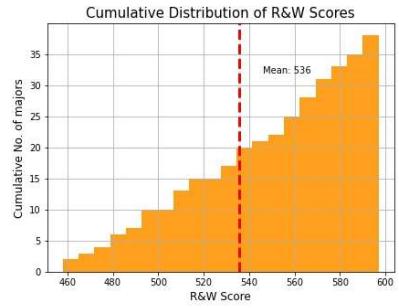
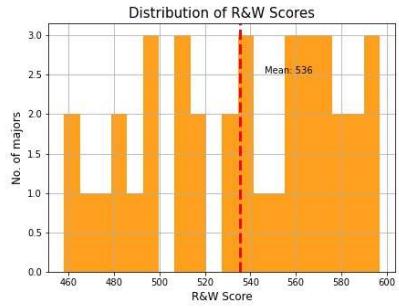
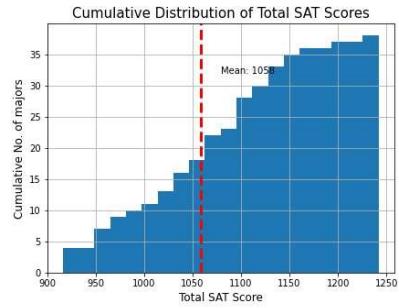
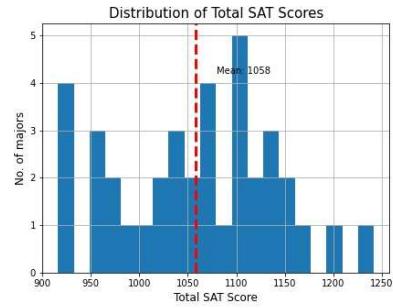
Data Analysis for College Majors

SAT Total Scores

R&W vs Math



Data Analysis for College Majors



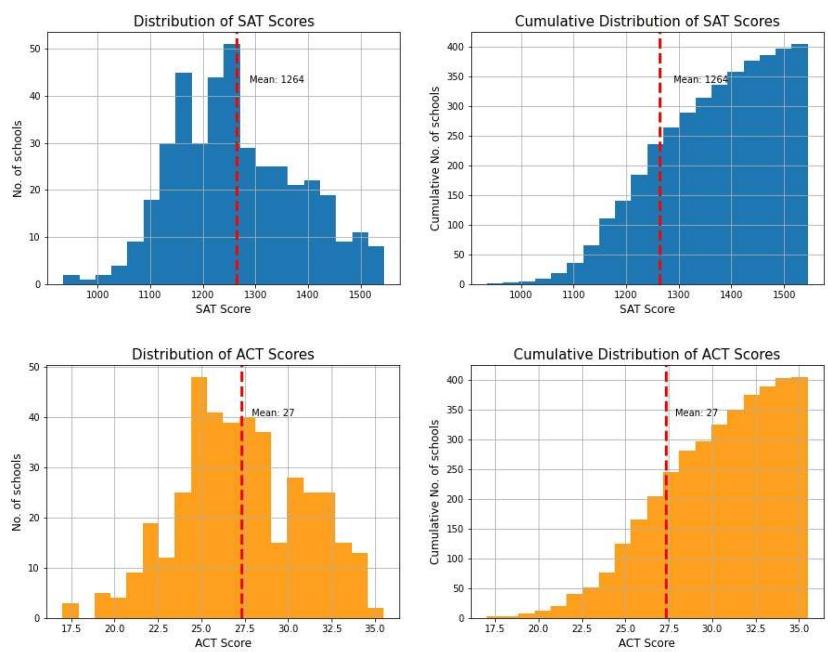
- ❖ R&W mean score: 536
- ❖ Math mean score: 523
- ❖ Total Mean score: 1058
- ❖ Most test takers did better on R&W as compared to Math

Data Analysis for College Majors

- ❖ SAT scores from applicants set the score requirement into these majors
- ❖ Recommended to score similar or higher than these mean scores for a higher chance of acceptance
- ❖ Scores for each section to aim for
 - ❖ Above R&W 597
 - ❖ Above Math 646
 - ❖ (As these scores are still an average)

int_college_major	test_takers	test_takers_pct	total_score	read_write	math	total_score_pct	read_write_pct	math_pct
Mathematics and Statistics	16508	0.01	1242	597	646	70.17	66.17	74.33
Physical Sciences	26318	0.01	1203	597	606	66.92	66.17	67.67
Social Sciences	33356	0.02	1164	594	570	63.67	65.67	61.67
Computer and Information Sciences and Support ...	79736	0.04	1156	571	585	63.00	61.83	64.17
Multi/Interdisciplinary Studies	2979	0.00	1155	581	574	62.92	63.50	62.33
int_college_major	test_takers	test_takers_pct	total_score	read_write	math	total_score_pct	read_write_pct	math_pct
Family and Consumer Sciences/Human Sciences	6469	0.0	953	484	469	46.08	47.33	44.83
Precision Production	319	0.0	932	466	466	44.33	44.33	44.33
Personal and Culinary Services, General	6668	0.0	929	474	456	44.08	45.67	42.67
Construction Trades, General	2500	0.0	919	459	460	43.25	43.17	43.33
Mechanic and Repair Technologies/Technicians	6592	0.0	916	458	458	43.00	43.00	43.00

Summary Statistics

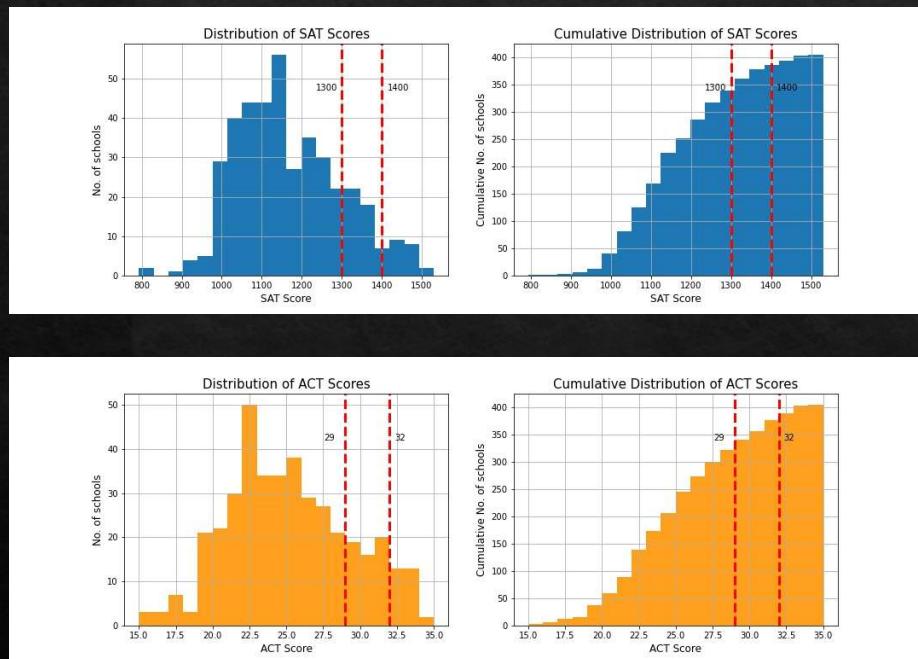


SAT	ACT	Acceptance chance*	Percentage of schools*
1070	22	Low chance	25% of schools
1175	25	Medium chance	25% of schools
1270	28	High chance	25% of schools
1150	24	Low chance	50% of schools
1250	27	Medium chance	50% of schools
1350	30	High chance	50% of schools
1250	28	Low chance	75% of schools
1350	30	Medium chance	75% of schools
1440	32	High chance	75% of schools

*All chances are an average based on the percentiles (25, 50, 75 percentiles as shown in the table) and percentage of schools.

Conclusions & Recommendations

- ❖ SAT: 1300 – 1400
- ❖ ACT: 29 – 32
- ❖ SAT 1400, ACT 32: Unlocks a shot for Cornell University (Ivy League)
- ❖ SAT 1300, ACT 29: Best non-Ivy schools in any state becomes available
- ❖ Very good chance for any average schools
- ❖ Anywhere in between, increase chances for best non-Ivy schools in any state



THANK YOU