



**Research Report**

**No. 2004-4**

# Understanding What SAT Reasoning Test<sup>™</sup> Scores Add to High School Grades: A Straightforward Approach

**Brent Bridgeman, Judy Pollack, and  
Nancy Burton**

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**College Entrance Examination Board, New York, 2004**

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Brent Bridgeman is principal research scientist at Educational Testing Service.

Judy Pollack is director, research at Educational Testing Service.

Nancy Burton is senior research scientist at Educational Testing Service.

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# Abstract

Although a number of large-scale studies have demonstrated an increase in predictive validity when SAT® scores are added to high school grades, this increment is often described in terms of a seemingly very small increase in explained variance. This may have led to the erroneous belief among test critics and others that students with low SAT scores would perform, on average, almost as well in college as students with high SAT scores. Using a sample of 41 colleges, the current study shows substantial differences in the percent of students who succeed (defined by a 2.5 or 3.5 college grade point average [CGPA] at the end of one year or four years in college) by SAT score level, even when intensity of the high school curriculum and high school grades are taken into account.

## Introduction

Large-scale studies, combining data over several colleges and universities, have been used to demonstrate the validity of the SAT Reasoning Test™ (formerly known as the SAT I: Reasoning Test), or its predecessor, the Scholastic Aptitude Test, for predicting freshman grade point average (e.g., Ramist, Lewis, and McCamley-Jenkins, 1994; Bridgeman, McCamley-Jenkins, and Ervin, 2000; Geiser and Studley, 2001). Typically, such studies use multiple regression methods to show the improvement in prediction when SAT scores are added to the high school grade point average (HSGPA). The improvement is frequently described in terms of the additional variance in college grades that can be “explained” by the test scores. The additional explained variance attributable to the test is typically less than 10 percent. Testing critics suggest that such an apparently minuscule improvement is not worth the bother. The National Center for Fair and Open Testing (FairTest), for example, simply states, “the SAT I has little value in predicting future college performance” (FairTest, 2003). Kidder and Rosner (2002) question the value of the SAT, citing data from a University of California study showing that “the SAT only adds 5.4 percent to the variance explained by HSGPA alone” (p. 193). Unfortunately, “explained variance” is a very difficult concept to understand, and multiple regression, although well understood by statisticians and admissions professionals, may be obscure to the layman interested in testing issues. This study seeks to show the value of grades and test scores for predicting success in college while requiring the reader to understand only the meaning of percent. Thus, this study shows the percent of students in various HSGPA and test score categories who are successful in college.

We define success in college at two levels. The lower level defines success as achieving a college grade point average (CGPA) of 2.5 (B-/C+) or better; the upper level defines success as a CGPA of 3.5 (A-/B+) or better on the typical grade scale from F=0.0 to A=4.0. Because grading standards may differ over colleges, we also separate colleges into four levels based on average SAT scores in the college.

In order to go beyond just the grade point average to describe the high school academic experience, we include a rough measure of the academic intensity of the curriculum taken by the student. Longitudinal data from the High School and Beyond database suggests that an index of the kind of courses taken in high school is a better predictor of college graduation than either test scores or HSGPA (Adelman, 1999).

Briefly, then, this study is an attempt to determine how many students at different levels of SAT score reach different criteria of success in college, after controlling on the selectivity of the college, the academic intensity of the students’ high school curriculum, and the students’ high school grades. We were interested to see whether, for example, students in selective colleges who took a moderately demanding high school curriculum and who got high grades in high school still differed markedly in their level of success depending on their SAT scores.

## Method

### Sample

The sample consisted of 41 colleges that had agreed to participate in a multiyear validity study by submitting course grades that would follow a single cohort of students over four or five years, then provide the same data for a cohort of students beginning the following year, and again for a third cohort. The current study used data only from the first cohort of students that began college in 1995. The sample was geographically diverse, included public and private institutions, and covered a fairly broad range of ability levels, though all colleges in the sample were somewhat selective (no college had a combined SAT average of less than 965, and most were well over 1000). All used SAT scores as part of the admissions process. (Although most would accept either ACT or SAT scores, the final sample included only institutions in which the majority of students submitted SAT scores.) Based on the course grades submitted, we computed a CGPA for the end of the freshman year and for each subsequent year. If the CGPA we computed for an individual differed by more than 0.5 grade points from the CGPA provided by the college, and we could not understand why, we dropped the person from the sample. In some cases we could explain discrepancies between the college-supplied CGPA and our computed CGPA by such college policies as

not counting a failed course in the CGPA if it was retaken later and passed. For such cases, we used the CGPA we computed that would include grades for both the passed and failed course. The grade data supplied by the colleges was merged with files at ETS that included SAT scores, Advanced Placement Program® (AP®) scores, and scores on the Student Descriptive Questionnaire (SDQ) that students complete when they register to take the SAT.

## Analysis Categories

The analysis strategy was to determine how much the intensity of the high school curriculum, the high school GPA, and SAT scores contribute to predicting success in college, and whether SAT scores make any difference after accounting for the high school measures. Though not used as a predictor, a fourth variable that is likely to contribute to a student's success is the selectivity of the college attended. More selective colleges have, for example, fewer dropouts, a higher proportion of graduates, and

tend to award higher grades (see, for example, Bowen and Bok, 1998). The exact definitions of the four analysis categories follow.

**College selectivity level.** To define a rough measure of each college's selectivity, we summed the SAT verbal and math scores for each person. When a person had taken the test more than once, we used the sum of the highest math score and the highest verbal score. We then averaged these sums within colleges and used these averages to divide the colleges into four levels. Level 1 colleges had mean combined SAT scores between 965 and 1093; Level 2 ranged from 1110 to 1195; Level 3 ranged from 1201 to 1249 and consisted exclusively of large, highly selective state universities; Level 4 scores ranged from 1256 to 1406. Note that even the least selective colleges in the study enrolled students whose average SAT total (around 1000) is equal to the national average. Table 1 shows the public/private and geographical mix

**Table 1**

Participating Colleges by College Selectivity Level					
Level 1 (SAT 965–1093)			Level 2 (SAT 1110–1195)		
Public/Private	Region	Number	Public/Private	Region	Number
Public	Middle States	873	Public	New England	939
Public	Middle States	731	Public	Middle States	1,788
Public	Middle States	1,088	Public	Middle States	1,993
Public	Middle States	1,041	Public	West	1,919
Public	Middle States	1,087	Public	West	3,211
Public	Middle States	837	Private	New England	4,046
Public	South	792	Private	Middle States	1,487
Public	South	1,718	Private	Midwest	502
Public	Southwest	1,178	Private	Midwest	292
Public	Southwest	2,757	Private	Southwest	5,030
Public	West	1,659	Private	Southwest	167
Private	Middle States	1,092	Private	West	371
Private	South	635	Private	West	376
Private	South	367			
Private	West	298			
Private	West	382			
<b>Total N</b>		<b>16,535</b>	<b>Total N</b>		<b>22,121</b>
Level 3 (SAT 1201–1249)			Level 4 (SAT 1256–1406)		
Public/Private	Region	Number	Public/Private	Region	Number
Public	Middle States	1,483	Public	South	2,035
Public	South	3,105	Private	New England	857
Public	Midwest	3,222	Private	Middle States	926
Public	Southwest	5,580	Private	South	1,132
Public	West	3,436	Private	Midwest	221
			Private	Midwest	283
			Private	Southwest	622
<b>Total N</b>		<b>16,826</b>	<b>Total N</b>		<b>6,076</b>

of colleges within each level, and shows the sample size for each college (i.e., number of students with valid high schools grades, college grades, and SAT scores).

**Academic intensity.** First, we defined separate high school academic intensity variables for math/science courses and for humanities/social science courses. Each of these scales had four levels. The math/science intensity variable was defined as follows:

- **3** if two or more Advanced Placement Program (AP) Exams taken in a math/science field (biology, chemistry, physics, calculus, statistics, computer science, or environmental science)
- **2** if one AP Exam taken in a math/science field
- **1** if at least 3 years of study in lab science and math course in trigonometry, precalculus, or calculus
- **0** otherwise

The humanities/social science intensity variable was defined as follows:

- **3** if two or more AP Exams taken in any history, English, foreign language, economics, or psychology
- **2** if one AP Exam from above list
- **1** if at least three years study in a foreign language, four years study in English, four years study in social science and/or history, and honors in at least one of these course categories
- **0** otherwise

Although planned future analyses will focus separately on college courses in the math/science and humanities/social science areas, the current analysis focused on overall CGPA. Therefore, we created an overall academic intensity variable with three levels by adding the scores from the math/science and humanities/social science variables. If the sum was 0, then the score on the combined variable was 1; if the sum was 1–4, then the score on the combined variable was 2; if the sum was 5–6, then the combined variable score was 3. A student with no AP courses could qualify for Level 2 with strong course work in either math/science or humanities/social science. In order to clearly delineate a group with a very rigorous high school curriculum, we set the standard for Level 3 quite high. For a Level 3 classification, the student would have to take at least two AP courses in one area (math/science or humanities/social science) and one AP course in the other area. The percent of students in each intensity classification by college level is shown in Table 2.

Across the four college levels, 52 to 68 percent of the students were in intensity Level 2, but there was wide variation across college levels in the percents in intensity Levels 1 and 3. At Level 1 colleges, almost half of the students were in intensity Level 1 with only 2 percent in

**Table 2**

Percent of Students at Each Academic Intensity Level for Each College Level

Academic Intensity	College Level				
	Total	1 (low)	2	3	4 (high)
3 (high)	14	2	9	26	35
2	62	52	68	64	59
1 (low)	23	46	22	10	5

intensity Level 3. At the Level 4 colleges the picture was reversed, with only 5 percent in intensity Level 1 and 35 percent in the very rigorous Level 3.

**High school grade point average.** Although all colleges in the sample submitted some indicator of success in high school for their students, some submitted class rank or some indicator other than the traditional A–F (4–0) HSGPA scale. In these 24 cases, we substituted the self-reported HSGPA from the SDQ. Such self-reports are not as precise as transcript-based grades, but they are adequate for roughly ranking students (Freeberg, Rock, and Pollack, 1989). We then defined four HSGPA categories. These categories are shown in Table 3. Very few students had averages below a B– (2.70). On the other hand, half of the students in the Level 3 and 4 colleges had high school averages in the top category (above A– [3.70]). An interesting anomaly in the table is that at Level 3 colleges only 10 percent have HSGPAs below 3.3 while at Level 4 colleges 20 percent of the enrolled freshman students are in the bottom two categories. This might be related to more formula-driven admissions procedures in the large state universities in Level 3, or Level 4 colleges may draw more heavily on high schools with especially rigorous grading standards; additional analyses will be needed to fully understand this phenomenon.

**Table 3**

Percent of Students at Each HSGPA Category for Each College Level

HSGPA	College Level				
	Total	1	2	3	4
4 (higher than 3.70)	36	20	34	51	50
3 (3.30–3.70)	38	35	41	40	31
2 (2.71–3.29)	18	28	19	8	17
1 (2.70 and below)	7	17	6	2	3



**Table 4**

Percent of Students at Each SAT Level  
for Each College Level

SAT (V+M)	College Level				
	Total	1	2	3	4
5 (1410–1600)	7	1	4	8	28
4 (1210–1400)	34	12	34	49	52
3 (1010–1200)	42	49	49	36	19
2 (810–1000)	16	35	13	6	2
1 (400–800)	1	4	1	0	0

**SAT scores.** Student SAT score levels are defined in Table 4. These score levels are necessarily related to college level as college levels were defined in terms of mean SAT scores. Though there are nominally five levels, note that only one percent of the students are in the first level (combined scores from 400 to 800) in this sample of selective colleges.

## Results and Discussion

Tables showing the percent of students exceeding a CGPA of 2.5 and 3.5 at the end of the freshman year by college level, HSGPA category, academic intensity, and SAT level are in appendix Table A1. Table A2 presents comparable results for four-year CGPAs. Rows containing no people were omitted. For example, there were no students in any Level 1 college who were in HSGPA Category 3 (3.3–3.7), intensity Level 3 (at least two AP courses in one area and one in another area), and SAT Level 1 (combined scores below 800), so there is no line for this combination in the table. If the total N for a row was less than 50, we shaded the row to indicate that the percent succeeding (last two columns) should be interpreted cautiously.

The shadings follow a sensible pattern. There are relatively few students with high academic intensity levels or SAT scores in Level 1 colleges; those few

students in Level 1 colleges with high academic intensity and high school GPA also tend to have high SAT scores. Both high and low SAT scores are uncommon in Level 2 colleges. Low-intensity high school curricula are uncommon in Level 3 colleges unless compensated for by high HSGPA, high SAT scores, or both. Students at Level 3 colleges rarely have either low HSGPAs or low SAT scores. Students at Level 4 colleges almost never have low academic intensity high school curricula. They seldom have SAT scores at the two lowest levels. At all colleges, there is a tendency for students with high-intensity high school curricula to also have good HSGPAs and high SAT scores. In the analyses that follow, we will concentrate on those patterns of curricula, grades, and test scores that have substantial numbers of students at a given college level.

### Predictors of Success in the Freshman Year

Table 5 replicates five rows from Table A1 to illustrate the added value of considering SAT scores when identifying who will be successful in the freshman year of college. Specifically, the table shows success rates for students in Level 1 colleges who are relatively homogeneous with respect to high school grades (3.7 or higher) and academic intensity (Level 2). Knowing that SAT scores add only slightly to the explained variance might lead to the expectation that success rates would be only a few percentage points higher for students at high SAT levels compared to students at low SAT levels. This is clearly not the case. Fewer than 14 percent of the students with SAT scores of 1000 or lower completed their freshman year with a CGPA of 3.5 or higher. Over half of the students with SAT scores over 1200, and 77 percent of the students with SAT scores over 1400, reached this high standard. The difference between 14 percent and 77 percent does not seem to be minuscule. Although most students with this level of accomplishment in high school met the 2.5 success criterion in college, there were still differences by SAT score levels from less than 77 percent at the lower levels to over 93 percent at the higher levels.

**Table 5**

Freshman Success Rates in Level 1 Colleges by SAT Score Level for Students in the Same HSGPA Category and Academic Intensity Level

Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA >= 3.5	N CGPA >= 2.5	% CGPA >= 3.5	% CGPA >= 2.5
2	4	1 (<800)	6	0	3	0.0	50.0
2	4	2(800–1000)	266	37	204	13.9	76.7
2	4	3(1010–1200)	1,159	345	1,001	29.8	86.4
2	4	4 (1210–1400)	687	348	642	50.7	93.4
2	4	5 (>1400)	64	49	62	76.6	96.9

Numerous interesting trends can be gleaned from the tables, but they are easier to comprehend graphically. Figure 1 shows the percent of students in Level 1 colleges with freshman CGPAs of 2.5 or higher for each of the three indicators (academic intensity, HSGPA, and SAT) separately. The number of students in each column is given at the bottom of the column.

When presented in this manner, it is clear that all three measures are strongly related to success in college. Although relatively few students in Level 1 colleges were in academic intensity Level 3 (AP courses in two different areas), these students were about twice as likely to finish the freshman year with a 2.5 CGPA as students in the lowest intensity level. In the bottom category of HSGPA and in the bottom level of SAT, only about 25 percent of the students finished the year with a 2.5; in the highest categories, over 80 percent reached this level. This analysis shows that each measure predicts success in college separately. The next analysis is designed to show whether the SAT predicts over and above the high school measures.

Figure 2 indicates success levels for Level 1 colleges when the measures are fully crossed (SAT score level within HSGPA category within academic intensity level). Bars are omitted for categories containing fewer than 50 students. Academic intensity Level 3 is not graphed because there were so few students in this category in these Level 1 schools. The graph makes it clear that both high school grades and SAT scores matter as indicators of who will do well in college. Consider the 2,404 students at academic intensity Level 1 who had a B+ average in high school (HSGPA Category 3 [3.3 to 3.7]); the percent of successful students in SAT Level 4 was twice as great as the percent in SAT Level 1, and SAT Level 3 was nearly 20 percentage points above Level 2. But high school

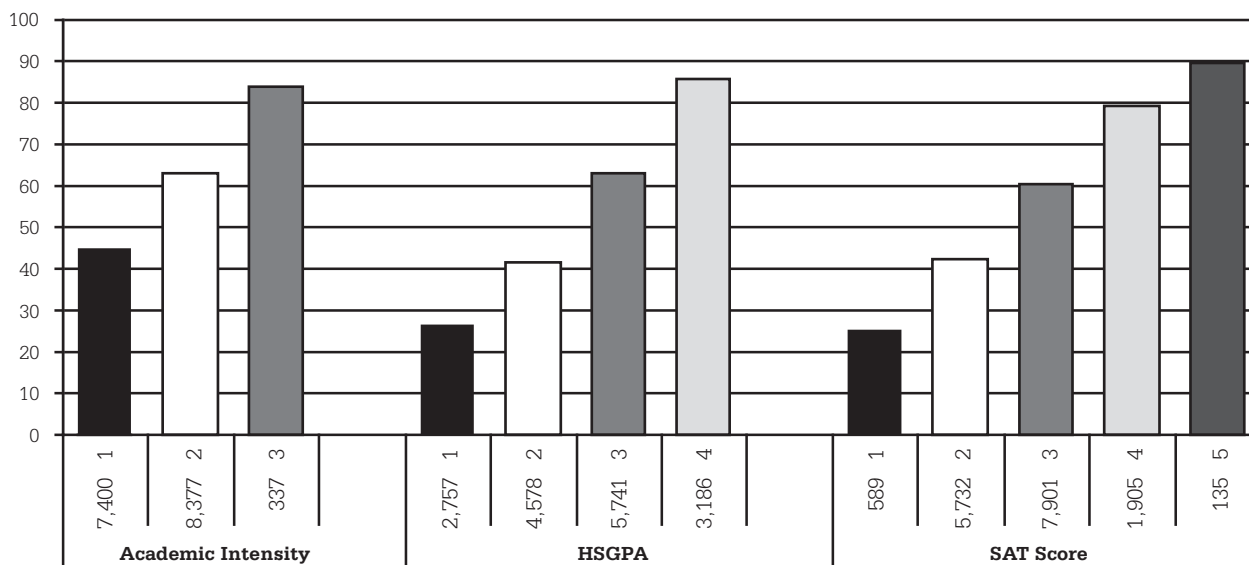
grades also clearly matter. For example, at SAT Level 3 (1010–1200) and academic intensity Level 1, about 30 percent of the students at HSGPA Category 1, 40 percent at HSGPA Category 2, 60 percent at HSGPA Category 3, and 80 percent at HSGPA Category 4 finished the freshman year at Level 1 colleges with a CGPA of 2.5 or higher. The pattern is almost identical at academic intensity Level 2 at these colleges.

Figures 3 and 4 show comparable information for the freshman CGPA of 3.5 or higher success level in Level 1 colleges. Figure 4 indicates that for HSGPA Categories 1–3, success is fairly low regardless of SAT score. For HSGPA Category 4, success improves dramatically as the SAT level increases.

## Predictors of Success Over Four Years in College

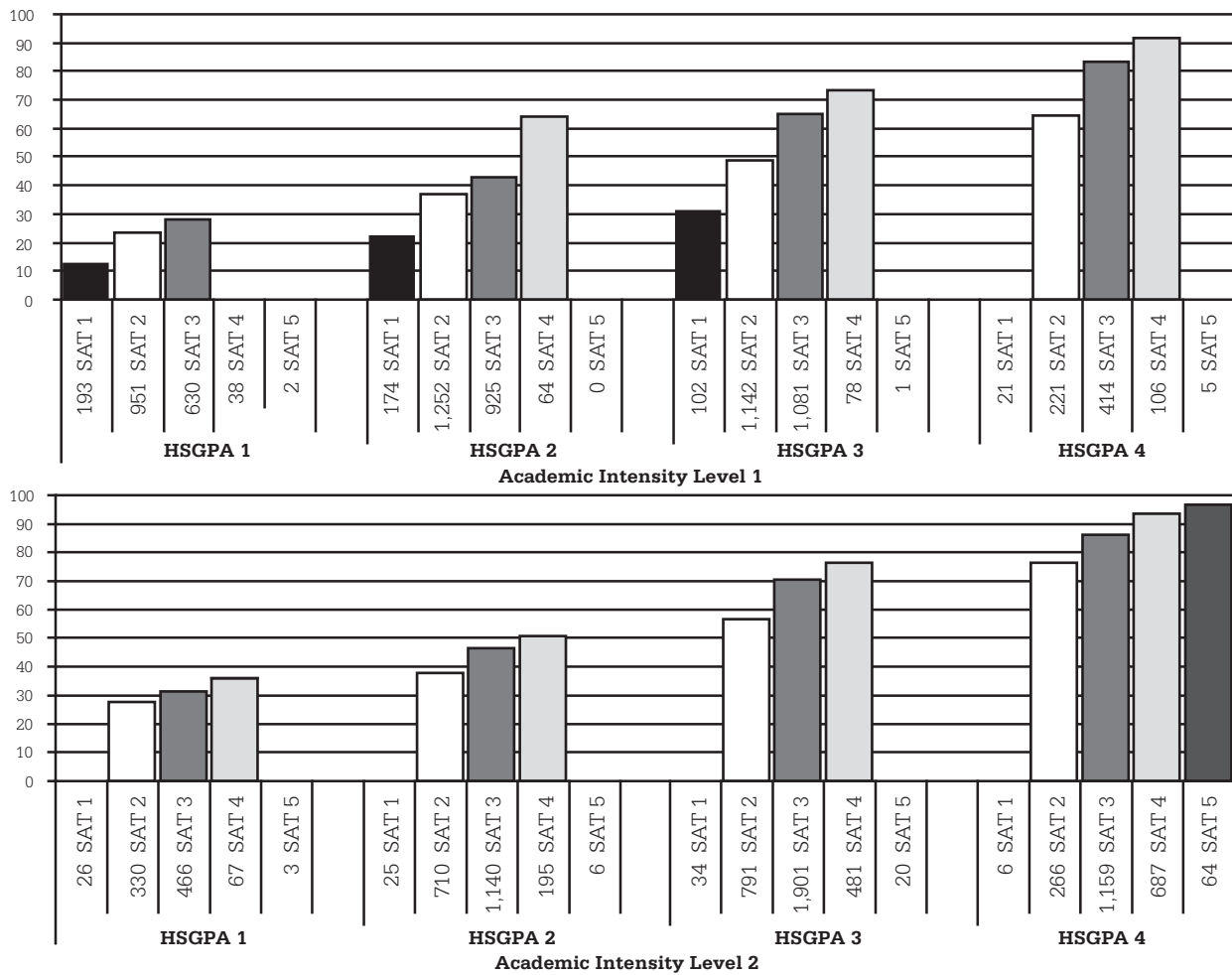
The same trends that are evident throughout Table A1 for predicting freshman grades are also evident in Table A2 in which the success criterion is based on grades earned over four years in college. For example, for a four-year college CGPA of 3.5 or higher in Level 4 colleges, among students in HSGPA Category 4 and academic intensity Level 2, 13 percent of the students at SAT Level 3 were successful compared to 54 percent at SAT Level 5.

Figures 5 and 6 illustrate differences in the most selective colleges using the criterion of CGPAs of 3.5 or higher after four years of college. Figure 6 omits academic intensity Level 1 because of the small number of people in this group. Indeed, the graph would have no bars because within HSGPA and SAT levels all groups contained fewer than 50 people. Figure 5 should shatter the notion that preadmission measures predict only freshman grades.



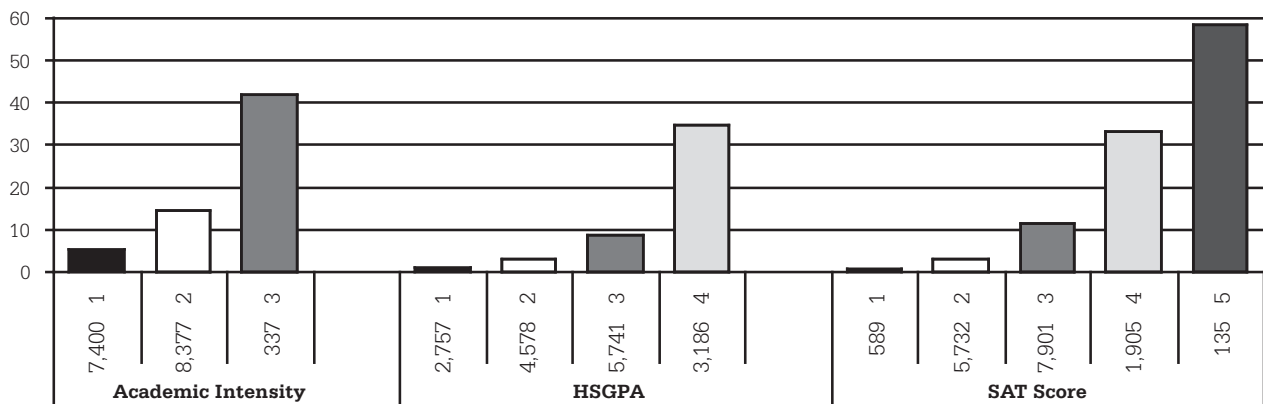
Note. The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor.

Figure 1. Level 1 colleges: Percent of class with freshman CGPA of 2.5 or higher.



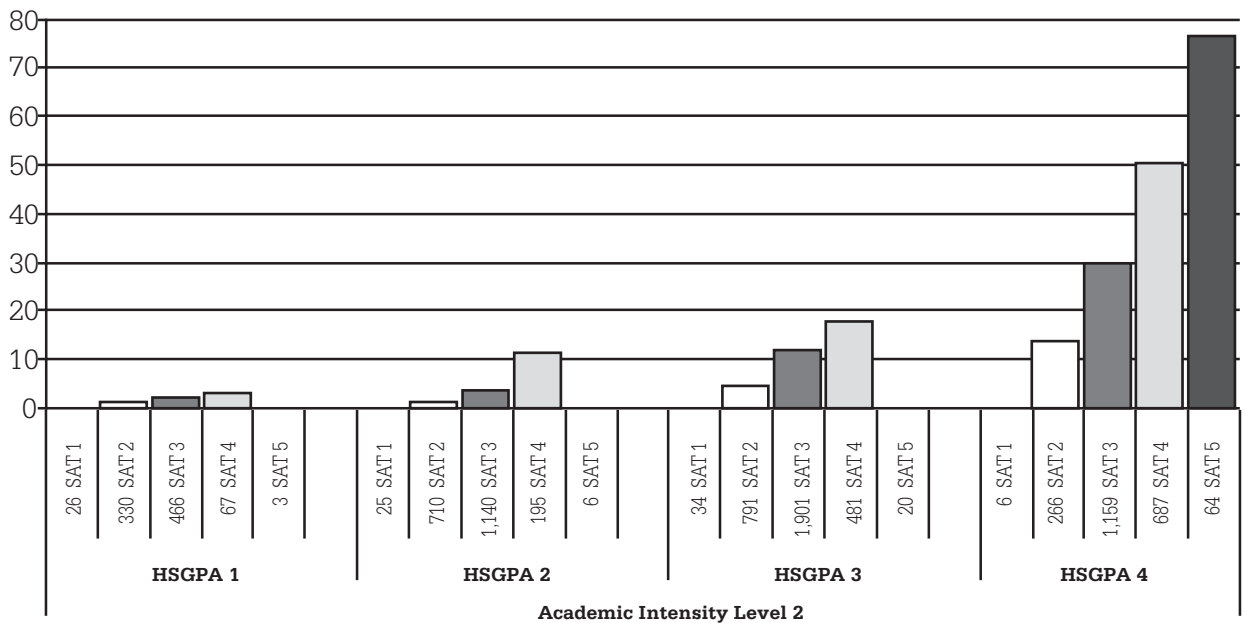
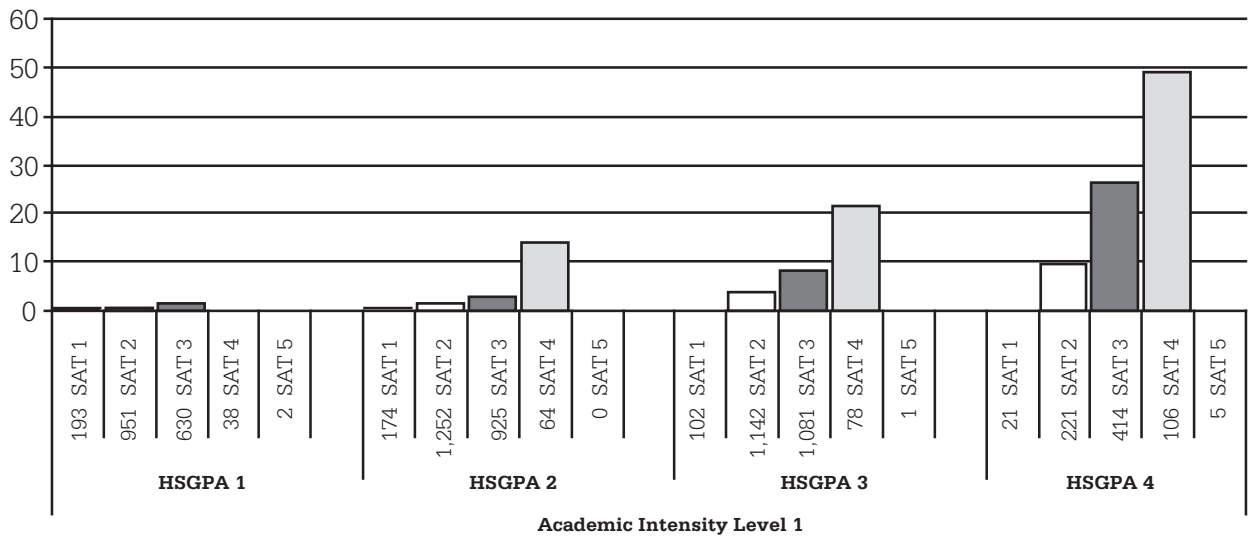
**Note.** The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor. Bars are omitted for sample sizes below 50.

**Figure 2.** Level 1 colleges: Percent of freshmen with CGPA of 2.5 or higher by the first two levels of academic intensity, HSGPA, and SAT score.



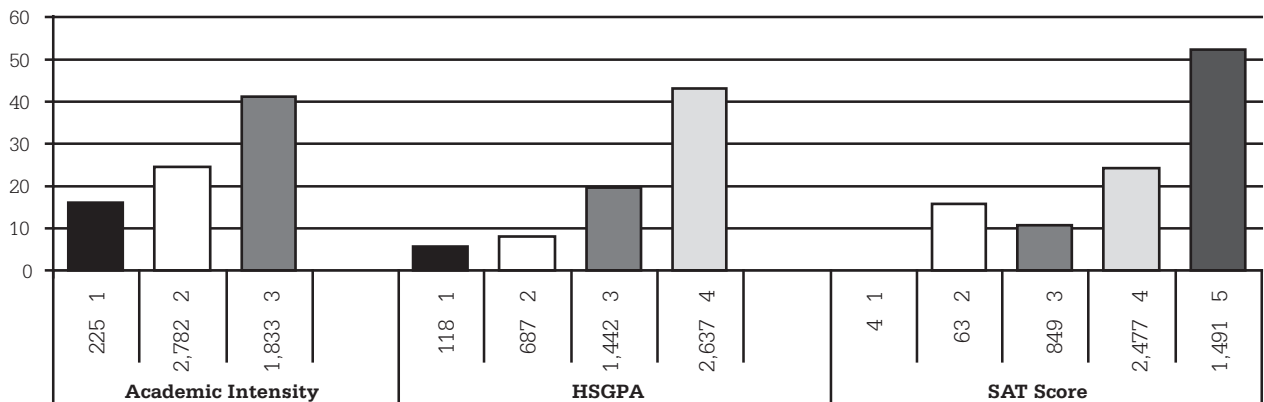
**Note.** The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor.

**Figure 3.** Level 1 colleges: Percent of class with freshman CGPA of 3.5 or higher.



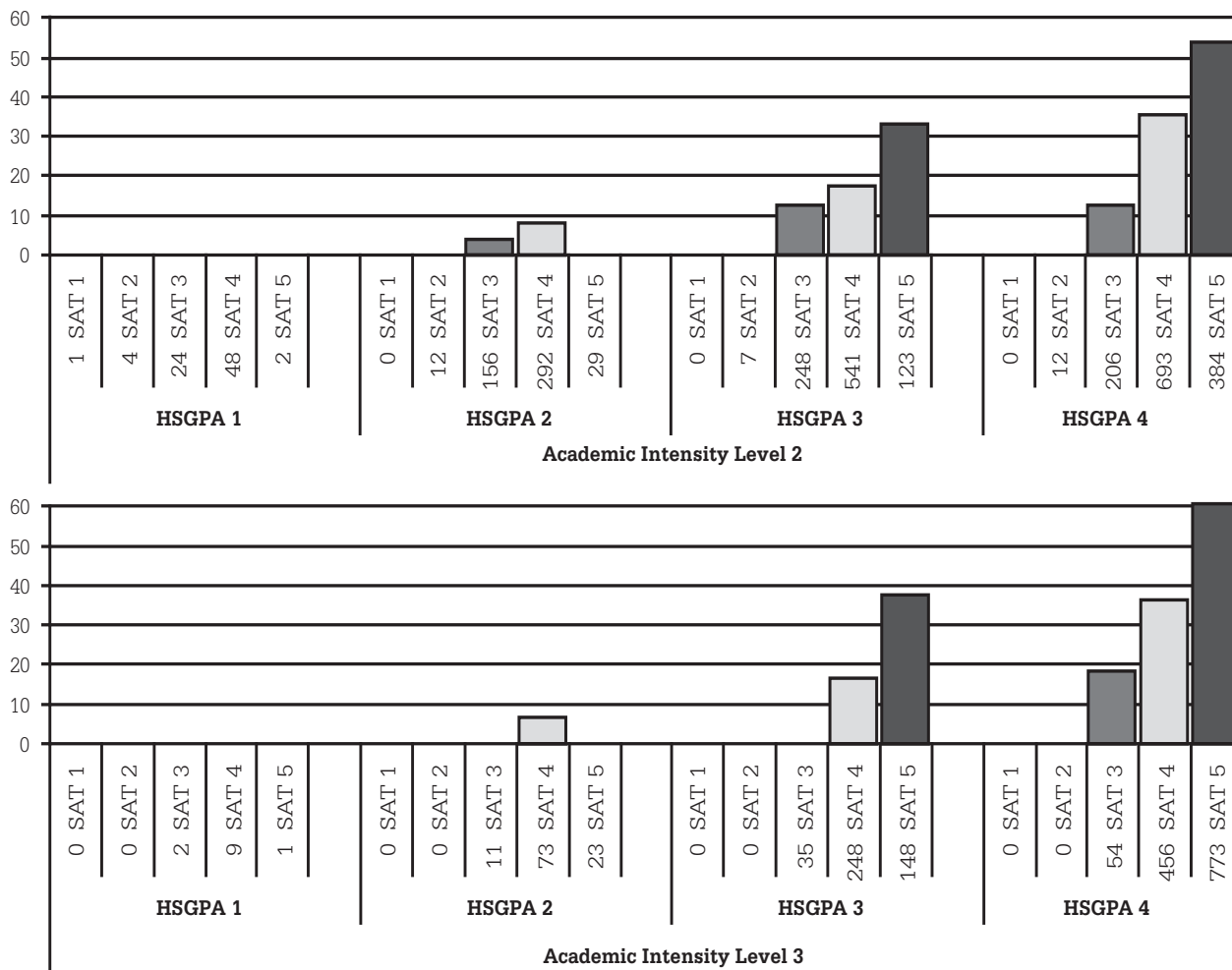
Note. The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor. Bars are omitted for sample sizes below 50.

Figure 4. Level 1 colleges: Percent of freshmen with CGPA of 3.5 or higher by the first two levels of academic intensity, HSGPA, and SAT score.



Note. The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor. Bars are omitted for sample sizes below 50.

Figure 5. Level 4 colleges: Percent of class with four-year CGPA of 3.5 or higher.



**Note.** The first number at the base of each bar indicates the sample size for that bar; the second number indicates the level of the predictor. Bars are omitted for sample sizes below 50.

**Figure 6.** Level 4 colleges: Percent of students with four-year CGPA of 3.5 or higher by the highest two levels of academic intensity, HSGPA, and SAT score.

Figure 6 indicates that most of the highly successful students in these highly selective institutions had earned A averages in high school, and many of them had done it in a very demanding curriculum that included at least two AP courses in one area and another course in a different area (i.e., academic intensity Level 3). Within this very accomplished group, there might seem to be little room for SAT scores to make any difference. Nevertheless, there are still substantial differences in success rates by SAT scores, from under 20 percent at SAT Level 3 to over 60 percent at Level 5.

### Effects of Using Narrower SAT Score Bands for Predicting Freshman CGPA

Given the large differences in the percent of successful students by SAT score category, even within intensity

and HSGPA categories, it may be difficult to understand why the contribution of SAT scores is not more widely recognized. Part of the problem might be that some people give too much attention to small differences in SAT scores. We used score bands with a range of 190 points in each level from 2 to 5 (and a 400-point range in Level 1), and differences would be less pronounced with narrower bands. To illustrate this point, Table 6 parallels Table 5, but divides levels 3 and 4 into four sublevels each. The range of points in each sublevel is 40 points. (3A = 1010–1050; 3B = 1060–1100...; 4D = 1360–1400).

As before, we focus on the success criterion of a CGPA of 3.5 or higher. Although there are still some noticeable jumps even within sublevels (e.g., 10.3 percentage points from 3A to 3B, and 16.6 points from 4B to 4C), some sublevels are separated by only a few percentage points (e.g., less than 4 points from 3D to 4A and from 4A to 4B). It may be

**Table 6**

Freshman Success Rates in Level 1 Colleges by SAT Score Level (and Sublevels) for Students in the Same HSGPA Category and Academic Intensity Level

<i>Academic Intensity</i>	<i>HSGPA Category</i>	<i>Student SAT Level</i>	<i>Total N</i>	<i>N CGPA &gt;= 3.5</i>	<i>N CGPA &gt;= 2.5</i>	<i>% CGPA &gt;= 3.5</i>	<i>% CGPA &gt;= 2.5</i>
2	4	1 (<800)	6	0	3	0.0	50.0
2	4	2 (800–1000)	266	37	204	13.9	76.7
2	4	3A (1010–1050)	218	36	186	16.5	85.3
2	4	3B (1060–1100)	295	79	241	26.8	81.7
2	4	3C (1110–1150)	312	99	279	31.7	89.4
2	4	3D (1160–1200)	334	131	295	39.2	88.3
2	4	4A (1210–1250)	286	123	265	43.0	92.7
2	4	4B (1260–1300)	199	193	183	46.7	92.0
2	4	4C (1310–1350)	128	81	125	63.3	97.7
2	4	4D (1360–1400)	74	51	69	68.9	93.2
2	4	5 (>1400)	64	49	62	76.6	96.9

obvious that large differences in SAT scores could translate to large differences in success percentages, and small score differences would translate to small success differences, but it is less obvious that a 40-point range in SAT scores is indeed small. The SAT scale goes from 200 to 800 (or 400 to 1600 for the combined scores), but the last digit is always zero, so the combined scale could be said to go from 40 to 160 and is thus a 121-point scale. The 40-point range then would be merely a 4-point range out of a possible 121-point range. A 40-point difference may be even more clearly seen as a small difference in terms of a number correct score. Getting just one or two more items correct on the 78-question verbal scale and one or two more items correct on the 60-question math scale can increase the combined scaled score by 40 points. It is unreasonable to expect a few more items answered correctly to translate into large differences in success percentages. Larger differences in success on the SAT can and do translate into differences in success in college.

## Conclusions

It should be noted that even using these rather coarse categories of academic intensity, HSGPA, and SAT score levels, it is still possible to identify a range of academic talent at colleges at all four levels of selectivity. Tables A1 and A2 have many unshaded lines, populated by students with quite different patterns of accomplishment. Table 7 summarizes the range of incoming achievement at all four college levels, and shows the percent of students at the highest and lowest achievement levels who attain a 2.5 or higher first year average (and a 3.5 or higher). Level 1 colleges lack students with the highest SAT scores, but otherwise have students with high academic intensity and high HSGPA. All other colleges have students at the highest level on all three measures. The minimum level of attainment differs somewhat, and is associated with lower percents of success as the selectivity of the college declines. However, there is clearly a great range

**Table 7**

Range of Freshman Success at Four Levels of College Selectivity

<i>College Level (N)</i>	<i>Student Achievement Level at Admission</i>	<i>Academic Intensity</i>	<i>HSGPA Category</i>	<i>Student SAT Level</i>	<i>N</i>	<i>% CGPA &gt;= 2.5</i>	<i>% CGPA &gt;= 3.5</i>
1 (N=15,000)	Lowest	1	1	1	193	13	1
	Highest	3	4	4	125	94	65
2 (N=22,000)	Lowest	1	1	2	143	29	1
	Highest	3	4	5	255	97	72
3 (N=17,000)	Lowest	1	2	2	79	34	0
	Highest	3	4	5	617	98	67
4 (N=6,000)	Lowest	1	2	3	54	41	0
	Highest	3	4	5	844	96	51

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of difference in success associated with the combined admissions measures at all of the colleges.

Our intent was to show in a straightforward manner how preadmissions measures are related to success in college, both at the end of the freshman year and at the end of four years in college. We purposely avoided sophisticated analytical methods that might produce more exact predictions but would be harder for an audience without statistical training to understand. Although the tables we produced could be used for making predictions about the likely success of individual students, there are other methods that are better suited for this purpose, such as ordinary least squares regression for prediction of overall grades or logistic regression for predicting dichotomous success categories. Furthermore, we combined verbal and math scores to simplify the presentation, but they should generally be kept separate when the goal is optimizing predictions. Nevertheless, the methods used in the current study are highly effective for demonstrating the practical importance of grades and SAT scores as indicators of which students are most likely to succeed in college.

## References

- Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment*. Jessups, MD: U.S. Department of Education.
- Bowen, W. G., & Bok, D. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions*. Princeton, NJ: Princeton University Press.
- Bridgeman, B., McCamley-Jenkins, L., & Ervin, N. (2000). *Predictions of freshman grade point average from the revised and recentered SAT I: Reasoning Test*. (College Board Report No. 2000-1). New York: College Entrance Examination Board.
- FairTest (2003). *SAT I: A Faulty Instrument for Predicting College Success*. (<http://fairtest.org/facts/satvalidity.html>)
- Freeberg, N. E., Rock, D. A., & Pollack, J. (1998). *Analysis of the revised Student Descriptive Questionnaire: Phase II, predictive validity of academic self-report* (College Board Report No. 89-8). New York: College Entrance Examination Board.
- Geiser, S. & Studley, R. (2001). *UC and the SAT: Predictive validity and differential impact of the SAT I and SAT II at the University of California*. ([http://www.ucop.edu/sas/research/researchandplanning/pdf/sat\\_study.pdf](http://www.ucop.edu/sas/research/researchandplanning/pdf/sat_study.pdf))
- Kidder, W. C., & Rosner, J. (2002). How the SAT creates "built-in headwinds": An educational and legal analysis of disparate impact. *Santa Clara Law Review*, 43(1), 131–211.
- Ramist, L., Lewis, C., & McCamley-Jenkins, L. (1994). *Student group differences in predicting college grades: Sex, language, and ethnic groups* (College Board Report No. 93-1). New York: College Entrance Examination Board.

# Appendix

**Table A1**

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Freshman Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA>= 3.5	% CGPA>= 2.5
1	1	1	1	193	1	25	1	13
1	1	1	2	951	5	222	1	23
1	1	1	3	630	9	177	1	28
1	1	1	4	38	3	12	8	32
1	1	1	5	2	0	1	0	50
1	1	2	1	174	1	39	1	23
1	1	2	2	1252	16	461	1	37
1	1	2	3	925	28	397	3	43
1	1	2	4	64	9	41	14	64
1	1	3	1	102	0	32	0	31
1	1	3	2	1142	42	556	4	49
1	1	3	3	1081	86	700	8	65
1	1	3	4	78	17	57	22	73
1	1	3	5	1	0	0	0	0
1	1	4	1	21	3	14	14	67
1	1	4	2	221	21	143	10	65
1	1	4	3	414	109	345	26	84
1	1	4	4	106	52	97	50	92
1	1	4	5	5	4	4	80	80
1	2	1	1	26	0	9	0	35
1	2	1	2	330	5	92	2	28
1	2	1	3	466	11	146	2	31
1	2	1	4	67	2	24	3	36
1	2	1	5	3	0	2	0	67
1	2	2	1	25	0	9	0	36
1	2	2	2	710	11	269	2	38
1	2	2	3	1140	44	528	4	46
1	2	2	4	195	22	99	11	51
1	2	2	5	6	1	4	17	67
1	2	3	1	34	0	15	0	44
1	2	3	2	791	37	449	5	57
1	2	3	3	1901	225	1341	12	71
1	2	3	4	481	87	368	18	77
1	2	3	5	20	3	17	15	85
1	2	4	1	6	0	3	0	50
1	2	4	2	266	37	204	14	77
1	2	4	3	1159	345	1001	30	86
1	2	4	4	687	348	642	51	93
1	2	4	5	64	49	62	77	97
1	3	1	3	5	0	3	0	60
1	3	1	4	1	0	1	0	100



**Table A1** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Freshman Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA>= 3.5	% CGPA>= 2.5
1	3	1	5	1	0	0	0	0
1	3	2	1	1	0	0	0	0
1	3	2	2	4	0	1	0	25
1	3	2	3	13	1	8	8	62
1	3	2	4	13	1	8	8	62
1	3	2	5	1	0	1	0	100
1	3	3	2	4	0	2	0	50
1	3	3	3	35	5	23	14	66
1	3	3	4	38	6	32	16	84
1	3	3	5	3	2	3	67	100
1	3	4	2	5	1	4	20	80
1	3	4	3	59	25	52	42	88
1	3	4	4	125	81	118	65	94
1	3	4	5	29	20	27	69	93
2	1	1	1	11	0	4	0	36
2	1	1	2	143	1	41	1	29
2	1	1	3	259	5	86	2	33
2	1	1	4	47	0	24	0	51
2	1	2	1	37	1	21	3	57
2	1	2	2	490	8	212	2	43
2	1	2	3	671	30	372	5	55
2	1	2	4	161	11	102	7	63
2	1	2	5	4	1	3	25	75
2	1	3	1	28	0	11	0	39
2	1	3	2	517	22	295	4	57
2	1	3	4	243	25	170	10	70
2	1	3	5	10	2	9	20	90
2	1	4	1	6	0	5	0	83
2	1	4	2	155	8	103	5	67
2	1	4	3	568	99	445	17	78
2	1	4	4	231	76	203	33	88
2	1	4	5	7	4	7	57	100
2	2	1	1	4	0	0	0	0
2	2	1	2	117	1	41	1	35
2	2	1	3	394	8	171	2	43
2	2	1	4	224	32	128	14	57
2	2	1	5	18	5	12	28	67
2	2	2	1	5	0	2	0	40
2	2	2	2	325	7	160	2	49
2	2	2	3	1390	57	784	4	56
2	2	2	4	720	70	476	10	66
2	2	2	5	42	11	31	26	74
2	2	3	1	21	0	5	0.0	24

**Table A1** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Freshman Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA>= 3.5	% CGPA>= 2.5
2	2	3	2	662	27	360	4	54
2	2	3	3	3370	248	2230	7	66
2	2	3	4	2088	340	1618	16	78
2	2	3	5	109	35	98	32	90
2	2	4	1	5	0	2	0	40
2	2	4	2	280	16	159	6	57
2	2	4	3	2212	408	1793	18	81
2	2	4	4	2405	844	2146	35	89
2	2	4	5	326	194	309	60	95
2	3	1	3	11	3	4	27	36
2	3	1	4	24	6	20	25	83
2	3	1	5	4	1	3	25	75
2	3	2	2	3	0	1	0	33
2	3	2	3	34	2	25	6	74
2	3	2	4	113	22	90	20	80
2	3	2	5	15	8	13	53	87
2	3	3	2	11	1	6	9	55
2	3	3	3	182	30	128	17	70
2	3	3	4	387	97	335	25	87
2	3	3	5	85	43	79	51	93
2	3	4	2	4	0	3	0	75
2	3	4	3	153	34	119	22	78
2	3	4	4	634	294	600	46	95
2	3	4	5	255	183	247	72	97
3	1	1	1	6	0	1	0	17
3	1	1	2	37	2	14	5	38
3	1	1	3	33	1	15	3	46
3	1	1	4	7	1	4	14	57
3	1	2	1	5	0	1	0	20
3	1	2	2	79	0	27	0	34
3	1	2	3	133	6	65	5	49
3	1	2	4	33	2	18	6	55
3	1	3	1	12	1	5	8	42
3	1	3	2	167	5	61	3	37
3	1	3	3	446	34	239	8	54
3	1	3	4	162	22	111	14	69
3	1	3	5	5	1	5	20	100
3	1	4	1	3	0	2	0	67
3	1	4	2	73	3	36	4	49
3	1	4	3	288	36	208	13	72
3	1	4	4	124	36	106	29	86
3	1	4	5	8	4	7	50	88
3	2	1	1	3	0	1	0	33

**Table A1** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Freshman Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA>= 3.5	% CGPA>= 2.5
3	2	1	2	31	3	7	10	23
3	2	1	3	89	0	33	0	37
3	2	1	4	41	3	18	7	44
3	2	1	5	5	1	3	20	60
3	2	2	1	4	0	2	0	50
3	2	2	2	105	3	44	3	42
3	2	2	4	318	30	208	9	65
3	2	2	5	26	2	19	8	73
3	2	3	1	9	1	5	11	56
3	2	3	2	309	11	153	4	50
3	2	3	3	1885	160	1172	9	62
3	2	3	4	2036	378	1612	19	79
3	2	3	5	167	48	136	29	81
3	2	4	2	193	10	102	5	53
3	2	4	3	1969	307	1474	16	75
3	2	4	4	2620	865	2298	33	88
3	2	4	5	342	191	321	56	94
3	3	1	3	5	0	2	0	40
3	3	1	4	6	1	5	17	83
3	3	1	5	2	0	1	0	50
3	3	2	2	4	0	2	0	50
3	3	2	3	42	4	28	10	67
3	3	2	4	95	16	72	17	76
3	3	2	5	21	6	19	29	91
3	3	3	2	21	0	10	0	48
3	3	3	3	248	19	168	8	68
3	3	3	4	876	209	733	24	84
3	3	3	5	184	57	165	31	90
3	3	4	2	1	0	0	0	0
3	3	4	2	18	0	7	0	39
3	3	4	3	455	82	366	18	80
3	3	4	4	1736	686	1621	40	93
3	3	4	5	617	411	602	67	98
4	1	1	1	2	0	0	0	0
4	1	1	2	9	0	2	0	22
4	1	1	3	10	0	4	0	40
4	1	1	4	9	1	3	11	33
4	1	1	5	1	1	1	100	100
4	1	2	2	12	0	4	0	33
4	1	2	3	54	0	22	0	41
4	1	2	4	43	3	19	7	44
4	1	2	5	2	0	1	0	50
4	1	3	1	1	0	1	0	100

**Table A1** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Freshman Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA>= 3.5	% CGPA>= 2.5
4	1	3	2	8	0	5	0	63
4	1	3	3	47	2	27	4	57
4	1	3	4	53	5	41	9	77
4	1	3	5	3	2	3	67	100
4	1	4	2	4	2	3	50	75
4	1	4	3	27	5	23	19	85
4	1	4	4	25	9	23	36	92
4	1	4	5	5	2	5	40	100
4	2	1	1	2	0	0	0	0
4	2	1	2	5	0	2	0	40
4	2	1	3	39	1	15	3	39
4	2	1	4	72	1	33	1	46
4	2	1	5	4	0	2	0	50
4	2	2	2	17	1	6	6	35
4	2	2	3	232	3	105	1	45
4	2	2	4	443	31	233	7	53
4	2	2	5	40	4	26	10	65
4	2	3	2	13	1	4	8	31
4	2	3	3	342	27	174	8	51
4	2	3	4	707	88	485	12	69
4	2	3	5	149	40	131	27	88
4	2	4	2	15	1	11	7	73
4	2	4	3	257	34	178	13	69
4	2	4	4	821	234	705	29	86
4	2	4	5	423	205	395	49	93
4	3	1	3	1	0	0	0	0
4	3	1	4	11	1	9	9	82
4	3	1	5	3	0	2	0	67
4	3	2	3	16	0	2	0	13
4	3	2	4	97	5	54	5	56
4	3	2	5	30	3	21	10	70
4	3	3	2	1	0	1	0	100
4	3	3	3	42	6	31	14	74
4	3	3	4	296	30	215	10	73
4	3	3	5	175	55	155	31	89
4	3	4	3	68	9	46	13	68
4	3	4	4	535	168	468	31	88
4	3	4	5	844	430	806	51	96

**Table A2**

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Senior Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College SAT Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA>=3.5	N CGPA>=2.5	% CGPA >= 3.5	% CGPA >= 2.5
1	1	1	1	78	1	30	1	39
1	1	1	2	481	7	237	2	49
1	1	1	3	299	6	168	2	56
1	1	1	4	15	0	10	0	67
1	1	2	1	71	1	33	1	47
1	1	2	2	688	16	446	2	65
1	1	2	3	517	28	384	5	74
1	1	2	4	34	6	28	18	82
1	1	3	1	41	1	26	2	63
1	1	3	2	691	35	537	5	78
1	1	3	3	684	91	567	13	83
1	1	3	4	42	9	36	21	86
1	1	4	1	9	1	8	11	89
1	1	4	2	142	21	127	15	89
1	1	4	3	286	90	268	32	94
1	1	4	4	71	38	70	54	99
1	1	4	5	4	4	4	100	100
1	2	1	1	14	0	6	0	43
1	2	1	2	159	5	96	3	60
1	2	1	3	243	8	141	3	58
1	2	1	4	27	2	18	7	67
1	2	1	5	2	0	2	0	100
1	2	2	1	10	0	8	0	80
1	2	2	2	443	13	293	3	66
1	2	2	3	649	44	472	7	73
1	2	2	4	114	10	85	9	75
1	2	2	5	3	2	2	67	67
1	2	3	1	15	0	12	0	80
1	2	3	2	538	48	413	9	77
1	2	3	3	1272	201	1110	16	87
1	2	3	4	301	70	267	23	89
1	2	3	5	14	2	12	14	86
1	2	4	1	2	0	2	0	100
1	2	4	2	171	44	156	26	91
1	2	4	3	857	304	796	36	93
1	2	4	4	491	249	474	51	97
1	2	4	5	47	36	45	77	96
1	3	1	3	4	0	2	0	50
1	3	1	4	1	0	1	0	100
1	3	2	2	3	0	1	0	33
1	3	2	3	9	1	6	11	67
1	3	2	4	5	1	5	20	100

**Table A2** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Senior Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College SAT Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA >= 3.5	N CGPA >= 2.5	% CGPA >= 3.5	% CGPA >= 2.5
1	3	2	5	1	0	1	0	100
1	3	3	2	4	1	2	25	50
1	3	3	3	27	4	19	15	70
1	3	3	4	25	3	24	12	96
1	3	3	5	2	1	2	50	100
1	3	4	2	3	0	2	0	67
1	3	4	3	41	19	39	46	95
1	3	4	4	101	67	97	66	96
1	3	4	5	21	14	18	67	86
2	1	1	1	7	0	5	0	71
2	1	1	2	84	1	47	1	56
2	1	1	3	148	3	91	2	62
2	1	1	4	28	2	20	7	71
2	1	1	5	1	1	1	100	100
2	1	2	1	22	0	17	0	77
2	1	2	2	280	3	196	1	70
2	1	2	3	418	32	324	8	78
2	1	2	4	109	10	91	9	84
2	1	2	5	2	0	2	0	100
2	1	3	1	16	0	13	0	81
2	1	3	2	359	21	280	6	78
2	1	3	3	779	67	644	9	83
2	1	3	4	169	28	144	17	85
2	1	3	5	5	2	5	40	100
2	1	4	1	6	1	5	17	83
2	1	4	2	116	9	96	8	83
2	1	4	3	434	95	399	22	92
2	1	4	4	171	60	163	35	95
2	1	4	5	6	4	6	67	100
2	2	1	1	1	0	0	0	0
2	2	1	2	82	2	44	2	54
2	2	1	3	245	8	172	3	70
2	2	1	4	137	25	115	18	84
2	2	1	5	15	4	13	27	87
2	2	2	1	5	0	2	0	40
2	2	2	2	204	5	153	3	75
2	2	2	3	938	62	733	7	78
2	2	2	4	479	69	403	14	84
2	2	2	5	24	7	22	29	92
2	2	3	1	16	0	10	0	63
2	2	3	2	469	19	354	4	76
2	2	3	3	2485	226	2092	9	84

**Table A2** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Senior Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College SAT Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA >= 3.5	N CGPA >= 2.5	% CGPA >= 3.5	% CGPA >= 2.5
2	2	3	4	1582	282	1400	18	89
2	2	3	5	77	32	70	42	91
2	2	4	1	2	0	2	0	100
2	2	4	2	205	13	158	6	77
2	2	4	3	1822	401	1644	22	90
2	2	4	4	1986	751	1882	38	95
2	2	4	5	267	157	250	59	94
2	3	1	3	6	1	6	17	100
2	3	1	4	18	6	18	33	100
2	3	1	5	4	1	4	25	100
2	3	2	2	2	1	1	50	50
2	3	2	3	24	0	17	0	71
2	3	2	4	88	22	81	25	92
2	3	2	5	12	7	11	58	92
2	3	3	2	10	0	7	0	70
2	3	3	3	132	23	109	17	83
2	3	3	4	317	85	291	27	92
2	3	3	5	62	34	59	55	95
2	3	4	2	3	0	3	0	100
2	3	4	3	119	30	98	25	82
2	3	4	4	526	249	507	47	96
2	3	4	5	216	150	213	69	99
2	3	4	1	1	0	0	0	0
3	1	1	1	7	0	4	0	57
3	1	1	2	35	1	12	3	34
3	1	1	3	30	1	14	3	47
3	1	1	4	7	0	5	0	71
3	1	2	1	5	0	2	0	40
3	1	2	2	69	2	41	3	59
3	1	2	3	112	4	75	4	67
3	1	2	4	26	2	22	8	85
3	1	3	1	14	1	9	7	64
3	1	3	2	133	2	86	2	65
3	1	3	3	369	43	296	12	80
3	1	3	4	123	21	102	17	83
3	1	3	5	5	1	5	20	100
3	1	4	1	3	1	3	33	100
3	1	4	2	58	4	42	7	72
3	1	4	3	247	50	215	20	87
3	1	4	4	108	34	99	32	92
3	1	4	5	8	7	8	88	100
3	2	1	1	3	0	1	0	33

**Table A2** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Senior Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College SAT Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA ≥ 3.5	N CGPA ≥ 2.5	% CGPA ≥ 3.5	% CGPA ≥ 2.5
3	2	1	2	21	0	13	0	62
3	2	1	3	67	1	35	2	52
3	2	1	4	30	3	19	10	63
3	2	1	5	3	0	2	0	67
3	2	2	1	4	0	1	0	25
3	2	2	2	82	1	49	1	60
3	2	2	3	300	18	215	6	72
3	2	2	4	246	29	202	12	82
3	2	2	5	23	3	21	13	91
3	2	3	1	6	0	3	0	50
3	2	3	2	253	10	175	4	69
3	2	3	3	1514	146	1172	10	77
3	2	3	4	1685	361	1481	21	88
3	2	3	5	140	49	128	35	91
3	2	4	2	145	7	106	5	73
3	2	4	3	1621	275	1359	17	84
3	2	4	4	2197	793	2037	36	93
3	2	4	5	273	158	256	58	94
3	3	1	3	4	0	2	0	50
3	3	1	4	7	1	3	14	43
3	3	1	5	1	0	1	0	100
3	3	2	2	4	0	4	0	100
3	3	2	3	37	5	29	14	78
3	3	2	4	77	7	57	9	74
3	3	2	5	17	5	16	29	94
3	3	3	2	14	0	10	0	71
3	3	3	3	210	23	157	11	75
3	3	3	4	725	178	648	25	89
3	3	3	5	154	52	141	34	92
3	3	4	2	15	0	11	0	73
3	3	4	3	365	70	323	19	89
3	3	4	4	1421	584	1343	41	95
3	3	4	5	480	310	470	65	98
4	1	1	1	1	0	0	0	0
4	1	1	2	5	0	0	0	0
4	1	1	3	5	0	4	0	80
4	1	1	4	7	0	4	0	57
4	1	1	5	1	0	1	0	100
4	1	2	2	9	1	6	11	67
4	1	2	3	35	4	26	11	74
4	1	2	4	29	4	22	14	76
4	1	2	5	1	0	1	0	100



**Table A2** (Continued)

Number and Percent Achieving a 3.5 or a 2.5 CGPA at the End of Senior Year by College Level, HSGPA Category, Academic Intensity, and SAT Level

College SAT Level	Academic Intensity	HSGPA Category	Student SAT Level	Total N	N CGPA >= 3.5	N CGPA >= 2.5	% CGPA >= 3.5	% CGPA >= 2.5
4	1	3	1	2	0	1	0	50
4	1	3	2	9	1	6	11	67
4	1	3	3	32	3	27	9	84
4	1	3	4	36	7	33	19	92
4	1	3	5	1	1	1	100	100
4	1	4	2	3	1	3	33	100
4	1	4	3	24	7	22	29	92
4	1	4	4	20	6	20	30	100
4	1	4	5	5	1	5	20	100
4	2	1	1	1	0	0	0	0
4	2	1	2	4	1	2	25	50
4	2	1	3	24	0	19	0	79
4	2	1	4	48	2	33	4	69
4	2	1	5	2	2	2	100	100
4	2	2	2	12	2	6	17	50
4	2	2	3	156	6	106	4	68
4	2	2	4	292	24	213	8	73
4	2	2	5	29	5	21	17	72
4	2	3	2	7	1	6	14	86
4	2	3	3	248	31	184	13	74
4	2	3	4	541	95	458	18	85
4	2	3	5	123	41	114	33	93
4	2	4	2	12	3	10	25	83
4	2	4	3	206	26	172	13	84
4	2	4	4	693	245	657	35	95
4	2	4	5	384	206	373	54	97
4	3	1	3	2	0	2	0	100
4	3	1	4	9	1	7	11	78
4	3	1	5	1	0	1	0	100
4	3	2	3	11	0	3	0	27
4	3	2	4	73	5	55	7	75
4	3	2	5	23	2	19	9	83
4	3	3	3	35	5	27	14	77
4	3	3	4	248	41	202	17	82
4	3	3	5	148	56	141	38	95
4	3	4	3	54	10	43	19	80
4	3	4	4	456	165	427	36	94
4	3	4	5	773	468	755	61	98



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