CollegeBoard
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The 7th Annual

AP® Report to the Nation

February 9, 2011

AP®

About AP®

The College Board's Advanced Placement Program® (AP®) enables students to pursue college-level studies while still in high school. Through more than 30 college-level courses, each culminating in a rigorous exam, AP provides willing and academically prepared students with the opportunity to earn college credit, advanced placement or both. Taking AP courses also demonstrates to college admission officers that students have sought out the most rigorous curriculum available to them.

Each AP course is modeled upon a comparable college course. College and university faculty play a vital role in ensuring that AP courses align with college-level standards by defining the curricular expectations of each course and reviewing all AP teachers' syllabi. Talented and dedicated AP teachers help AP students in classrooms around the world develop and apply the content knowledge and skills they will need in college.

Each AP course culminates with a college-level assessment developed and scored by college and university faculty, as well as experienced AP teachers. AP Exams are an essential part of the AP experience, enabling students to demonstrate their mastery of college-level course work. An AP Exam score of 5 is equivalent to a grade of A in the corresponding college course. An AP Exam score of 4 is equivalent to grades of A-, B+ and B in college, and a score of 3 is equivalent to grades of B-, C+ and C in college. Most four-year colleges and universities in the United States grant students credit, advanced placement or both on the basis of successful AP Exam scores. Universities in more than 60 countries recognize AP Exam scores in the admission process and/or award credit and placement for qualifying scores. Visit www.collegeboard.com/ap/creditpolicy to view AP credit and placement policies at more than 1,000 colleges and universities.

Performing well on an AP Exam means more than just mastering the material in a particular subject; it is a pathway to success in college. Research consistently shows that students who score a 3 or higher on AP Exams typically experience greater academic success in college and are more likely to graduate on time than otherwise comparable non-AP peers.

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About This Report

This report shows how well educators across the United States have increased access to the types of rich academic experiences that prepare students for success in college. By combining national, state and AP data, this report provides educators and policymakers with information they can use to celebrate their successes, understand their unique challenges and set meaningful goals to increase opportunity for all students. It's important to note that while AP Exams are valid measures of students' content mastery of college-level studies in specific academic disciplines, AP results should never be used as the sole measure for gauging educational excellence and equity.

Because a central source of demographic data for nonpublic schools is not available for all states, this report represents *public* school students only. References to the total number of high school graduates represent projections supplied in "Knocking at the College Door" (2008), Western Interstate Commission for Higher Education. Additionally, this report looks at students' entire experience with AP — tracking exams taken by seniors throughout their high school career — as opposed to reporting exam results from a particular calendar year.

Additional data are available exclusively online at www.collegeboard.com/apreport.

How Does AP Advance Our Nation's Education Agenda?

In order to reestablish the United States as a global leader in education, the College Board's Commission on Access, Admissions and Success in Higher Education recommended that the U.S. increase the percent of 24- to 34-year-olds who hold an associate degree or higher to 55 percent by 2025. Currently, the percentage of American adults with postsecondary credentials is not keeping pace with growth in other industrialized nations. Improving college success for all Americans, but most urgently for low-income and minority students, is critical to our nation's economic and social health.

AP fosters college persistence and success.

Performing well on an AP Exam means more than just accomplishing college-level work; it is a pathway to success in college. Research consistently shows that students who score a 3 or higher on AP Exams typically experience greater academic success in college and have higher graduation rates than otherwise comparable non-AP peers.[1]

A recent College Board study showed that students who scored 3 or higher on four popular AP Exams earned higher first-year GPAs, were more likely to continue on to a second year of college, and were more likely to attend selective institutions, on average, than students with comparable SAT® scores and high school GPAs who did not take AP. Even students who scored a 1 or 2 on an AP Exam showed higher retention rates into their second year of college than non-AP students, and they were more likely to attend selective institutions.[2]

AP offers opportunities for traditionally underserved students to succeed.

Recent research shows that participation in high-quality curricula, measured by an external assessment such as the AP Exam, significantly boosts the likelihood of traditionally underserved students' future success in college.

Researchers in Texas found that black/African American and Hispanic/Latino AP students in some subjects earned higher grades in college than black/African American and Hispanic/Latino students with comparable SAT ranges and socioeconomic backgrounds who did not take AP.[3]

The National Center for Educational Accountability found that minority and low-income students who participate in AP, and particularly those who score a 3 or higher on the exam, are much more likely to earn a college degree within five years of beginning college than comparable minority and low-income students.[4]

AP helps increase American student achievement in science and math.

In September 2010, President Barack Obama announced the launch of Change the Equation, a nonprofit and nonpartisan initiative to improve science, technology, engineering and math (STEM) education, and to push the U.S. to "the top of the pack" in these fields in the next decade.[5] This initiative follows on recent studies such as the National Academies' landmark 2005 volume *Rising Above the Gathering Storm*, which warned that, because of our relative weakness compared to the rest of the world in math and science education, "the age of relatively unchallenged U.S. leadership is ending."[6] The subtitle of the Academies' new follow-up report, *Rapidly Approaching Category 5*, speaks to the ongoing grim situation: The U.S. now ranks 27th out of 29 wealthy countries in the proportion of college students with degrees in science and engineering and, in 2009, more than half of this country's patents were awarded to foreign companies.[7]

Research suggests that AP math and science courses and exams provide a positive academic experience for our nation's students. Taking into account control variables like gender, ethnicity, parental education level and socioeconomic status, Harvard Education Press published research last year showing that students who took AP math or science exams were more likely than non-AP students to earn degrees in particular physical science, engineering and life science disciplines — the fields leading to the cutting-edge careers that can help restore America's competitiveness.[8]

A College Board study showed that female, black/African American, and Hispanic/Latino students who took AP math and science exams were much more likely to major in related disciplines than peers who did not take AP.[9] In other words, the study showed that AP is correlated with diversifying the pool of students majoring in math and science, which in turn may lead to more diversity among those who are employed in these fields.

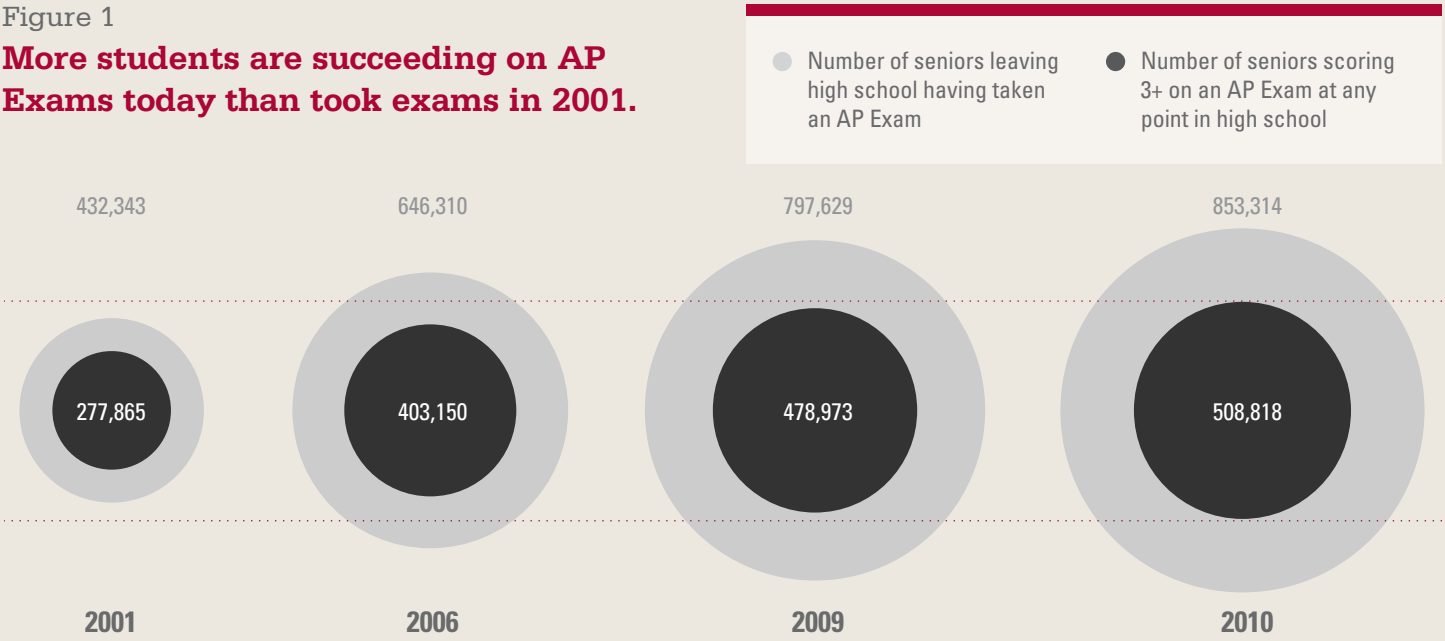
Boston College's Trends in Mathematics and Science Study (TIMSS) center conducts research to compare students around the globe in math and science achievement. Its comparison of math and science achievement in 16 countries found that AP math and science students, particularly those scoring 3 or higher on an AP Exam, outperform students from nearly all nations in these subject areas.[10]

Further Reading

Visit the College Board's College Completion Agenda at completionagenda.collegeboard.org.

Figure 1

More students are succeeding on AP Exams today than took exams in 2001.



Fostering College Persistence and Success

This section of the report outlines the degree to which each state provided its students with the kind of high-quality AP opportunity that will prepare them well for college.

What the Data Show

Figure 1 demonstrates the growth in overall participation and success in the AP Program since 2001. The number of students succeeding in AP today exceeds the number of students who took the exams nearly 10 years ago.

Figures 2 and 3 show the percent of each state's graduating class scoring 3 or higher on at least one AP Exam. This is calculated by dividing the number of AP students graduating with at least one AP score of 3 or higher by the total number of graduates. By counting students scoring 3 or higher only once, regardless of how many exams they took, the percentage measures the proportion of graduates that received both preparation for, and access to, a successful AP experience. There is no way to inflate this percentage by restricting access to AP; students scoring 1s or 2s neither increase nor reduce the percentage. By looking at all seniors — not just the AP classroom — educators and policymakers can better determine the extent to which their overall population is succeeding in advanced academics in high school.

Figure 4 looks at how students from the class of 2010 performed on *all* the AP Exams they took in high school.

The grid in **Figure 5** situates, relative to national averages, the degree to which each state provided students with access to at least one successful AP experience against that state's AP participation rates.

How to Make Further Progress

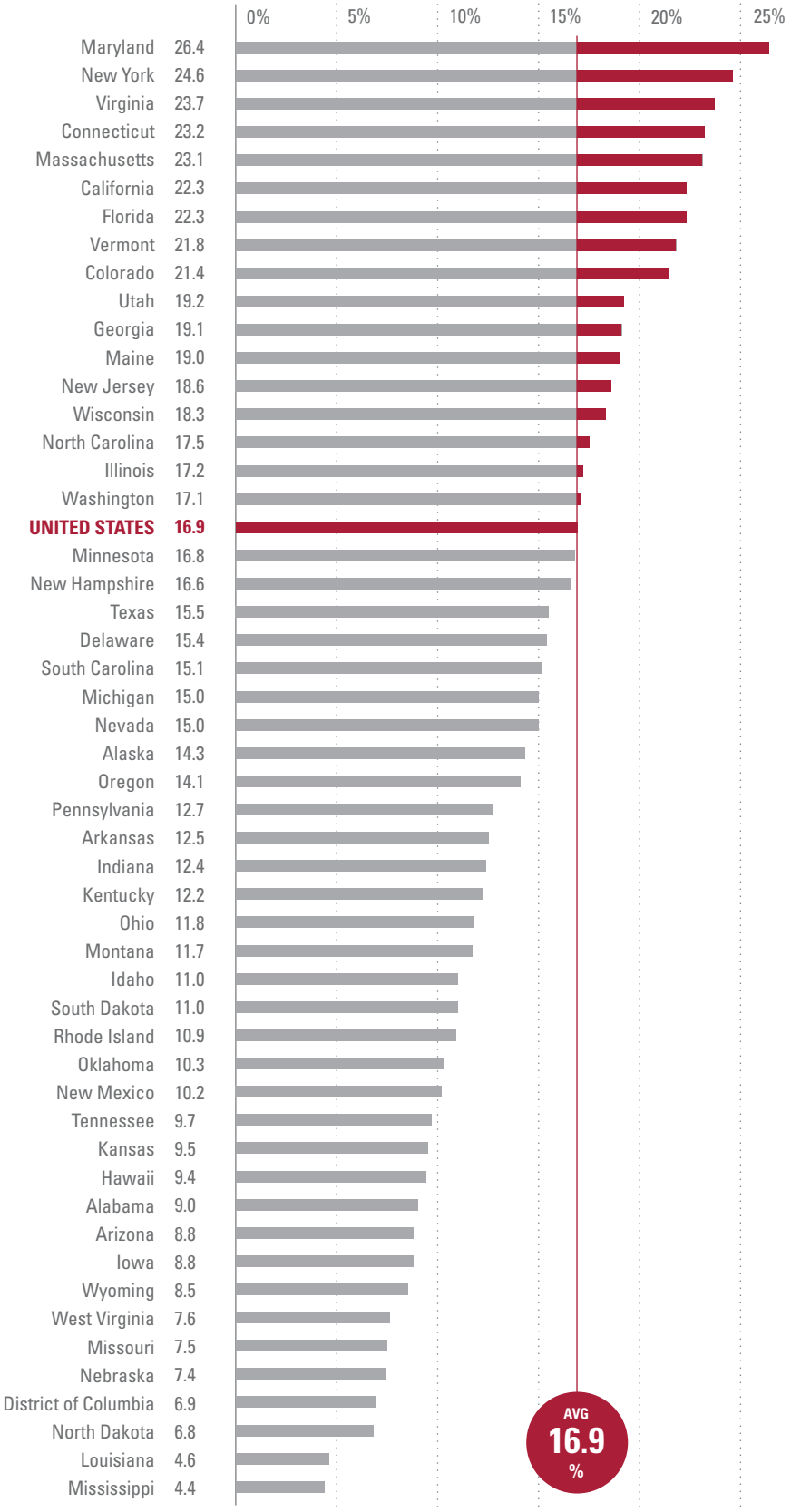
Over time, an increase in students participating in AP is typically accompanied by an increase in the number of successful AP students. It is through a commitment to equitable access to AP that excellence can be achieved.

States with high percentages of exams receiving scores of 3 or higher, but who are serving a lower percentage of their high school population, should implement policies for serving a greater proportion of the high school population. On the other hand, states with high percentages of exams receiving scores of 1 or 2 should focus on the sort of Pre-AP® strategies that prepare a diversity of students for eventual enrollment and success in AP classes.

Figure 2

What percent of the class of 2010 completed high school having had at least one successful AP experience?

Percent of all seniors scoring 3 or higher on an AP Exam at any point in high school



To view trends over time, see the Figure 3 foldout on the following page.

Figure 4

How did the class of 2010 perform?

All AP Exams taken by the class of 2010 at any point in high school

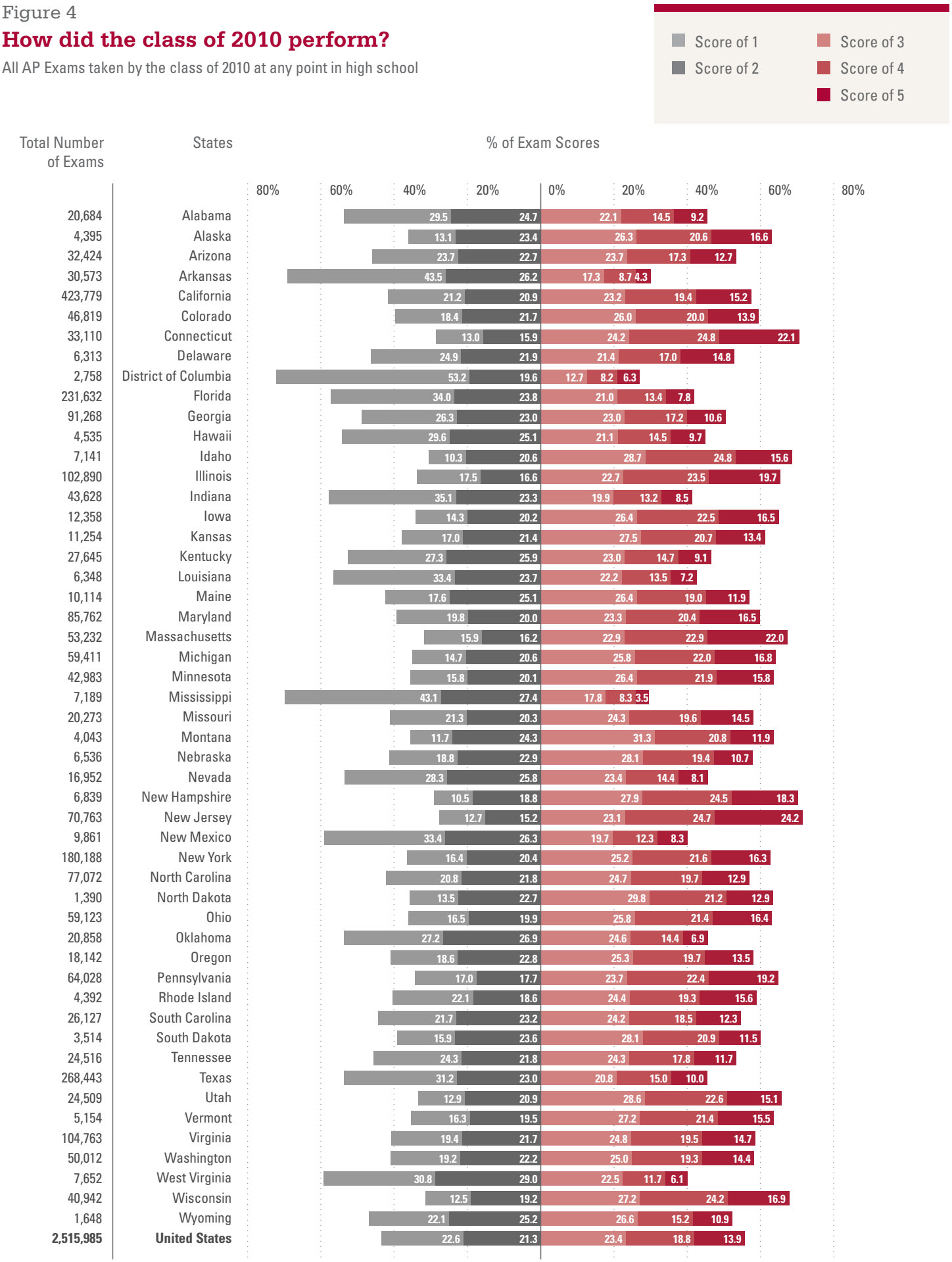


Figure 3

Over time, what percent of seniors completed high school with at least one successful AP experience?

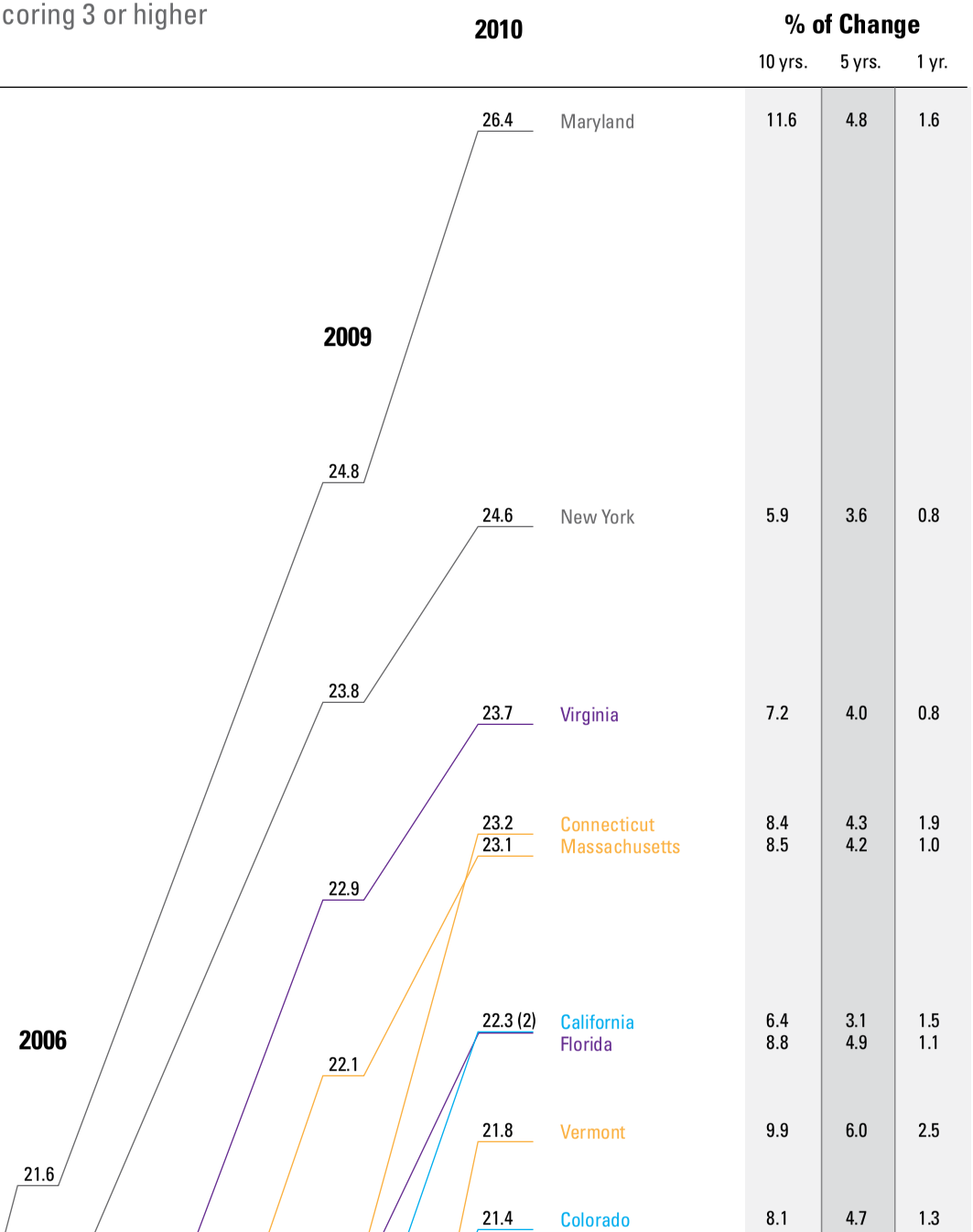
Percent of seniors from the classes of 2001, 2006, 2009 and 2010 scoring 3 or higher on an AP Exam at any point in high school

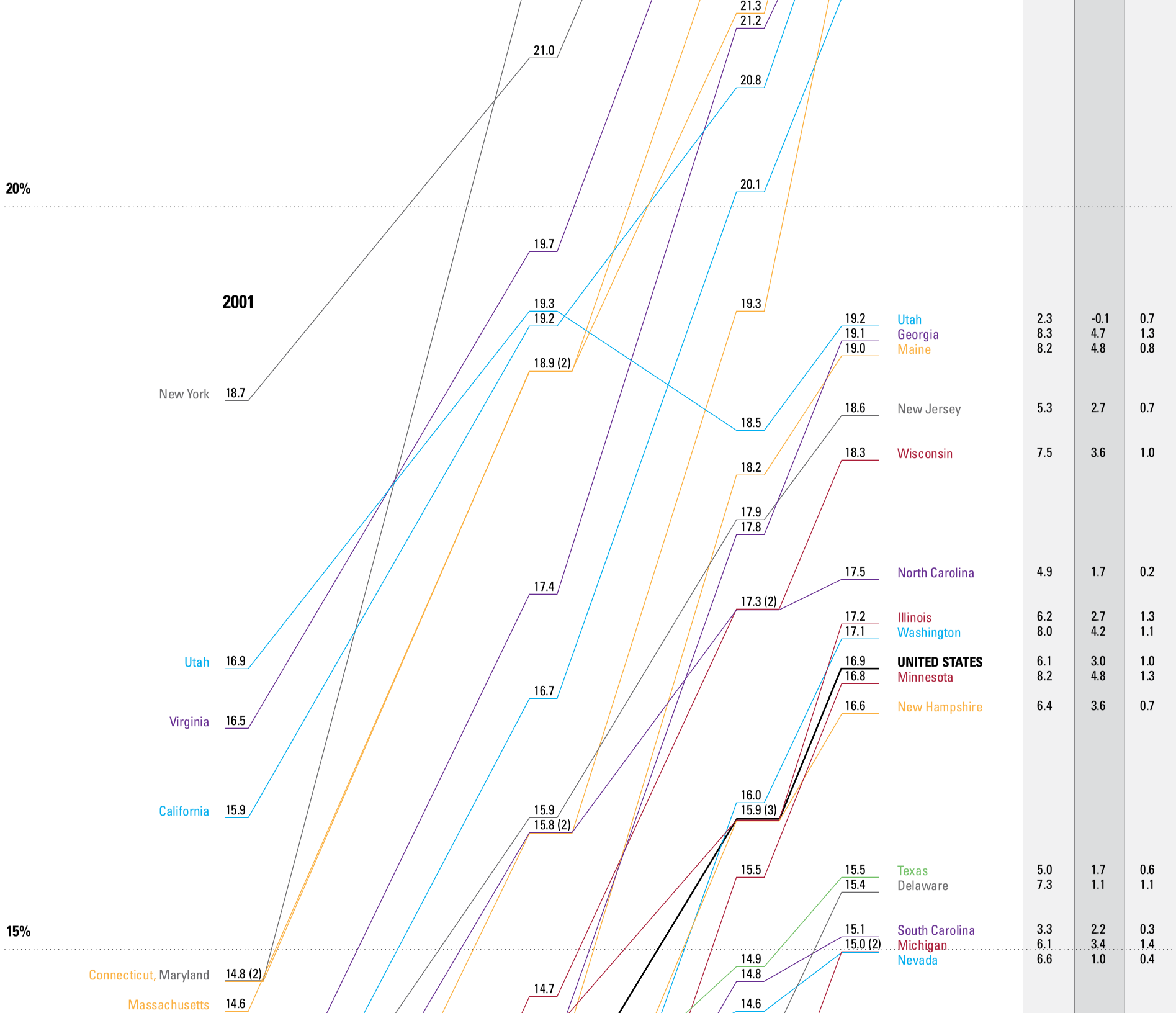
3,018,460
Students in the graduating class of 2010

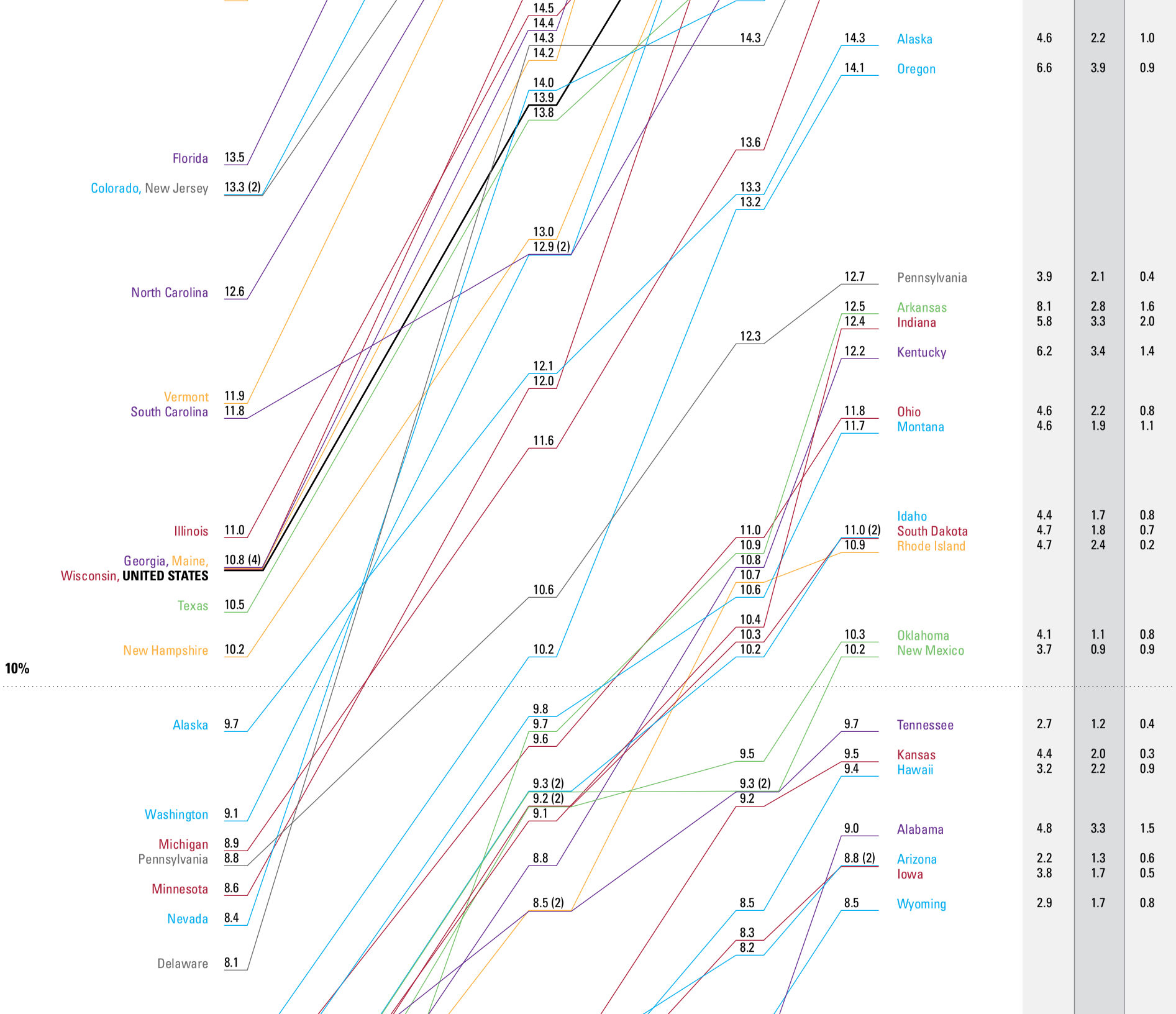
28.3%
Percent of the class of 2010 who took an AP Exam during high school

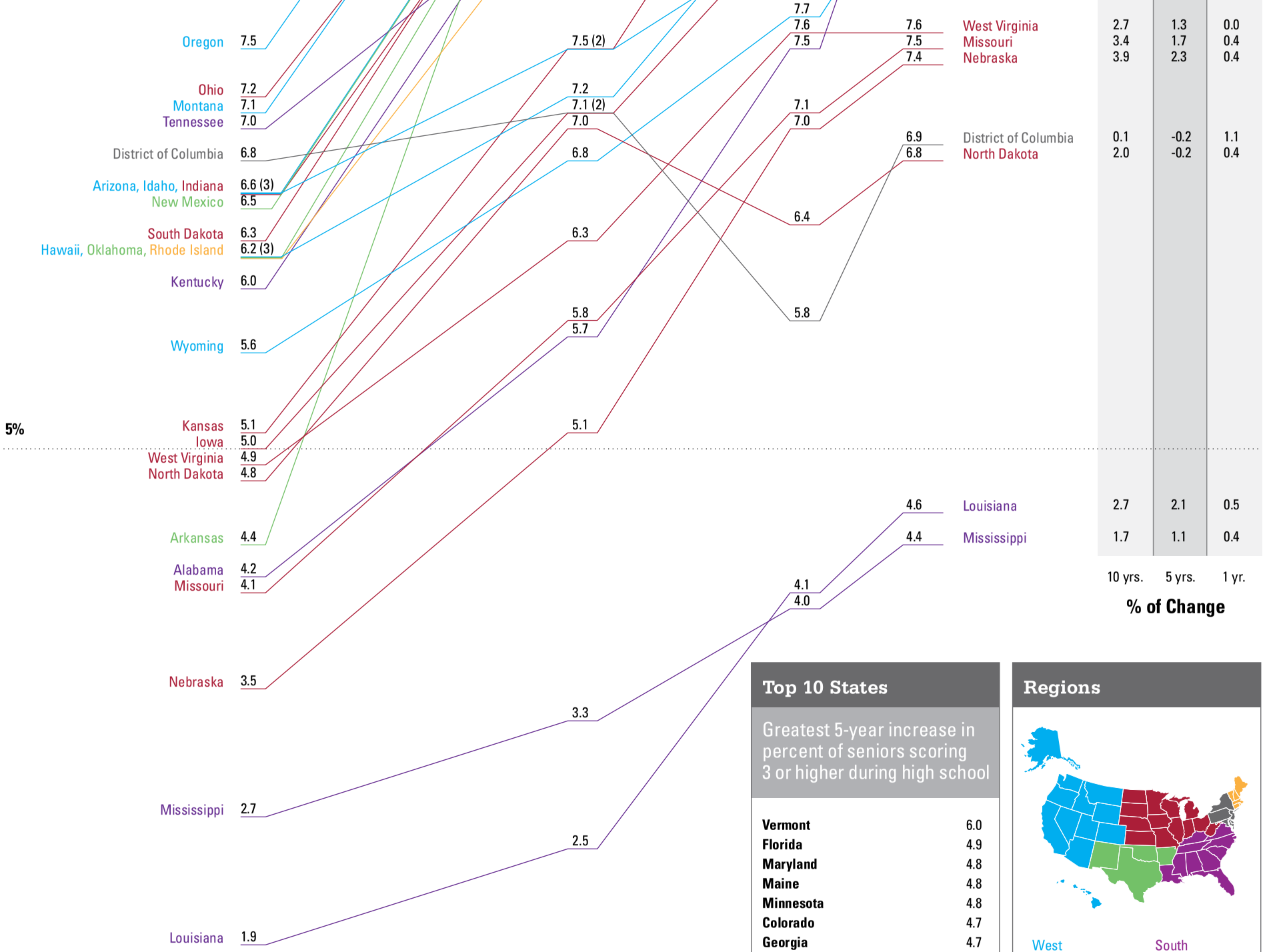
16.9%
Percent of the class of 2010 scoring 3 or higher on an AP Exam during high school

12,705
Total number of U.S. public schools attended by AP students from the class of 2010 (an increase of 165 over last year)




20%
15%
2001
New York 18.7
Utah 16.9
Virginia 16.5
California 15.9
Connecticut, Maryland 14.8 (2)
Massachusetts 14.6
21.0
19.7
19.3
19.2
18.9 (2)
17.4
16.7
15.9
15.8 (2)
14.7
21.3
21.2
20.8
20.1
19.3
18.5
18.2
17.9
17.8
17.3 (2)
16.0
15.9 (3)
15.5
14.9
14.8
14.6
19.2 Utah 2.3 -0.1 0.7
19.1 Georgia 8.3 4.7 1.3
19.0 Maine 8.2 4.8 0.8
18.6 New Jersey 5.3 2.7 0.7
18.3 Wisconsin 7.5 3.6 1.0
17.5 North Carolina 4.9 1.7 0.2
17.2 Illinois 6.2 2.7 1.3
17.1 Washington 8.0 4.2 1.1
16.9 UNITED STATES 6.1 3.0 1.0
16.8 Minnesota 8.2 4.8 1.3
16.6 New Hampshire 6.4 3.6 0.7
15.5 Texas 5.0 1.7 0.6
15.4 Delaware 7.3 1.1 1.1
15.1 South Carolina 3.3 2.2 0.3
15.0 (2) Michigan 6.1 3.4 1.4
Nevada 6.6 1.0 0.4


10%
Florida 13.5
Colorado, New Jersey 13.3 (2)
North Carolina 12.6
Vermont 11.9
South Carolina 11.8
Illinois 11.0
Georgia, Maine, Wisconsin, UNITED STATES 10.8 (4)
Texas 10.5
New Hampshire 10.2
Alaska 9.7
Washington 9.1
Michigan 8.9
Pennsylvania 8.8
Minnesota 8.6
Nevada 8.4
Delaware 8.1
14.5
14.4
14.3
14.2
14.0
13.9
13.8
13.0
12.9 (2)
12.1
12.0
11.6
10.6
10.2
9.8
9.7
9.6
9.3 (2)
9.2 (2)
9.1
8.8
8.5 (2)
14.3 Alaska 4.6 2.2 1.0
14.1 Oregon 6.6 3.9 0.9
13.6
13.3
13.2
12.7 Pennsylvania 3.9 2.1 0.4
12.5 Arkansas 8.1 2.8 1.6
12.4 Indiana 5.8 3.3 2.0
12.3
12.2 Kentucky 6.2 3.4 1.4
11.8 Ohio 4.6 2.2 0.8
11.7 Montana 4.6 1.9 1.1
11.0 Idaho 4.4 1.7 0.8
11.0 (2) South Dakota 4.7 1.8 0.7
10.9 Rhode Island 4.7 2.4 0.2
10.9
10.8
10.7
10.6
10.4
10.3 Oklahoma 4.1 1.1 0.8
10.3
10.2 New Mexico 3.7 0.9 0.9
10.2
9.7 Tennessee 2.7 1.2 0.4
9.5 Kansas 4.4 2.0 0.3
9.5
9.4 Hawaii 3.2 2.2 0.9
9.3 (2)
9.2
9.0 Alabama 4.8 3.3 1.5
8.8 (2) Arizona 2.2 1.3 0.6
Iowa 3.8 1.7 0.5
8.5 Wyoming 2.9 1.7 0.8
8.5
8.3
8.2
8.5



Top 10 States

Greatest 5-year increase in percent of seniors scoring 3 or higher during high school

Vermont	6.0
Florida	4.9
Maryland	4.8
Maine	4.8
Minnesota	4.8
Colorado	4.7
Georgia	4.7
Connecticut	4.3
Massachusetts	4.2
Washington	4.2

Regions

West
Southwest
Midwest
South
Middle States
New England

Figure 5

How can states support greater AP participation and success?

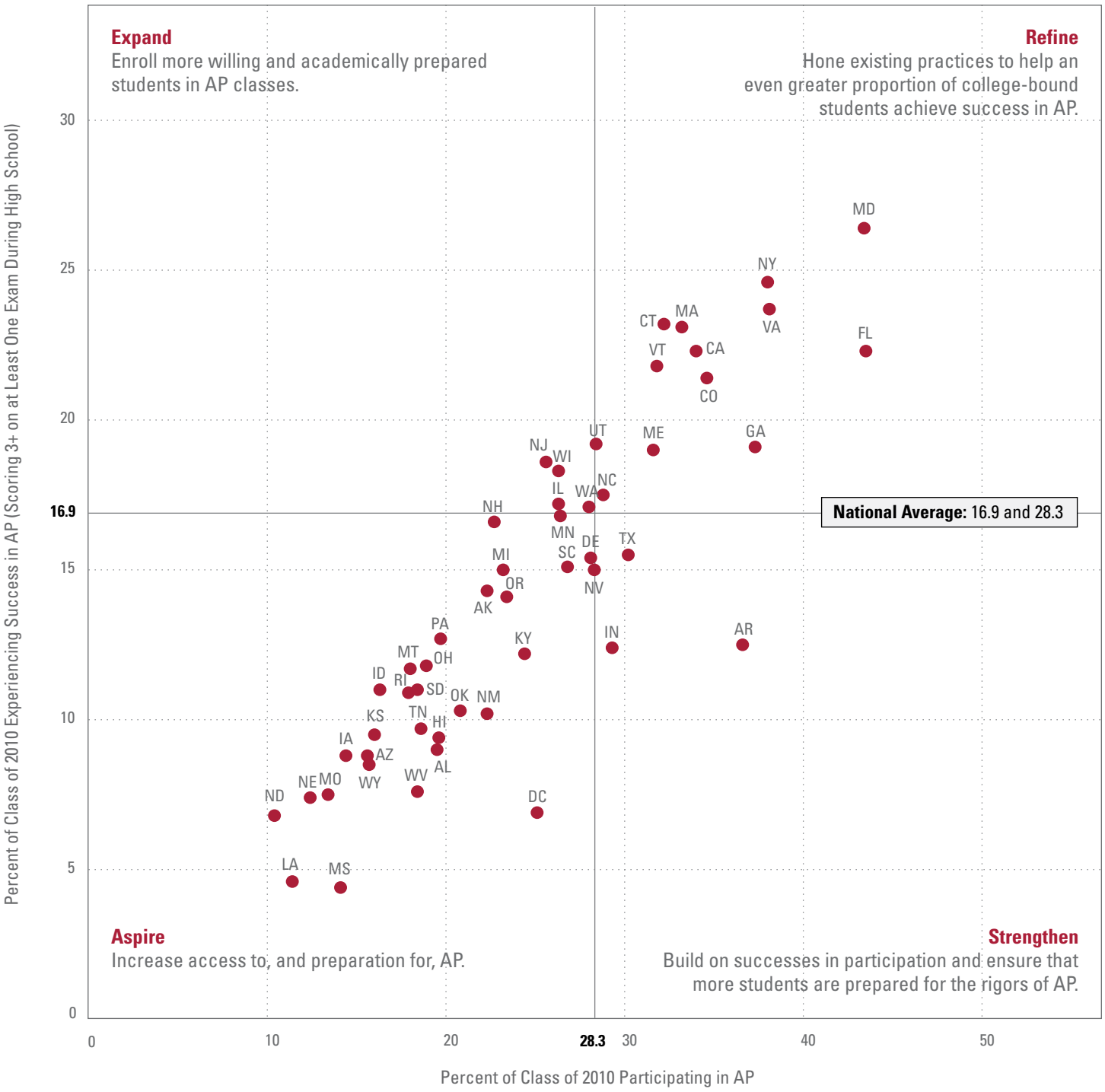
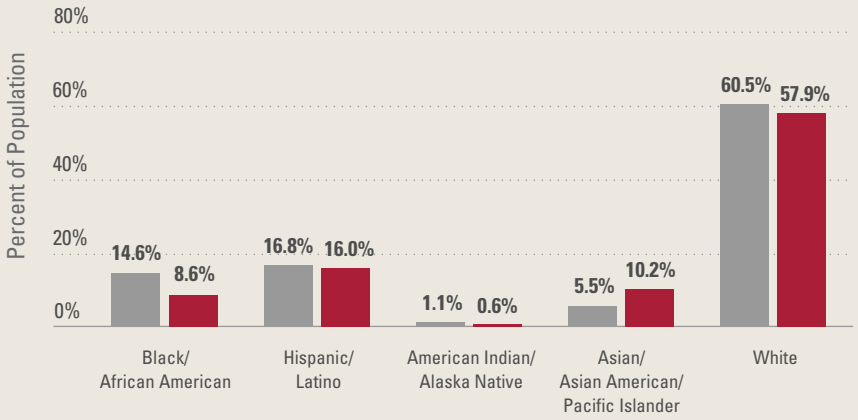


Figure 6

How well was the diversity of the class of 2010 reflected in AP?

Demographics of all seniors from the class of 2010 versus AP examinees



Note: Because some AP Exam takers identify themselves as "Other" for race/ethnicity or do not provide race/ethnicity, the "AP Examinee Population" in this figure only represents 93.2%.

Offering Opportunities for Traditionally Underserved Students to Succeed

This section of the report shows how well states are providing equitable access to rigorous, college-level experiences to all willing and academically prepared students.

What the Data Show

The AP Program encourages educators to make equitable access a guiding principle for their AP courses by giving all willing and academically prepared students the opportunity to succeed in rigorous, college-level opportunities. **Figure 6** compares the populations of all student demographic groups with their level of participation in AP. It shows that traditionally underserved, minority students remain underrepresented in AP classrooms. **Figures 7-9** illustrate how traditionally underserved student populations have changed since 2001.

The College Board also believes that true equity is not achieved until the demographics both of AP classrooms and of the successful AP student population mirror the demographics of the nation. **Figure 10** shows how much progress states are making toward that goal. When measuring success in this way, it's important to note where a particular race/ethnicity is a relatively small proportion of the state population. Despite strides that have been made by educators to expand access to AP, the data indicate that traditionally underserved minority students are not always receiving adequate preparation for the rigors of college-level course work.

How to Make Further Progress

Students and educators routinely attest to how an AP experience, regardless of exam performance, helps prepare students for success in college. And particularly in the case of traditionally underserved students, much work remains to be done to provide these students with the kind of academic intensity AP offers.

While some recent research indicates how exposing students to the college-level standards inherent in AP courses can lead to positive college outcomes,[11] the likelihood of college success is significantly stronger for AP students who score a 3 or higher. Thus, simply expanding AP opportunities for more students is not enough. It is important for educators and policymakers to take a closer look at how well they are preparing all of their students — during middle school and the early high school years — for the rigors of college-level course work.

Trends in Traditionally Underserved Student Groups

- Black/African American
- Hispanic/Latino
- American Indian/ Alaska Native
- Low income

Figure 7

How has the overall student population changed?

Raw number and percent of all seniors

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
●	336,176	345,431	358,388	371,972	384,728	403,569	422,742	437,151	437,035	441,946
■	296,776	314,122	338,417	359,401	380,736	414,428	434,200	465,727	480,920	505,777
◆	26,137	26,903	27,392	28,331	30,456	31,908	33,326	34,039	34,763	34,481

Figure 8

How has AP participation changed?

Raw number and percent of seniors leaving high school having taken an AP Exam

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
●	23,906	26,594	30,076	33,015	38,009	43,836	50,732	58,806	65,716	73,270
■	48,354	54,472	63,695	70,419	79,499	88,694	97,418	112,092	123,588	136,717
◆	2,199	2,333	2,569	2,907	3,199	3,541	3,862	4,331	4,528	4,891
▲	N/A	N/A	N/A	N/A	N/A	102,701	112,190	128,655	150,396	179,774

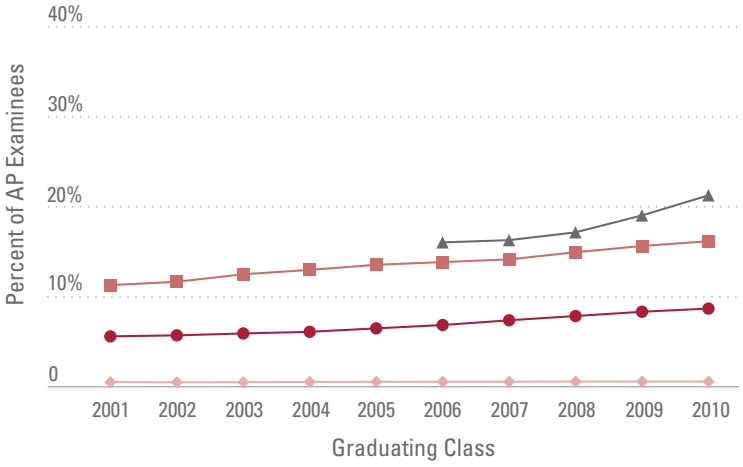


Figure 9

How has the successful AP student population changed?

Raw number and percent of seniors scoring 3 or higher on an AP Exam in high school

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
●	7,764	8,632	9,784	10,422	11,290	12,517	13,910	16,101	17,749	19,675
■	33,479	37,089	43,021	47,075	51,550	56,118	57,764	63,739	68,267	74,479
◆	988	1,053	1,144	1,302	1,414	1,594	1,699	1,977	2,073	2,195
▲	N/A	N/A	N/A	N/A	N/A	53,662	55,720	61,698	70,585	84,135

At time of press, the numbers of low-income students for each graduating class (Figure 7) and for AP students prior to the class of 2006 (Figures 8 and 9) are not available.

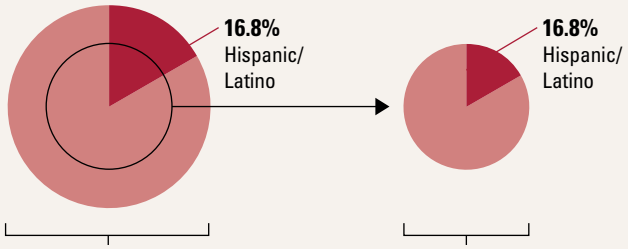
Figure 10

How close are states to achieving equity and excellence for traditionally underserved students?

Defining equity and excellence

How well each state is enabling all of its students to succeed in AP can be measured by comparing the demographics of that state with the demographics of its successful AP student population.

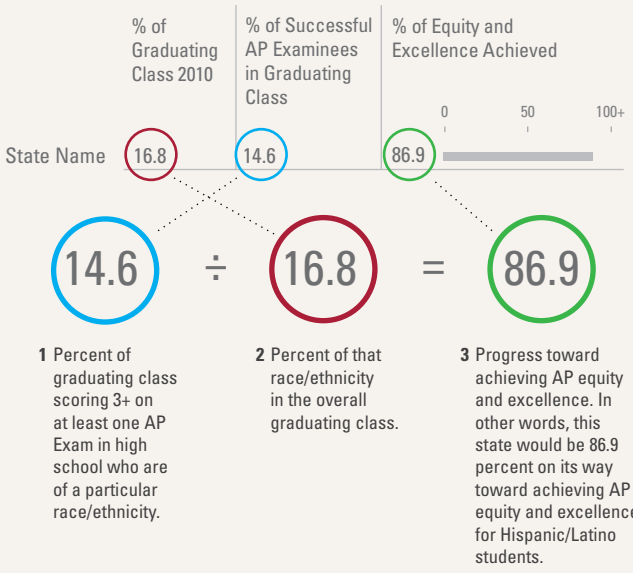
For example, if 16.8 percent of a state's graduating class is Hispanic/Latino and 16.8 percent of the students scoring 3 or higher on at least one AP Exam in the state are Hispanic/Latino, that state would have achieved equity and excellence in AP for Hispanic/Latino students. In other words, the state's diversity is reflected in its successful AP student population.



Measuring equity and excellence

The tables at right chart each state's, and the nation's, progress toward achieving equity and excellence. For each state, there are three numbers for each race/ethnicity:

Hispanic/Latino



1 Percent of graduating class scoring 3+ on at least one AP Exam in high school who are of a particular race/ethnicity.

2 Percent of that race/ethnicity in the overall graduating class.

3 Progress toward achieving AP equity and excellence. In other words, this state would be 86.9 percent on its way toward achieving AP equity and excellence for Hispanic/Latino students.

* Precise American Indian/Alaska Native student enrollments for the District of Columbia are not available.

Black/African American

	% of Graduating Class 2010	% of Successful AP Examinees in Graduating Class	% of Equity and Excellence Achieved
Hawaii	1.9	2.1	100+
South Dakota	1.4	1.4	100+
Idaho	0.8	0.7	87.5
New Mexico	2.4	1.7	70.8
Vermont	1.5	1.0	66.7
Oregon	2.3	1.1	47.8
Utah	1.1	0.5	45.5
Montana	0.7	0.3	42.9
Arizona	5.8	2.4	41.4
Colorado	5.7	2.2	38.6
New Hampshire	1.6	0.6	37.5
District of Columbia	90.4	33.0	36.5
Maine	2.2	0.8	36.4
Florida	20.0	6.7	33.5
Georgia	34.8	11.6	33.3
Tennessee	22.0	7.2	32.7
Massachusetts	7.5	2.4	32.0
Kentucky	10.4	3.3	31.7
Alaska	3.8	1.2	31.6
Nevada	11.1	3.5	31.5
Washington	4.8	1.5	31.3
West Virginia	4.5	1.4	31.1
Louisiana	34.3	10.6	30.9
Wyoming	1.3	0.4	30.8
Delaware	29.5	8.8	29.8
Iowa	4.7	1.4	29.8
Virginia	24.3	6.9	28.4
Maryland	35.6	9.9	27.8
California	7.0	1.9	27.1
Oklahoma	10.0	2.7	27.0
UNITED STATES	**14.6**	**3.9**	**26.7**
New York	15.5	4.1	26.5
Texas	15.4	4.0	26.0
Alabama	32.4	8.3	25.6
Minnesota	6.3	1.6	25.4
Ohio	13.5	3.4	25.2
North Dakota	1.6	0.4	25.0
Illinois	15.7	3.8	24.2
Mississippi	49.0	11.8	24.1
Arkansas	21.1	4.9	23.2
Indiana	9.5	2.2	23.2
Kansas	7.0	1.6	22.9
South Carolina	38.0	8.4	22.1
North Carolina	29.9	6.5	21.7
Connecticut	12.0	2.4	20.0
Nebraska	5.7	1.1	19.3
New Jersey	15.9	3.0	18.9
Rhode Island	8.1	1.5	18.5
Missouri	16.3	3.0	18.4
Wisconsin	6.8	1.1	16.2
Michigan	16.1	2.6	16.1
Pennsylvania	13.9	2.0	14.4

Hispanic/Latino

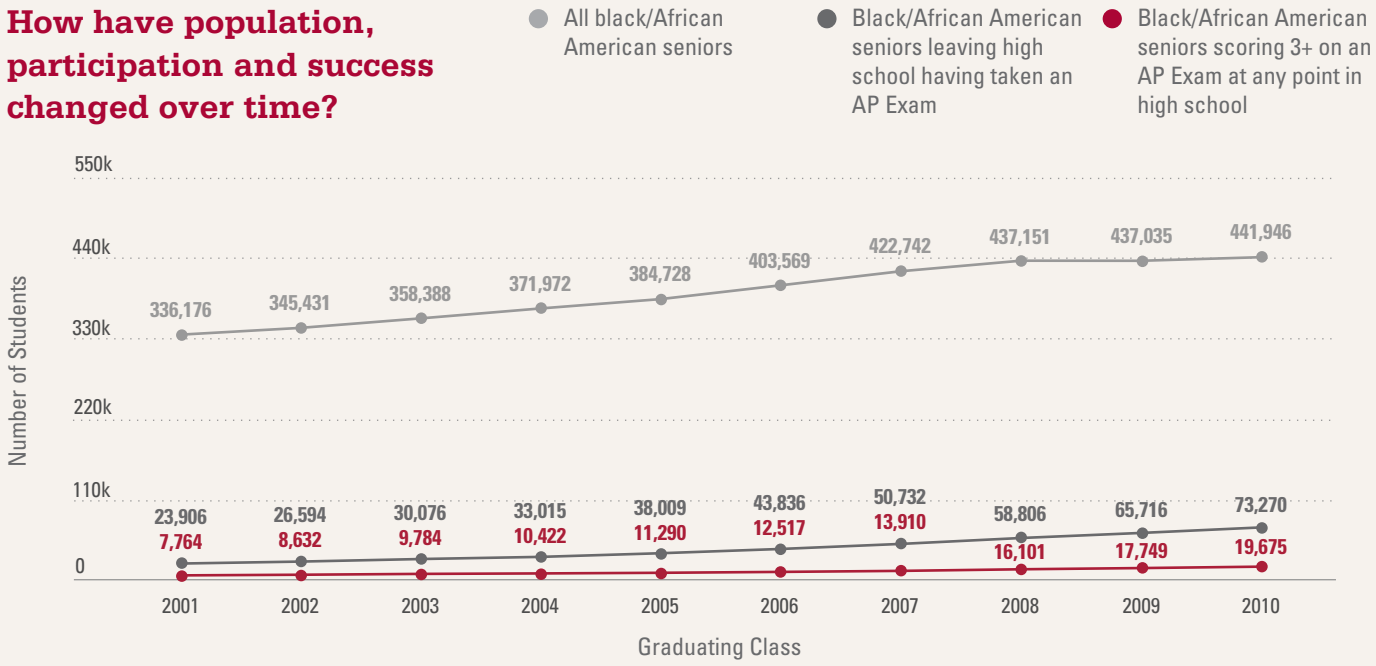
	% of Graduating Class 2010	% of Successful AP Examinees in Graduating Class	% of Equity and Excellence Achieved
District of Columbia	6.3	17.2	100+
Louisiana	2.3	4.9	100+
Mississippi	1.2	1.5	100+
North Dakota	1.4	1.7	100+
Florida	23.1	27.9	100+
Alaska	2.9	3.4	100+
Maryland	7.1	7.7	100+
Arkansas	7.0	7.5	100+
South Dakota	1.6	1.7	100+
Georgia	6.3	6.7	100+
Virginia	6.8	6.9	100+
Kentucky	2.7	2.7	100+
Alabama	2.3	2.3	100+
Ohio	2.0	2.0	100+
Tennessee	3.5	3.3	94.3
Maine	1.2	1.1	91.7
Oklahoma	7.7	6.7	87.0
UNITED STATES	**16.8**	**14.6**	**86.9**
South Carolina	3.6	3.1	86.1
Vermont	1.4	1.2	85.7
Illinois	14.4	12.3	85.4
Michigan	3.2	2.7	84.4
Missouri	3.2	2.7	84.4
Texas	39.4	32.7	83.0
New Hampshire	2.8	2.3	82.1
New Mexico	49.4	39.8	80.6
New York	14.1	11.3	80.1
California	41.4	31.9	77.1
Montana	2.4	1.8	75.0
Indiana	5.0	3.7	74.0
North Carolina	7.0	5.1	72.9
Kansas	8.3	5.8	69.9
Delaware	7.1	4.7	66.2
Hawaii	4.1	2.7	65.9
Arizona	34.8	22.4	64.4
Nevada	29.5	18.7	63.4
Iowa	4.6	2.7	58.7
New Jersey	16.9	9.8	58.0
Utah	9.2	5.2	56.5
Washington	10.9	5.9	54.1
Wisconsin	5.1	2.7	52.9
Wyoming	8.4	4.4	52.4
Connecticut	12.3	6.4	52.0
Rhode Island	15.3	7.8	51.0
Nebraska	9.0	4.5	50.0
Oregon	13.6	6.8	50.0
West Virginia	1.2	0.6	50.0
Colorado	20.8	10.3	49.5
Massachusetts	10.6	4.9	46.2
Minnesota	3.6	1.6	44.4
Pennsylvania	5.4	2.4	44.4
Idaho	10.5	3.4	32.4

American Indian/Alaska Native

	% of Graduating Class 2010	% of Successful AP Examinees in Graduating Class	% of Equity and Excellence Achieved
West Virginia	0.1	0.5	100+
Mississippi	0.1	0.4	100+
Georgia	0.1	0.4	100+
Kentucky	0.1	0.2	100+
Ohio	0.1	0.2	100+
Pennsylvania	0.1	0.2	100+
Tennessee	0.2	0.3	100+
Indiana	0.2	0.3	100+
Maryland	0.3	0.4	100+
Virginia	0.3	0.4	100+
Texas	0.4	0.5	100+
Arkansas	0.9	1.1	100+
South Carolina	0.3	0.3	100+
Vermont	0.5	0.5	100+
Missouri	0.5	0.5	100+
Delaware	0.3	0.3	100+
Maine	0.5	0.4	80.0
Florida	0.4	0.3	75.0
Connecticut	0.3	0.2	66.7
Illinois	0.3	0.2	66.7
Massachusetts	0.3	0.2	66.7
New Hampshire	0.3	0.2	66.7
Kansas	1.3	0.8	61.5
Alabama	1.0	0.6	60.0
Michigan	0.7	0.4	57.1
Colorado	1.1	0.6	54.5
California	0.8	0.4	50.0
Iowa	0.6	0.3	50.0
Rhode Island	0.6	0.3	50.0
Hawaii	0.5	0.2	40.0
Nebraska	1.0	0.4	40.0
New York	0.5	0.2	40.0
Oklahoma	19.6	7.7	39.3
Nevada	1.3	0.5	38.5
Oregon	2.1	0.8	38.1
UNITED STATES	**1.1**	**0.4**	**36.4**
Washington	2.2	0.8	36.4
Idaho	1.8	0.6	33.3
New Jersey	0.3	0.1	33.3
Wisconsin	1.2	0.4	33.3
North Carolina	1.1	0.3	27.3
Louisiana	0.8	0.2	25.0
Utah	1.6	0.4	25.0
South Dakota	4.6	1.0	21.7
Montana	8.2	1.4	17.1
Arizona	6.0	1.0	16.7
Alaska	21.3	3.5	16.4
New Mexico	11.3	1.7	15.0
Minnesota	1.5	0.2	13.3
North Dakota	6.8	0.2	2.9
Wyoming	2.2	0.0	0.0
District of Columbia	*	0.0	*

Black/African American

How have population, participation and success changed over time?



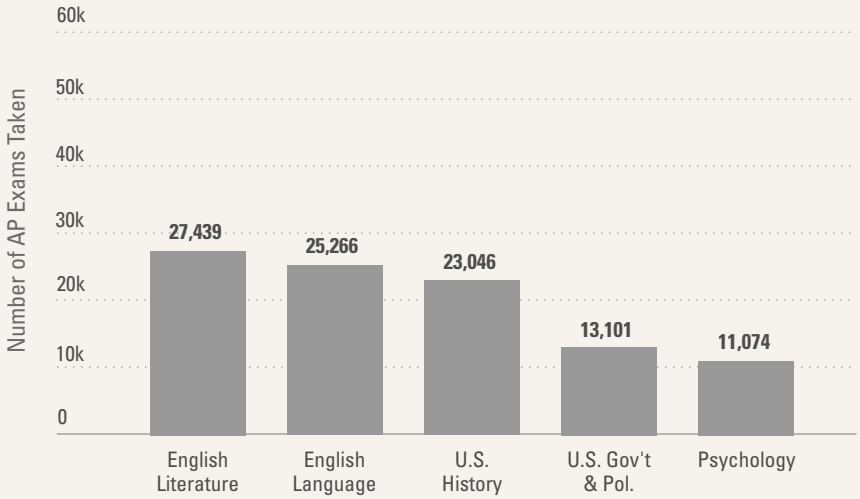
Who are they?

63% / 37%

Female Male

Class of 2010

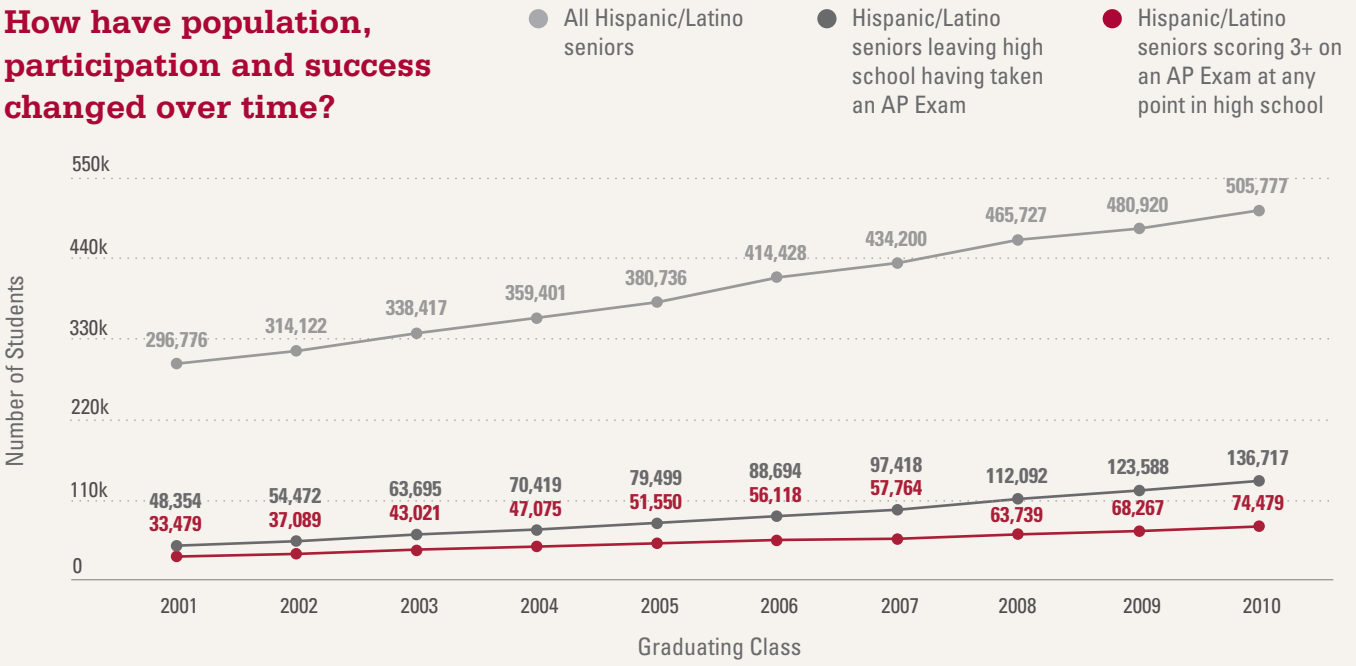
What exams are they taking?



Top 5 most popular AP Exams taken by black/African American students from the class of 2010

Hispanic/Latino

How have population, participation and success changed over time?



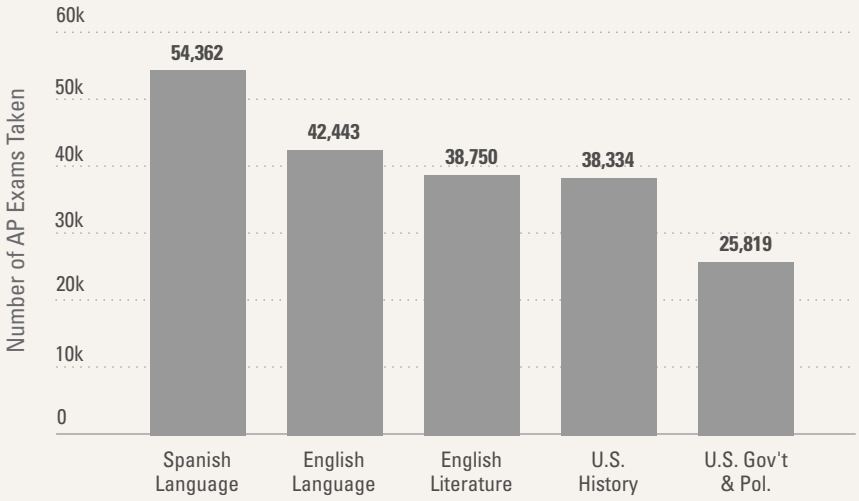
Who are they?

59% / 41%

Female Male

Class of 2010

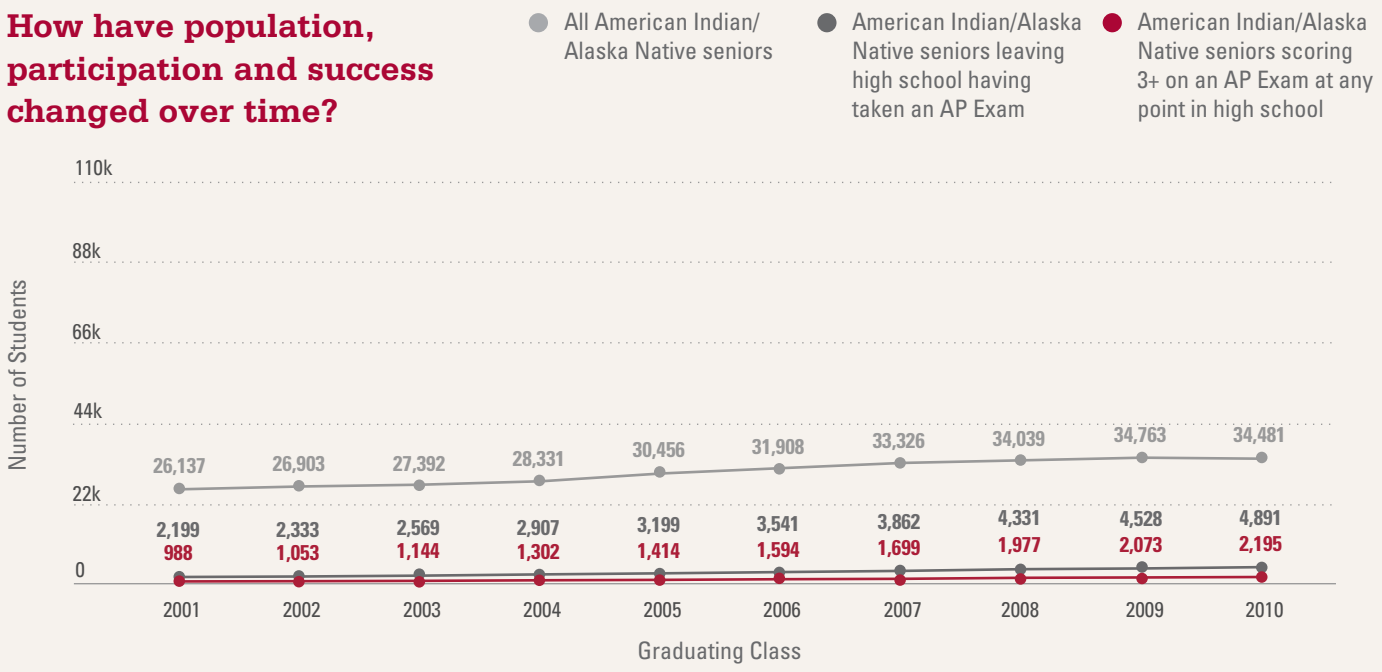
What exams are they taking?



Top 5 most popular AP Exams taken by Hispanic/Latino students from the class of 2010

American Indian/Alaska Native

How have population, participation and success changed over time?



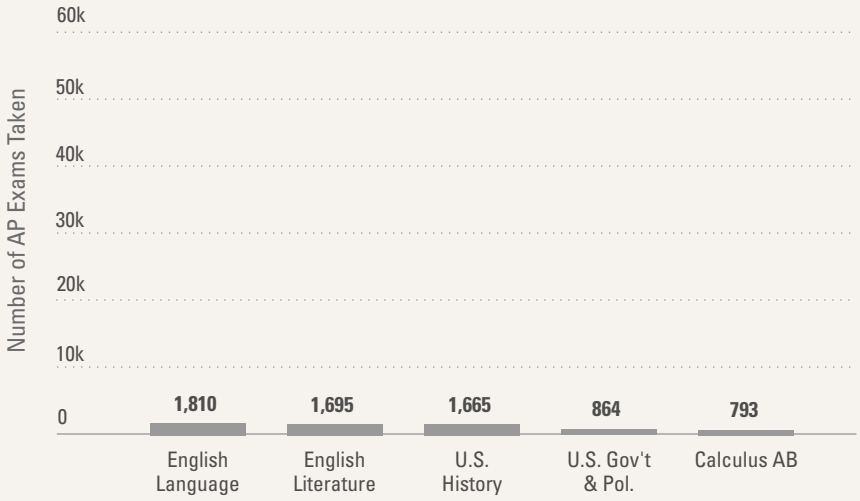
Who are they?

58% / 42%

Female Male

Class of 2010

What exams are they taking?

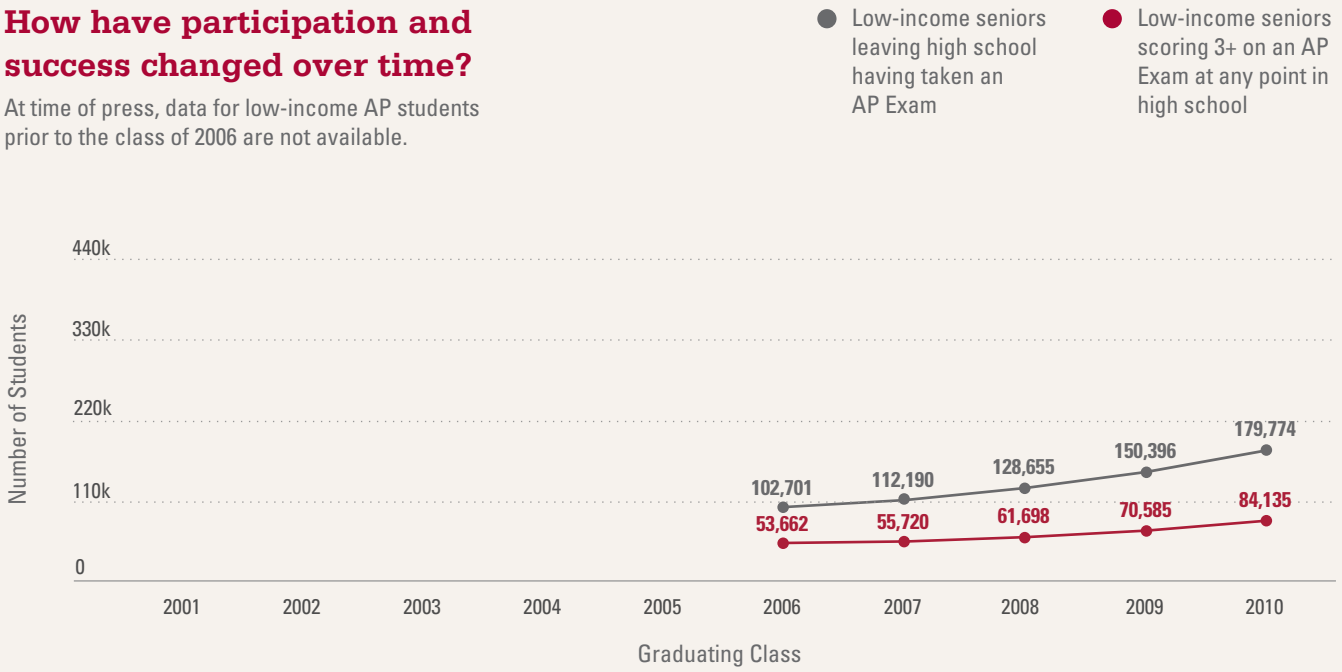


Top 5 most popular AP Exams taken by American Indian/Alaska Native students from the class of 2010

Low Income

How have participation and success changed over time?

At time of press, data for low-income AP students prior to the class of 2006 are not available.



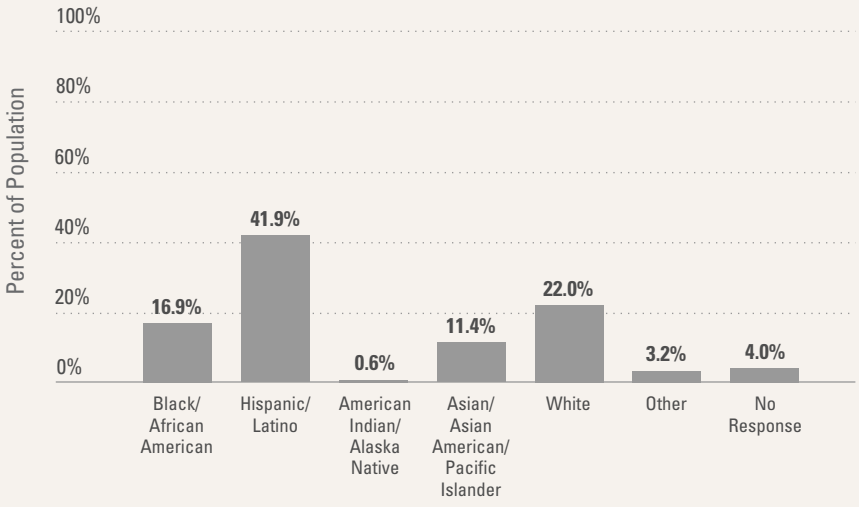
Who are they?

61% / 39%

Female Male

Class of 2010

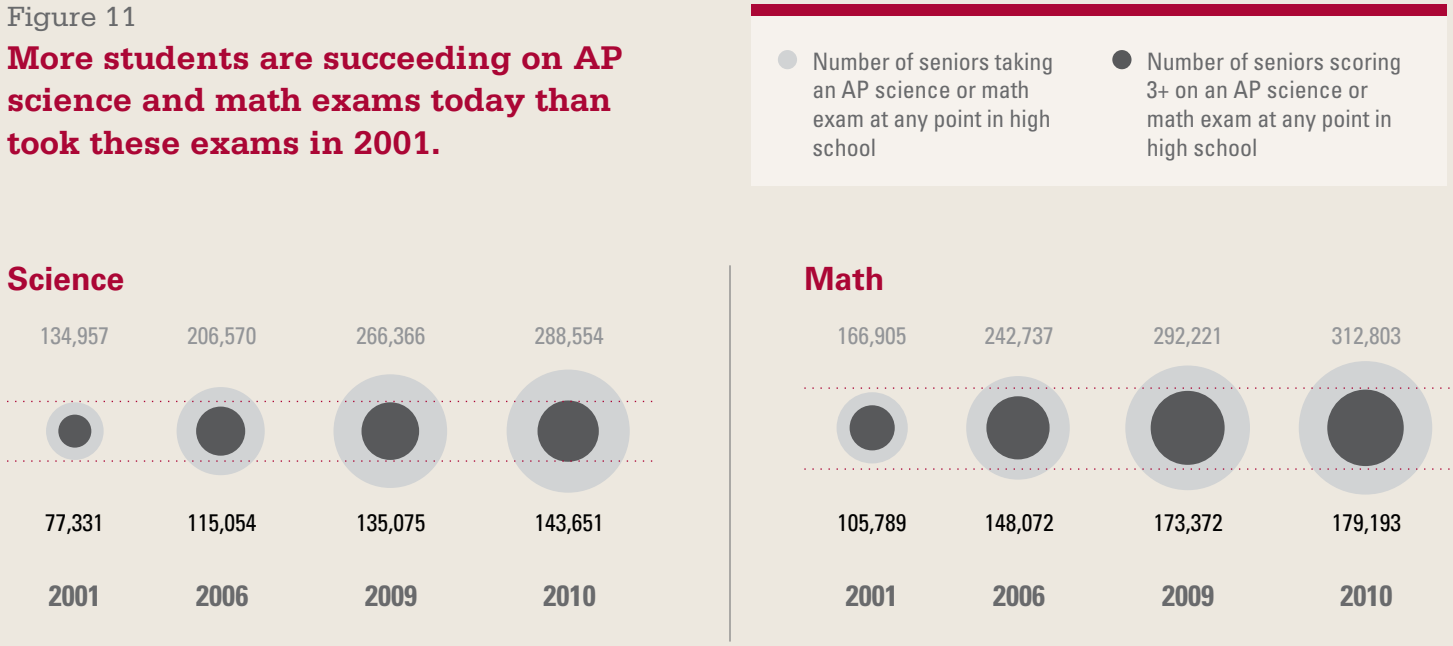
What race/ethnicity are they?



Percent of low-income AP examinees from the class of 2010 by race/ethnicity

Figure 11

More students are succeeding on AP science and math exams today than took these exams in 2001.



Increasing Achievement in Science and Math

This section of the report shows how AP is helping to prepare students in science and math fields, which are essential to our nation's long-term prosperity.

What the Data Show

Figure 11 presents the growth in overall participation and success in AP science and math since 2001. The number of students succeeding in AP science and math today exceeds the number of students who participated in these disciplines nearly 10 years ago.

Figure 12 looks at how AP students from the graduating class of 2010 performed on all the AP science and math exams they took throughout high school. Score distributions — the number of exams at each score point — vary by AP subject. For this year's graduating class, over 70 percent of their AP Calculus BC, Computer Science AB* and Physics C: Mechanics Exams received a score of 3 or higher. Over 30 percent of their AP Biology, Calculus AB, Chemistry, Computer Science A and Environmental Science Exams received a score of 1. Such a high proportion of students at the lowest AP score point indicates that many students did not receive adequate preparation for these college-level science and math courses.

How to Make Further Progress

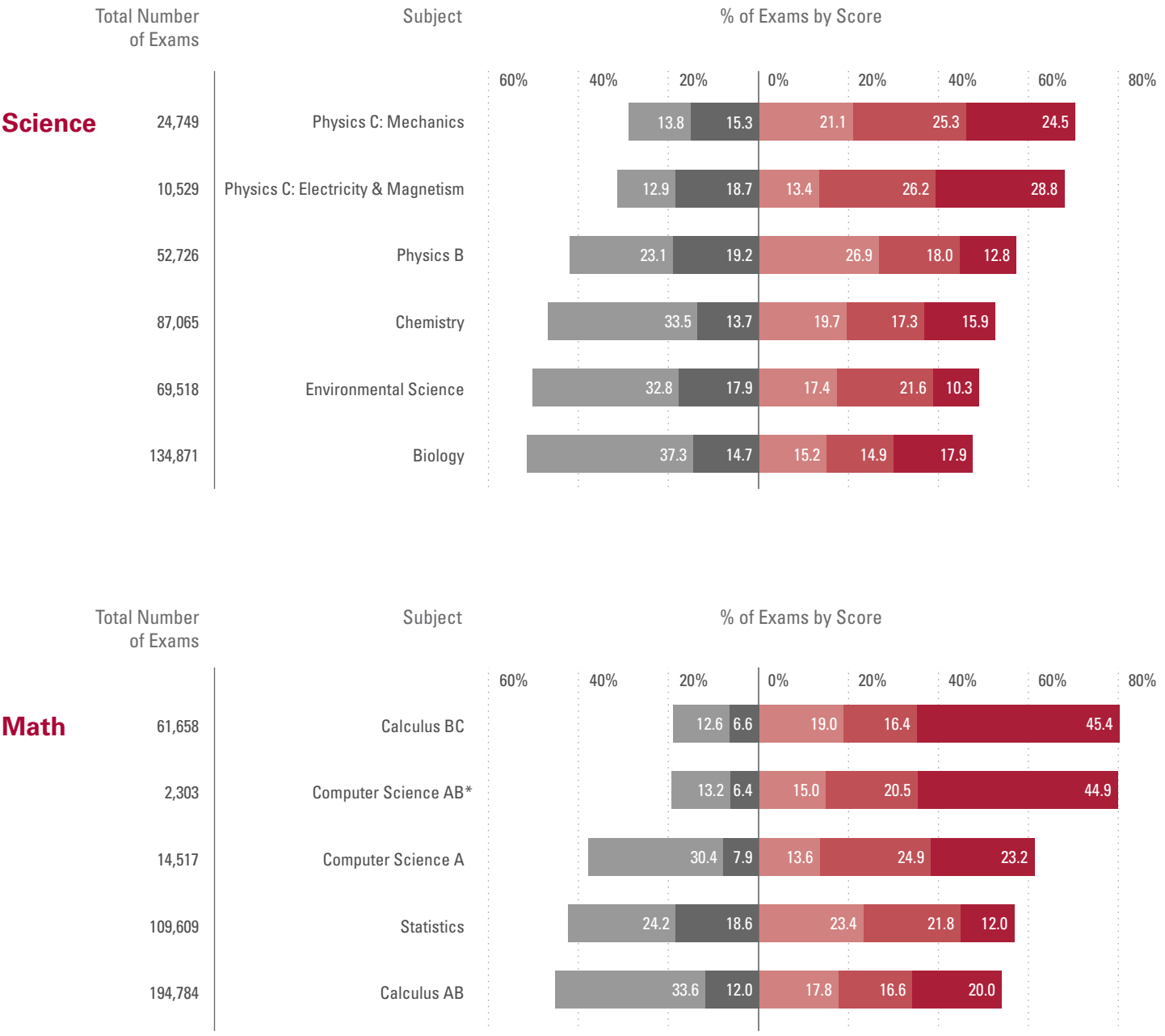
Given the importance of science and math education to our nation's future, the College Board urges policymakers and educators to look at these score distributions as an opportunity to consider ways to better prepare students for the rigors of college-level work long before they take the AP course. To be prepared for these AP courses, students should have at a minimum the following prior experience:

AP Biology	A course in high school biology and one in high school chemistry.
AP Calculus AB	Four years of high school mathematics, covering algebra, geometry, trigonometry, analytic geometry and elementary functions.
AP Chemistry	A course in high school chemistry and a second-year algebra course.
AP Computer Science A	Knowledge of basic algebra and experience in problem solving. Students should be comfortable with functions and the concepts found in the uses of functional notation. Competence in written communication is also essential.
AP Environmental Science	Two years of high school laboratory science — one year of life science and one year of physical science (e.g., biology and chemistry) — and, because of the quantitative analysis that is required, at least one year of algebra. Desirable, but not necessary, is one year of earth science.

Figure 12

How did the class of 2010 perform in AP science and math?

All AP science and math exams taken by seniors at any point in high school



* This exam was last offered in May 2009.

Further Reading

Complete details on how the class of 2010 performed across all AP subjects are available at www.collegeboard.com/apreport.

While there is no single strategy for building an effective AP program, we urge policymakers and educators to consider the following tactics to increase high-quality, college-level learning opportunities for all students. For a more substantive and specific guide to establishing high-quality, equitable AP programs, consult the Broad Foundation's manual, *Expanding Advanced Placement (AP) Access.* [12]

How Can You Support Student Success?

	Near-term	Mid-term	Long-term
Increase Access	- Set a clear statewide goal for AP participation and performance. - Identify potential AP students with AP Potential™, a tool that uses PSAT/NMSQT® results to find students likely to succeed in AP.	- Require secondary schools to review current AP course enrollment practices to ensure that all students have access to academic pathways that will prepare them for AP.	- Require all high schools to offer a minimum number of AP courses.
Improve Awareness	- Implement a statewide communication strategy highlighting the benefits of AP to students and their parents. - Support public service announcements and state recognition ceremonies for AP students and teachers.	- Encourage colleges and universities to include their AP credit and placement policies in recruitment campaigns. - Encourage institutions of higher education to award college credit, advanced placement or both for AP Exam scores.	- Establish AP participation and performance indicators on state report cards. - Encourage and incentivize faculty from higher education institutions to get involved in AP activities like exam scoring and course syllabus review.
Strengthen Academics	- Provide targeted assistance to schools with historically underserved populations for materials and supplies. - Encourage teachers to take advantage of the range of free instructional materials and exam information available on AP Central®. - Use annual AP score results to target areas for increased attention and focus in the curriculum.	- Adopt rigorous academic standards that provide a vertically aligned progression of content and skills anchored in AP. - Make available professional development funding for new AP teachers, particularly in traditionally underserved schools, to attend an AP Summer Institute offered at one of your state's colleges or universities. - Implement summer programs to help students prepare for specific AP courses.	- Develop plans to recruit, retain and mentor new and less experienced AP teachers. - Include AP and Pre-AP training or degree requirements in education programs for middle and high school teachers. - Conduct local validity studies on former AP students' college performance, persistence and time to degree.

Schools with the Largest Numbers of Black/ African American and Hispanic/Latino Students Experiencing Success in AP

While there is much work to do to ensure that all students are given the opportunity to succeed in AP, the College Board applauds schools across the nation for increasing access to AP among traditionally underserved students.

There are many schools that have achieved success in one particular regard — assisting significant numbers of black/African American and/or Hispanic/Latino students to succeed in particular AP subjects. The following schools lead the nation in this achievement.

Exemplary Programs by State

California	- Eagle Rock High School (Los Angeles)
Florida	- Barbara Goleman Senior High School (Miami) - Coral Reef Senior High School (Miami) - Cypress Bay High School (Weston) - Design and Architecture Senior High (Miami) - Miami Killian Senior High School (Miami)
Georgia	- Southwest DeKalb High School (Decatur)
Illinois	- Homewood-Flossmoor Community High School (Flossmoor)
Maryland	- Eleanor Roosevelt High School (Greenbelt) - Paint Branch High School (Burtonsville)
Texas	- Michael E. DeBakey High School for Health Professions (Houston) - Science Academy of South Texas (Mercedes) - United High School (Laredo) - Valley View High School (Pharr)

Exemplary AP Programs by Subject

	Black/African American	Hispanic/Latino
Art History		Barbara Goleman Senior High School (Florida)
Biology	Eleanor Roosevelt High School (Maryland)	
Calculus AB	Michael E. DeBakey High School for Health Professions (Texas)	Cypress Bay High School (Florida)
Calculus BC		Cypress Bay High School (Florida)
Chemistry	Eleanor Roosevelt High School (Maryland)	
English Lang. & Comp.	Eleanor Roosevelt High School (Maryland)	Coral Reef Senior High School (Florida)
English Lit. & Comp.	Eleanor Roosevelt High School (Maryland)	Coral Reef Senior High School (Florida)
Environmental Science		Eagle Rock High School (California)
European History		Coral Reef Senior High School (Florida)
Human Geography		Miami Killian Senior High School (Florida)
Macroeconomics	Southwest DeKalb High School (Georgia)	Cypress Bay High School (Florida)
Microeconomics		Cypress Bay High School (Florida)
Physics B		Science Academy of South Texas (Texas)
Psychology	Homewood-Flossmoor Community High School (Illinois)	Cypress Bay High School (Florida)
Spanish Language		United High School (Texas)
Spanish Literature		Valley View High School (Texas)
Studio Art	Design and Architecture Senior High (Florida)	Design and Architecture Senior High (Florida)
U.S. Gov't & Politics		Cypress Bay High School (Florida)
U.S. History	Southwest DeKalb High School (Georgia)	Coral Reef Senior High School (Florida)
World History	Paint Branch High School (Maryland)	Coral Reef Senior High School (Florida)

Appendix A

Raw Numbers for Figures 2, 3 and 5

	Number of Seniors				Number of Seniors Who Took an AP Exam in High School				Percentage of Seniors Who Took an AP Exam in High School			
	2001	2006	2009	2010	2001	2006	2009	2010	2001	2006	2009	2010
Alabama	37,082	37,681	39,692	39,628	2,897	3,597	6,462	7,710	7.8	9.5	16.3	19.5
Alaska	6,812	7,782	7,404	7,551	1,042	1,471	1,556	1,683	15.3	18.9	21.0	22.3
Arizona	46,733	66,098	78,608	79,117	4,717	8,099	11,367	12,335	10.1	12.3	14.5	15.6
Arkansas	27,100	27,450	29,395	29,074	2,336	8,038	9,973	10,635	8.6	29.3	33.9	36.6
California	315,189	370,697	387,759	385,728	71,898	106,040	124,076	131,123	22.8	28.6	32.0	34.0
Colorado	39,241	46,538	47,106	48,329	7,937	12,315	15,498	16,740	20.2	26.5	32.9	34.6
Connecticut	30,388	35,998	37,578	37,139	6,252	9,230	11,186	11,952	20.6	25.6	29.8	32.2
Delaware	6,614	7,092	7,595	7,661	877	1,890	2,050	2,149	13.3	26.6	27.0	28.1
District of Columbia	2,808	3,175	4,035	4,138	467	629	1,029	1,037	16.6	19.8	25.5	25.1
Florida	111,112	142,918	145,317	151,116	24,536	44,940	58,251	65,741	22.1	31.4	40.1	43.5
Georgia	62,499	74,827	81,613	82,085	12,332	19,492	27,432	30,643	19.7	26.0	33.6	37.3
Hawaii	10,102	10,723	11,287	10,702	1,150	1,555	2,130	2,095	11.4	14.5	18.9	19.6
Idaho	15,941	16,135	17,012	17,226	1,632	2,470	2,623	2,816	10.2	15.3	15.4	16.3
Illinois	110,624	125,385	134,495	133,503	16,565	25,673	32,940	35,133	15.0	20.5	24.5	26.3
Indiana	56,172	59,378	63,165	62,789	7,426	10,908	13,098	18,425	13.2	18.4	20.7	29.3
Iowa	33,774	34,858	35,466	35,604	2,435	3,714	4,687	5,135	7.2	10.7	13.2	14.4
Kansas	29,360	29,404	29,398	29,394	2,340	3,419	4,638	4,705	8.0	11.6	15.8	16.0
Kentucky	36,957	37,930	40,305	40,135	4,266	6,595	8,833	9,779	11.5	17.4	21.9	24.4
Louisiana	38,314	33,115	30,113	28,126	1,296	1,821	2,837	3,198	3.4	5.5	9.4	11.4
Maine	12,654	13,539	12,679	12,774	2,050	3,114	3,951	4,034	16.2	23.0	31.2	31.6
Maryland	49,222	55,886	58,284	57,523	10,613	18,174	23,293	24,961	21.6	32.5	40.0	43.4
Massachusetts	54,393	61,120	61,665	61,220	11,072	16,049	19,071	20,352	20.4	26.3	30.9	33.2
Michigan	96,515	103,996	109,349	106,246	13,569	18,326	23,348	24,658	14.1	17.6	21.4	23.2
Minnesota	56,581	59,320	58,915	58,152	8,374	10,840	14,396	15,354	14.8	18.3	24.4	26.4
Mississippi	23,748	24,080	25,377	25,331	1,626	2,378	3,282	3,576	6.8	9.9	12.9	14.1
Missouri	54,138	58,673	62,077	62,502	3,463	5,214	7,649	8,364	6.4	8.9	12.3	13.4
Montana	10,628	10,318	10,036	10,019	1,216	1,531	1,661	1,802	11.4	14.8	16.6	18.0
Nebraska	19,658	19,798	20,623	20,151	1,097	1,637	2,566	2,498	5.6	8.3	12.4	12.4
Nevada	15,127	16,411	20,714	21,041	1,994	3,907	5,582	5,949	13.2	23.8	26.9	28.3
New Hampshire	12,294	13,951	14,184	13,916	1,868	2,582	3,082	3,160	15.2	18.5	21.7	22.7
New Jersey	76,130	92,538	97,706	97,676	14,141	20,645	24,485	25,016	18.6	22.3	25.1	25.6
New Mexico	18,199	17,498	17,849	17,829	2,288	3,385	3,771	3,980	12.6	19.3	21.1	22.3
New York	141,884	159,496	159,434	160,181	39,758	50,944	58,710	60,856	28.0	31.9	36.8	38.0
North Carolina	63,288	77,956	84,507	85,651	13,209	21,197	24,422	24,629	20.9	27.2	28.9	28.8
North Dakota	8,445	7,376	7,035	6,922	558	724	735	721	6.6	9.8	10.4	10.4
Ohio	111,281	120,685	124,275	121,867	12,923	18,526	22,123	23,045	11.6	15.4	17.8	18.9
Oklahoma	37,458	36,256	37,253	37,705	4,219	6,967	7,313	7,853	11.3	19.2	19.6	20.8
Oregon	29,939	31,702	32,624	32,412	3,479	5,199	6,916	7,584	11.6	16.4	21.2	23.4
Pennsylvania	114,436	127,673	131,150	129,844	15,010	20,125	24,606	25,561	13.1	15.8	18.8	19.7
Rhode Island	8,603	9,943	10,206	10,036	903	1,298	1,764	1,795	10.5	13.1	17.3	17.9
South Carolina	30,026	35,055	35,272	35,856	6,064	7,774	9,175	9,626	20.2	22.2	26.0	26.8
South Dakota	8,881	8,303	8,319	8,050	958	1,281	1,326	1,481	10.8	15.4	15.9	18.4
Tennessee	40,642	47,968	51,885	51,910	4,806	7,087	9,140	9,637	11.8	14.8	17.6	18.6
Texas	215,316	252,810	267,511	271,900	39,456	62,376	76,699	82,249	18.3	24.7	28.7	30.2
Utah	31,036	31,692	33,137	33,883	7,507	8,848	9,192	9,614	24.2	27.9	27.7	28.4
Vermont	6,856	7,089	6,942	6,694	1,176	1,669	1,945	2,126	17.2	23.5	28.0	31.8
Virginia	66,067	74,705	81,073	80,760	17,150	22,933	29,537	30,781	26.0	30.7	36.4	38.1
Washington	55,081	63,108	64,785	65,271	7,531	13,314	17,235	18,296	13.7	21.1	26.6	28.0
West Virginia	18,440	16,861	17,917	17,419	1,688	2,212	3,090	3,204	9.2	13.1	17.2	18.4
Wisconsin	59,341	63,606	63,689	63,400	9,597	13,430	16,095	16,691	16.2	21.1	25.3	26.3
Wyoming	6,071	5,398	5,546	5,274	579	728	803	827	9.5	13.5	14.5	15.7
UNITED STATES	**2,569,200**	**2,891,994**	**3,019,361**	**3,018,460**	**432,343**	**646,310**	**797,629**	**853,314**	**16.8**	**22.3**	**26.4**	**28.3**

Endnotes

	Number of Seniors Who Scored 3+ on an AP Exam in High School				Percentage of Seniors Who Scored 3+ on an AP Exam in High School			
	2001	2006	2009	2010	2001	2006	2009	2010
Alabama	1,552	2,129	2,972	3,573	4.2	5.7	7.5	9.0
Alaska	664	941	982	1,080	9.7	12.1	13.3	14.3
Arizona	3,102	4,929	6,484	6,963	6.6	7.5	8.2	8.8
Arkansas	1,187	2,652	3,210	3,623	4.4	9.7	10.9	12.5
California	50,018	71,030	80,710	85,890	15.9	19.2	20.8	22.3
Colorado	5,217	7,753	9,475	10,330	13.3	16.7	20.1	21.4
Connecticut	4,496	6,809	8,017	8,629	14.8	18.9	21.3	23.2
Delaware	536	1,017	1,083	1,180	8.1	14.3	14.3	15.4
District of Columbia	190	226	233	285	6.8	7.1	5.8	6.9
Florida	14,995	24,923	30,803	33,712	13.5	17.4	21.2	22.3
Georgia	6,754	10,786	14,520	15,668	10.8	14.4	17.8	19.1
Hawaii	629	776	964	1,001	6.2	7.2	8.5	9.4
Idaho	1,059	1,508	1,732	1,893	6.6	9.3	10.2	11.0
Illinois	12,151	18,126	21,429	23,028	11.0	14.5	15.9	17.2
Indiana	3,705	5,377	6,591	7,807	6.6	9.1	10.4	12.4
Iowa	1,689	2,476	2,929	3,145	5.0	7.1	8.3	8.8
Kansas	1,493	2,197	2,706	2,805	5.1	7.5	9.2	9.5
Kentucky	2,210	3,338	4,369	4,903	6.0	8.8	10.8	12.2
Louisiana	726	839	1,241	1,307	1.9	2.5	4.1	4.6
Maine	1,371	1,925	2,307	2,430	10.8	14.2	18.2	19.0
Maryland	7,309	12,082	14,455	15,167	14.8	21.6	24.8	26.4
Massachusetts	7,956	11,538	13,634	14,122	14.6	18.9	22.1	23.1
Michigan	8,620	12,083	14,873	15,914	8.9	11.6	13.6	15.0
Minnesota	4,848	7,135	9,111	9,797	8.6	12.0	15.5	16.8
Mississippi	630	798	1,019	1,115	2.7	3.3	4.0	4.4
Missouri	2,208	3,396	4,388	4,682	4.1	5.8	7.1	7.5
Montana	757	1,011	1,066	1,174	7.1	9.8	10.6	11.7
Nebraska	684	1,018	1,442	1,497	3.5	5.1	7.0	7.4
Nevada	1,270	2,298	3,023	3,148	8.4	14.0	14.6	15.0
New Hampshire	1,251	1,808	2,260	2,311	10.2	13.0	15.9	16.6
New Jersey	10,146	14,740	17,522	18,214	13.3	15.9	17.9	18.6
New Mexico	1,178	1,623	1,661	1,820	6.5	9.3	9.3	10.2
New York	26,520	33,435	38,016	39,463	18.7	21.0	23.8	24.6
North Carolina	7,967	12,324	14,648	15,019	12.6	15.8	17.3	17.5
North Dakota	402	517	448	474	4.8	7.0	6.4	6.8
Ohio	8,063	11,555	13,663	14,323	7.2	9.6	11.0	11.8
Oklahoma	2,316	3,339	3,526	3,895	6.2	9.2	9.5	10.3
Oregon	2,259	3,227	4,305	4,580	7.5	10.2	13.2	14.1
Pennsylvania	10,093	13,561	16,154	16,488	8.8	10.6	12.3	12.7
Rhode Island	530	844	1,092	1,095	6.2	8.5	10.7	10.9
South Carolina	3,554	4,532	5,233	5,409	11.8	12.9	14.8	15.1
South Dakota	557	764	859	885	6.3	9.2	10.3	11.0
Tennessee	2,838	4,074	4,835	5,017	7.0	8.5	9.3	9.7
Texas	22,576	34,766	39,772	42,254	10.5	13.8	14.9	15.5
Utah	5,231	6,113	6,141	6,503	16.9	19.3	18.5	19.2
Vermont	817	1,118	1,342	1,460	11.9	15.8	19.3	21.8
Virginia	10,900	14,751	18,566	19,162	16.5	19.7	22.9	23.7
Washington	5,002	8,154	10,336	11,182	9.1	12.9	16.0	17.1
West Virginia	896	1,065	1,360	1,328	4.9	6.3	7.6	7.6
Wisconsin	6,403	9,356	11,040	11,618	10.8	14.7	17.3	18.3
Wyoming	340	368	426	450	5.6	6.8	7.7	8.5
UNITED STATES	**277,865**	**403,150**	**478,973**	**508,818**	**10.8**	**13.9**	**15.9**	**16.9**

1 See: Chrys Dougherty, Lynn Mellor, and Shuling Jian, "The Relationship Between Advanced Placement and College Graduation" (2005), National Center for Educational Accountability; and Linda Hargrove, Donn Godin, and Barbara Dodd, "College Outcomes Comparisons by AP and Non-AP High School Experiences" (2008), The College Board.

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7 "Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5," Washington, D.C.: National Academies, 2010.

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10 Eugenio J. Gonzalez, Kathleen M. O'Connor, and Julie A. Miles, "How Well Do Advanced Placement Students Perform on the TIMSS Advanced Mathematics and Physics Tests?" (2001), The International Study Center, Lynch School of Education, Boston College.

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12 This guide is available as a free download in the Resources for Districts section of www.broadeducation.org.

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