

Issue Tables

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Academic Preparation for College in the High School Senior Class of 2003–04

Introduction

Academic preparation in high school plays a critical role in students' transition to college. Using data from the Education Longitudinal Study of 2002 (ELS:02), which provides information about the transitions students make as they move through high school and into postsecondary education or careers, this set of Issue Tables describes the academic preparation for college among the 2003–04 high school senior class.¹ Indicators of academic preparation include academic coursetaking, performance, high school completion status, and college remediation. Each table shows various academic preparation indicators for all students and by a wide range of student, family, and high school characteristics. These tables, as summarized below, supplement the First Look reports issued along with the release of the first and second follow-ups of ELS:02 data in 2004 and 2006 (Ingels, Planty, and Bozick 2005; Bozick and Lauff 2007).

Tables 1 through 5 address students' academic coursetaking during high school, showing course credits earned in various academic subjects; the highest mathematics and science courses taken in high school; information on Advanced Placement (AP) or International Baccalaureate (IB) coursetaking; and the percentage of students

¹ Three additional sets of Issue Tables (see Related NCES Reports) related to students' preparation for college were also generated, using data from ELS:02. These three sets of tables address postsecondary expectations and plans; steps toward postsecondary enrollment; and financial concerns and preparation, and are available at <http://nces.ed.gov/pubsearch/>.

who completed high-level academic coursework.² Tables 6 and 7 provide information about students' academic performance by showing their high school grade point averages and the levels of mathematics proficiency they demonstrated in their senior year.

Table 8 presents the distribution of seniors by their high school completion status, and table 9 shows the percentage of students who took remedial coursework after entering college.

Data

All information presented in these Issue Tables is based on data collected in the Education Longitudinal Study of 2002 (ELS:02). ELS:02 followed a nationally representative cohort of 2002 high school sophomores as they progressed through high school and then into postsecondary education and/or work. After the initial data collection in 2002, data were collected again in 2004, when most students were high school seniors, and again in 2006, when most had entered postsecondary education or the workforce. Seniors in 2004 who were not in the base-year sample were given a chance of selection into the sample. This procedure, referred to as “freshening,” made the ELS spring 2004 senior cohort nationally representative of the 12th-grade class. The study collected high school transcripts that covered students' 4 years of coursetaking, administered standardized tests, and surveyed students, parents, teachers, and schools. It thus provides a rich source of information on how this cohort prepared for college while still in high school. For more detailed information on ELS:02, see <http://nces.ed.gov/surveys/ELS2002/>.

² High-level academic coursework consists of 4 years of English; 3 years of mathematics (including at least 1 year of a course higher than algebra II); 3 years of science (including at least 1 year of a course higher than biology); 3 years of social studies (including at least 1 year of U.S. or world history); and 2 years of a single non-English language.

Most of the tables (except for tables 7 and 9) are based on data from students' transcripts, and the analysis sample for these tables is restricted to all high school seniors in the spring of 2004 with at least 3 years of transcript information between 9th and 12th grades. Table 7 looks at students' performance on a mathematics achievement test. Since this test was administered to all seniors, the sample for table 7 consists of all high school seniors in the spring of 2004. Table 9 examines remedial coursetaking in college, and the sample for this table is restricted to spring 2004 high school seniors who had enrolled in postsecondary education by 2006. Information about remedial coursetaking was collected from students, not from postsecondary transcripts.

References

- Bozick, R., and Lauff, E. (2007). *Education Longitudinal Study of 2002 (ELS:02): A First Look at the Initial Postsecondary Experiences of the Sophomore Class of 2002* (NCES 2008-308). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Ingels, S.J., Planty, M., and Bozick, R. (2005). *A Profile of the American High School Senior in 2004: A First Look—Initial Results from the First Follow-up of the Educational Longitudinal Study of 2002 (ELS:02)* (NCES 2006-348). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- U.S. Department of Education. (2003). *NCES Statistical Standards* (NCES 2003-601). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Related NCES Reports

- Getting Ready for College: Financial Concerns and Preparation Among the High School Senior Class of 2003–04* (NCES 2010-204) (forthcoming)
- The High School Senior Class of 2003–04: Steps Toward Postsecondary Enrollment* (NCES 2010-203) (forthcoming)
- Postsecondary Expectations and Plans for the High School Senior Class of 2003–04* (NCES 2010-170)

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Table 1. Average total number of course credits that high school seniors earned in various academic subjects, by selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Average number of course credits earned in academic subjects ¹													
	Total		English		Mathematics		Science		Social studies		Non-English language		Fine arts	
	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI
Total	18.6	[18.4–18.8]	4.2	[4.2–4.3]	3.5	[3.5–3.5]	3.2	[3.1–3.2]	3.9	[3.8–3.9]	1.9	[1.8–1.9]	1.9	[1.9–2.0]
Sex														
Male	17.9	[17.7–18.1]	4.2	[4.1–4.2]	3.5	[3.4–3.5]	3.1	[3.1–3.2]	3.8	[3.7–3.9]	1.7	[1.6–1.7]	1.6	[1.6–1.7]
Female	19.3	[19.1–19.5]	4.3	[4.3–4.4]	3.5	[3.5–3.6]	3.2	[3.2–3.3]	4.0	[3.9–4.0]	2.1	[2.0–2.1]	2.2	[2.1–2.3]
Race/ethnicity ²														
White	19.0	[18.8–19.2]	4.2	[4.1–4.2]	3.5	[3.5–3.6]	3.3	[3.2–3.3]	3.9	[3.9–4.0]	2.0	[1.9–2.0]	2.1	[2.0–2.2]
Black	17.8	[17.4–18.1]	4.3	[4.2–4.4]	3.6	[3.5–3.7]	3.1	[3.0–3.2]	3.8	[3.7–3.9]	1.6	[1.4–1.7]	1.5	[1.4–1.7]
Hispanic	17.6	[17.3–18.0]	4.4	[4.3–4.5]	3.3	[3.2–3.4]	2.8	[2.7–2.9]	3.7	[3.6–3.8]	1.8	[1.7–1.9]	1.7	[1.5–1.8]
Asian	19.5	[19.1–19.9]	4.4	[4.3–4.5]	3.7	[3.6–3.8]	3.6	[3.4–3.7]	3.8	[3.7–3.9]	2.3	[2.2–2.4]	1.8	[1.6–1.9]
American Indian	17.0	[15.7–18.2]	4.2	[3.8–4.7]	3.2	[2.9–3.5]	2.9	[2.5–3.2]	4.1	[3.6–4.5]	1.3	[0.9–1.6]	1.4	[0.9–1.8]
Two or more races	18.1	[17.6–18.6]	4.1	[4.0–4.2]	3.4	[3.3–3.5]	3.1	[2.9–3.2]	3.8	[3.7–3.9]	1.7	[1.6–1.9]	2.0	[1.8–2.2]
First language learned to speak as a child														
Non-English	18.0	[17.7–18.4]	4.5	[4.4–4.6]	3.4	[3.3–3.5]	3.0	[2.9–3.1]	3.7	[3.6–3.8]	1.8	[1.7–2.0]	1.6	[1.5–1.7]
English	18.7	[18.5–18.9]	4.2	[4.2–4.2]	3.5	[3.5–3.5]	3.2	[3.2–3.2]	3.9	[3.8–4.0]	1.9	[1.8–1.9]	2.0	[1.9–2.1]
Highest level of parents' education														
High school or less	17.5	[17.3–17.7]	4.3	[4.2–4.3]	3.3	[3.3–3.4]	2.9	[2.9–3.0]	3.8	[3.7–3.8]	1.5	[1.4–1.5]	1.7	[1.6–1.8]
Some college	18.2	[18.0–18.4]	4.2	[4.1–4.3]	3.4	[3.4–3.5]	3.1	[3.0–3.1]	3.8	[3.8–3.9]	1.8	[1.7–1.8]	1.9	[1.8–2.0]
College graduation	19.4	[19.1–19.6]	4.2	[4.2–4.3]	3.6	[3.6–3.7]	3.3	[3.3–3.4]	4.0	[3.9–4.1]	2.1	[2.1–2.2]	2.0	[1.9–2.1]
Graduate/professional degree	20.1	[19.8–20.3]	4.2	[4.2–4.3]	3.7	[3.6–3.7]	3.5	[3.4–3.6]	4.0	[3.9–4.0]	2.4	[2.3–2.5]	2.2	[2.1–2.4]

See notes at end of table.

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Table 1. Average total number of course credits that high school seniors earned in various academic subjects, by selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	Average number of course credits earned in academic subjects ¹													
	Total		English		Mathematics		Science		Social studies		Non-English language		Fine arts	
	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI	Num.	95% CI
Family income in 2001														
\$35,000 or lower	17.7	[17.5–17.9]	4.3	[4.3–4.4]	3.4	[3.3–3.4]	2.9	[2.9–3.0]	3.8	[3.7–3.8]	1.5	[1.4–1.6]	1.8	[1.7–1.8]
\$35,001–75,000	18.6	[18.4–18.8]	4.2	[4.1–4.2]	3.5	[3.4–3.5]	3.2	[3.1–3.2]	3.8	[3.8–3.9]	1.9	[1.8–1.9]	2.0	[1.9–2.1]
More than \$75,000	19.7	[19.4–19.9]	4.2	[4.2–4.3]	3.6	[3.6–3.7]	3.4	[3.3–3.5]	4.0	[4.0–4.1]	2.4	[2.3–2.4]	2.0	[1.9–2.1]
Family composition														
Mother and father	19.1	[18.9–19.3]	4.2	[4.2–4.3]	3.6	[3.5–3.6]	3.3	[3.2–3.3]	3.9	[3.8–4.0]	2.0	[2.0–2.1]	2.0	[1.9–2.1]
Mother or father and guardian	18.0	[17.7–18.3]	4.2	[4.2–4.3]	3.4	[3.3–3.5]	3.0	[2.9–3.1]	3.8	[3.7–3.9]	1.7	[1.6–1.8]	1.8	[1.7–1.9]
Single parent (mother or father)	18.0	[17.8–18.2]	4.2	[4.2–4.3]	3.4	[3.3–3.5]	3.0	[2.9–3.1]	3.8	[3.8–3.9]	1.7	[1.6–1.7]	1.9	[1.8–2.0]
Other	17.0	[16.6–17.5]	4.3	[4.1–4.4]	3.3	[3.2–3.4]	2.9	[2.7–3.0]	3.7	[3.5–3.8]	1.4	[1.2–1.5]	1.5	[1.4–1.7]
Sector of high school last attended														
Public	18.5	[18.3–18.7]	4.2	[4.2–4.3]	3.5	[3.4–3.5]	3.1	[3.1–3.2]	3.9	[3.8–3.9]	1.8	[1.8–1.9]	1.9	[1.9–2.0]
Catholic	20.1	[19.7–20.4]	4.3	[4.2–4.5]	3.8	[3.7–3.8]	3.5	[3.4–3.6]	4.1	[3.9–4.2]	2.8	[2.6–2.9]	1.6	[1.5–1.8]
Other private	20.1	[19.4–20.8]	4.3	[4.2–4.5]	3.7	[3.6–3.9]	3.5	[3.4–3.6]	3.9	[3.7–4.1]	2.4	[2.2–2.7]	2.1	[1.7–2.5]
Urbanicity of high school last attended														
Urban	18.4	[18.1–18.7]	4.3	[4.2–4.3]	3.4	[3.4–3.5]	3.2	[3.1–3.3]	3.8	[3.7–3.9]	1.9	[1.8–2.0]	1.8	[1.7–2.0]
Suburban	18.6	[18.4–18.8]	4.2	[4.1–4.3]	3.5	[3.4–3.6]	3.1	[3.1–3.2]	3.9	[3.8–3.9]	2.0	[1.9–2.0]	1.9	[1.8–2.0]
Rural	18.9	[18.5–19.4]	4.3	[4.2–4.4]	3.5	[3.5–3.6]	3.3	[3.2–3.4]	4.0	[3.8–4.2]	1.7	[1.6–1.8]	2.1	[2.0–2.3]

¹ “Course credits” refer to standardized Carnegie units. A Carnegie unit is a standard of measurement used for secondary education that represents the completion of a course that meets one period per day for 1 year. Academic subjects include English, mathematics, science, social studies, non-English language, and fine arts.

² Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that high school seniors earned, on average, a total of 18.6 credits in academic subjects during their high school years. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “Base-year, 2002,” “First Follow-up, 2004,” and “High School Transcript Study, 2004.”

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Table 2. Percentage distribution of high school seniors, by highest mathematics course taken and selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Highest mathematics course									
	Pre-algebra or below		Algebra I/geometry		Algebra II		Trigonometry/analytic geometry/statistics		Pre-calculus/calculus	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Total	6.8	[6.0–7.5]	21.2	[19.8–22.6]	25.1	[23.7–26.4]	16.9	[15.5–18.3]	30.1	[28.6–31.6]
Sex										
Male	8.5	[7.4–9.5]	22.7	[21.1–24.3]	24.2	[22.6–25.9]	15.6	[14.1–17.0]	29.0	[27.4–30.7]
Female	5.2	[4.4–5.9]	19.6	[18.1–21.2]	25.9	[24.2–27.5]	18.2	[16.5–19.9]	31.1	[29.3–32.9]
Race/ethnicity ¹										
White	5.6	[4.8–6.4]	18.4	[16.9–19.8]	23.8	[22.1–25.4]	17.8	[16.2–19.4]	34.5	[32.7–36.4]
Black	9.6	[7.3–11.8]	22.9	[19.9–26.0]	29.3	[26.0–32.6]	21.4	[17.4–25.4]	16.8	[14.4–19.3]
Hispanic	9.2	[7.0–11.4]	32.1	[28.0–36.2]	28.6	[25.6–31.6]	11.6	[8.9–14.2]	18.5	[15.7–21.4]
Asian	3.1	[1.8–4.4]	13.6	[10.9–16.2]	17.4	[13.8–21.0]	12.5	[10.1–15.0]	53.4	[48.7–58.0]
American Indian	12.8	[4.8–20.7]	29.6	[20.0–39.3]	38.8	[30.1–47.4]	8.5	[1.2–15.9]	10.3	[2.4–18.2]
Two or more races	9.9	[6.7–13.1]	23.9	[19.4–28.4]	23.8	[19.7–27.8]	15.2	[11.4–18.9]	27.3	[22.4–32.1]
First language learned to speak as a child										
Non-English	9.0	[7.0–11.0]	27.5	[23.8–31.3]	25.1	[22.2–28.0]	10.8	[8.8–12.8]	27.6	[24.4–30.8]
English	6.4	[5.7–7.2]	20.2	[18.8–21.5]	25.1	[23.6–26.5]	17.8	[16.3–19.3]	30.5	[28.9–32.0]
Highest level of parents' education										
High school or less	10.7	[9.2–12.2]	30.5	[28.1–32.8]	27.3	[25.2–29.4]	14.2	[12.4–16.0]	17.4	[15.6–19.2]
Some college	7.3	[6.2–8.4]	24.3	[22.4–26.1]	28.4	[26.5–30.3]	16.6	[14.7–18.4]	23.5	[21.8–25.1]
College graduation	4.4	[3.4–5.5]	14.8	[13.0–16.6]	22.7	[20.6–24.8]	19.9	[17.8–21.9]	38.2	[35.7–40.7]
Graduate/professional degree	3.1	[2.0–4.2]	9.9	[8.1–11.6]	18.4	[16.2–20.6]	17.7	[15.3–20.0]	51.0	[48.0–53.9]

See notes at end of table.

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Table 2. Percentage distribution of high school seniors, by highest mathematics course taken and selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	Highest mathematics course									
	Pre-algebra or below		Algebra I/geometry		Algebra II		Trigonometry/analytic geometry/statistics		Pre-calculus/calculus	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Family income in 2001										
\$35,000 or lower	10.5	[9.2–11.9]	28.6	[26.4–30.7]	27.7	[25.7–29.8]	15.0	[13.2–16.9]	18.2	[16.5–19.8]
\$35,001–75,000	6.6	[5.6–7.5]	21.4	[19.7–23.2]	25.8	[24.1–27.5]	17.3	[15.6–19.0]	28.9	[27.0–30.7]
More than \$75,000	3.0	[2.3–3.7]	12.5	[10.9–14.0]	21.0	[19.0–23.0]	18.4	[16.4–20.4]	45.2	[42.8–47.6]
Family composition										
Mother and father	5.2	[4.4–6.0]	17.6	[16.2–19.0]	23.9	[22.4–25.5]	17.2	[15.7–18.7]	36.1	[34.3–37.9]
Mother or father and guardian	7.7	[6.3–9.1]	27.3	[24.6–30.0]	27.2	[24.3–30.2]	16.8	[14.4–19.2]	21.0	[18.7–23.3]
Single parent (mother or father)	9.4	[7.8–11.0]	25.5	[22.9–28.0]	26.5	[24.3–28.7]	16.8	[14.6–19.0]	21.8	[19.7–23.9]
Other	15.2	[10.9–19.5]	29.8	[24.5–35.1]	26.7	[22.2–31.3]	12.5	[8.8–16.2]	15.7	[12.0–19.4]
Sector of high school last attended										
Public	7.3	[6.5–8.1]	22.4	[20.9–23.9]	25.5	[24.1–27.0]	16.4	[15.0–17.9]	28.3	[26.7–29.8]
Catholic	0.8	[0.1–1.5]	4.3	[2.6–6.0]	21.1	[16.8–25.4]	23.7	[19.5–27.9]	50.1	[44.7–55.5]
Other private	0.4	[0.0–0.8]	8.4	[5.3–11.5]	18.0	[12.7–23.3]	19.4	[13.6–25.2]	53.8	[45.8–61.8]
Urbanicity of high school last attended										
Urban	6.9	[5.5–8.3]	21.4	[19.0–23.7]	23.9	[21.8–26.1]	19.1	[16.5–21.7]	28.7	[26.2–31.2]
Suburban	6.4	[5.3–7.5]	20.8	[18.7–22.8]	24.7	[22.8–26.7]	14.8	[12.9–16.6]	33.3	[31.1–35.6]
Rural	7.5	[6.1–8.8]	21.7	[19.0–24.4]	27.9	[24.7–31.2]	18.5	[15.3–21.7]	24.4	[21.5–27.3]

¹ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 6.8 percent of high school seniors completed pre-algebra or below as their highest mathematics course in high school. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “Base-year, 2002,” “First Follow-up, 2004,” and “High School Transcript Study, 2004.”

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Table 3. Percentage distribution of high school seniors, by highest science course taken and selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Highest science course											
	No science/ primary physical science		Secondary physical science/basic biology		General biology		Chemistry I or physics I		Chemistry I and physics I		Chemistry II, physics II, or advanced biology	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Total	4.1	[3.5–4.8]	3.7	[3.0–4.4]	26.9	[25.3–28.6]	32.3	[30.6–33.9]	16.0	[14.5–17.5]	16.9	[15.6–18.3]
Sex												
Male	5.3	[4.3–6.2]	4.3	[3.4–5.1]	28.8	[27.0–30.7]	28.9	[27.1–30.6]	16.5	[14.9–18.1]	16.2	[14.7–17.8]
Female	3.0	[2.4–3.5]	3.2	[2.4–3.9]	25.0	[23.1–27.0]	35.6	[33.6–37.7]	15.6	[13.9–17.3]	17.6	[16.0–19.3]
Race/ethnicity ¹												
White	3.3	[2.5–4.0]	3.3	[2.5–4.1]	25.1	[23.1–27.0]	31.4	[29.4–33.3]	17.5	[15.7–19.3]	19.4	[17.7–21.2]
Black	4.9	[3.4–6.4]	3.5	[2.1–4.8]	32.9	[29.3–36.4]	37.5	[33.5–41.4]	11.5	[8.7–14.4]	9.8	[7.1–12.4]
Hispanic	6.9	[5.4–8.4]	4.8	[3.0–6.6]	32.7	[29.0–36.3]	34.4	[31.2–37.5]	13.4	[10.5–16.4]	7.8	[6.1–9.4]
Asian	3.0	[1.7–4.3]	1.9	[0.9–2.9]	13.8	[10.8–16.7]	26.2	[22.7–29.6]	18.4	[15.1–21.8]	36.8	[32.2–41.3]
American Indian	3.0	[0.0–6.3]	4.4	[0.0–9.6]	47.7	[31.0–64.4]	28.0	[14.7–41.3]	9.9	[1.2–18.5]	7.1	[1.9–12.2]
Two or more races	5.8	[3.6–8.0]	8.0	[4.8–11.1]	24.6	[19.8–29.4]	29.3	[24.8–33.7]	15.7	[11.8–19.6]	16.6	[13.0–20.3]
First language learned to speak as a child												
Non-English	6.2	[4.8–7.6]	3.9	[2.4–5.5]	30.0	[26.6–33.5]	29.0	[25.9–32.1]	13.9	[11.3–16.6]	16.8	[14.2–19.4]
English	3.8	[3.1–4.5]	3.7	[3.0–4.4]	26.4	[24.7–28.1]	32.8	[31.1–34.5]	16.3	[14.8–17.9]	17.0	[15.5–18.4]
Highest level of parents' education												
High school or less	6.6	[5.4–7.8]	5.2	[3.9–6.5]	35.6	[33.0–38.3]	32.1	[29.8–34.5]	9.0	[7.5–10.5]	11.5	[9.9–13.1]
Some college	4.0	[3.1–4.9]	4.2	[3.1–5.2]	30.5	[28.2–32.8]	33.2	[31.0–35.3]	14.5	[12.8–16.2]	13.6	[12.0–15.3]
College graduation	3.1	[2.2–4.0]	2.9	[1.9–3.8]	20.5	[18.5–22.6]	33.2	[30.8–35.6]	21.0	[18.5–23.5]	19.2	[17.0–21.5]
Graduate/professional degree	2.1	[1.2–2.9]	1.7	[0.9–2.5]	15.5	[13.5–17.5]	29.6	[26.8–32.3]	22.8	[20.2–25.3]	28.3	[25.6–31.1]

See notes at end of table.

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Table 3. Percentage distribution of high school seniors, by highest science course taken and selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	Highest science course											
	No science/ primary physical science		Secondary physical science/basic biology		General biology		Chemistry I or physics I		Chemistry I and physics I		Chemistry II, physics II, or advanced biology	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Family income in 2001												
\$35,000 or lower	5.8	[4.9–6.8]	5.1	[4.0–6.3]	35.5	[33.0–38.0]	31.8	[29.4–34.2]	10.3	[8.6–12.0]	11.4	[9.8–13.0]
\$35,001–75,000	4.3	[3.4–5.3]	3.6	[2.8–4.4]	26.3	[24.1–28.4]	32.9	[30.9–34.9]	16.1	[14.3–17.9]	16.9	[15.1–18.6]
More than \$75,000	1.9	[1.3–2.5]	2.3	[1.6–3.1]	18.3	[16.4–20.3]	31.9	[29.4–34.4]	22.3	[20.0–24.7]	23.2	[20.8–25.6]
Family composition												
Mother and father	3.1	[2.5–3.8]	3.3	[2.5–4.1]	22.8	[20.9–24.6]	32.1	[30.2–34.1]	19.1	[17.3–20.8]	19.6	[17.8–21.3]
Mother or father and guardian	5.1	[3.7–6.5]	4.5	[3.3–5.8]	33.3	[30.4–36.2]	32.9	[30.1–35.7]	10.7	[8.7–12.7]	13.4	[11.3–15.5]
Single parent (mother or father)	5.5	[4.2–6.7]	4.1	[3.0–5.2]	32.1	[29.6–34.7]	32.7	[30.1–35.3]	12.2	[10.3–14.2]	13.3	[11.6–15.1]
Other	8.7	[5.5–11.9]	4.7	[2.5–7.0]	39.3	[34.2–44.5]	29.7	[24.6–34.8]	9.6	[6.3–12.8]	8.0	[5.1–10.8]
Sector of high school last attended												
Public	4.4	[3.7–5.1]	3.9	[3.2–4.7]	28.0	[26.2–29.8]	32.3	[30.6–34.0]	14.9	[13.4–16.5]	16.4	[14.9–17.8]
Catholic	0.6	[0.0–1.6]	1.7	[0.0–3.7]	15.6	[11.1–20.1]	30.4	[25.5–35.3]	30.0	[24.3–35.6]	21.7	[17.7–25.7]
Other private	0.4	[0.0–1.1]	0.6	[0.2–1.1]	12.3	[7.8–16.8]	33.6	[27.1–40.2]	27.4	[18.8–36.0]	25.6	[18.6–32.6]
Urbanicity of high school last attended												
Urban	4.4	[3.4–5.4]	2.8	[1.8–3.7]	24.8	[22.3–27.3]	34.5	[31.8–37.3]	17.5	[14.7–20.2]	16.0	[13.8–18.2]
Suburban	3.9	[3.1–4.8]	4.3	[3.2–5.4]	26.3	[23.9–28.6]	30.5	[28.2–32.8]	16.3	[14.2–18.3]	18.7	[16.6–20.9]
Rural	4.1	[2.4–5.8]	3.9	[2.2–5.6]	31.9	[27.5–36.3]	33.0	[29.2–36.8]	13.1	[10.0–16.2]	14.0	[11.4–16.6]

¹ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 4.1 percent of high school seniors took no science or primary physical science as their highest science course in high school. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “Base-year, 2002,” “First Follow-up, 2004,” and “High School Transcript Study, 2004.”

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Table 4. Percentage of high school seniors who took at least one Advanced Placement (AP) or International Baccalaureate (IB) course in various subjects, average total number of course credits earned in AP/IB courses, and the percentage who took or planned to take AP tests in high school, by selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Students taking at least one AP/IB course in												Average total number of course credits in AP/IB ¹		Students taking or planning to take AP test	
	Any subject		English		Mathematics		Science		Social studies		Non-English language		Num.	95% CI	Pct.	95% CI
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI				
Total	29.3	[27.8–30.9]	14.4	[13.2–15.5]	11.4	[10.3–12.5]	9.9	[8.9–10.9]	16.9	[15.6–18.3]	4.7	[4.0–5.3]	2.6	[2.5–2.7]	29.9	[28.5–31.3]
Sex																
Male	26.3	[24.5–28.0]	10.7	[9.5–11.8]	12.0	[10.7–13.3]	9.9	[8.7–11.1]	14.9	[13.4–16.3]	3.6	[2.9–4.2]	2.7	[2.5–2.8]	27.7	[26.1–29.4]
Female	32.4	[30.4–34.3]	18.0	[16.4–19.6]	10.9	[9.6–12.1]	9.9	[8.8–11.0]	19.0	[17.3–20.7]	5.8	[4.9–6.7]	2.6	[2.5–2.7]	32.0	[30.1–33.8]
Race/ethnicity ²																
White	32.4	[30.4–34.4]	16.1	[14.6–17.6]	12.9	[11.6–14.3]	10.9	[9.6–12.2]	19.2	[17.5–21.0]	4.1	[3.3–4.8]	2.6	[2.5–2.8]	31.7	[29.9–33.5]
Black	16.0	[13.5–18.4]	7.5	[5.9–9.1]	4.0	[2.7–5.2]	4.7	[3.3–6.0]	7.9	[6.1–9.7]	2.0	[1.2–2.8]	2.1	[1.8–2.4]	19.8	[17.2–22.5]
Hispanic	23.7	[20.5–26.9]	10.3	[7.8–12.7]	6.1	[4.6–7.6]	4.8	[3.7–5.9]	11.6	[9.1–14.1]	9.2	[7.2–11.2]	2.2	[2.1–2.4]	27.1	[24.0–30.3]
Asian	52.2	[47.4–57.0]	27.3	[22.9–31.7]	33.0	[28.7–37.3]	29.4	[25.5–33.2]	34.8	[30.3–39.4]	8.6	[6.0–11.2]	3.8	[3.5–4.1]	48.5	[43.8–53.2]
American Indian	13.3	[6.0–20.7]	5.9	[0.2–11.6]	3.9	[0.0–8.1]	2.2	[0.0–4.4]	6.1	[0.1–12.2]	#	[†]	‡	[†]	21.2	[12.8–29.6]
Two or more races	25.3	[20.7–29.9]	13.2	[9.7–16.7]	10.5	[7.4–13.5]	10.2	[7.3–13.1]	14.1	[10.3–18.0]	3.2	[1.5–5.0]	2.6	[2.2–3.0]	26.0	[21.3–30.8]
First language learned to speak as a child																
Non-English	30.7	[27.6–33.8]	13.9	[11.8–16.1]	13.1	[11.0–15.2]	11.3	[9.4–13.3]	16.8	[14.2–19.4]	10.4	[8.4–12.4]	3.0	[2.7–3.2]	33.4	[30.2–36.6]
English	29.1	[27.5–30.8]	14.4	[13.2–15.7]	11.2	[10.0–12.3]	9.7	[8.6–10.7]	17.0	[15.6–18.4]	3.8	[3.2–4.4]	2.6	[2.5–2.7]	29.3	[27.9–30.8]
Highest level of parents' education																
High school or less	17.6	[15.7–19.4]	7.5	[6.1–8.8]	5.5	[4.4–6.6]	5.0	[4.0–6.0]	8.4	[7.0–9.7]	3.5	[2.5–4.5]	2.2	[2.0–2.3]	20.6	[18.6–22.6]
Some college	21.8	[20.1–23.5]	9.5	[8.3–10.8]	6.3	[5.4–7.2]	5.9	[5.0–6.8]	11.7	[10.3–13.0]	3.2	[2.5–3.9]	2.1	[2.0–2.3]	22.6	[21.0–24.1]
College graduation	37.2	[34.7–39.8]	18.4	[16.4–20.5]	16.1	[14.2–18.0]	12.4	[10.8–14.0]	21.7	[19.4–24.0]	5.2	[4.1–6.2]	2.7	[2.5–2.8]	36.1	[33.6–38.6]
Graduate/professional degree	51.0	[48.0–54.1]	28.7	[25.9–31.4]	24.0	[21.2–26.8]	21.5	[18.7–24.2]	33.6	[30.7–36.5]	8.7	[6.9–10.6]	3.3	[3.1–3.5]	49.3	[46.2–52.3]

See notes at end of table.

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Table 4. Percentage of high school seniors who took at least one Advanced Placement (AP) or International Baccalaureate (IB) course in various subjects, average total number of course credits earned in AP/IB courses, and the percentage who took or planned to take AP tests in high school, by selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	Students taking at least one AP/IB course in												Average total number of course credits in AP/IB ¹		Students taking or planning to take AP test	
	Any subject		English		Mathematics		Science		Social studies		Non-English language		Num.	95% CI	Pct.	95% CI
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI				
Family income in 2001																
\$35,000 or lower	18.5	[16.7–20.2]	8.5	[7.2–9.8]	5.4	[4.5–6.3]	5.3	[4.3–6.3]	9.7	[8.4–11.0]	3.7	[2.9–4.6]	2.3	[2.1–2.5]	22.3	[20.5–24.1]
\$35,001–75,000	28.0	[26.1–29.9]	13.8	[12.3–15.3]	10.3	[9.0–11.6]	9.0	[7.8–10.1]	15.4	[13.8–17.0]	3.9	[3.1–4.6]	2.5	[2.4–2.6]	28.0	[26.3–29.8]
More than \$75,000	43.5	[40.7–46.3]	21.9	[19.7–24.0]	19.8	[17.7–22.0]	16.4	[14.3–18.5]	27.3	[24.6–30.0]	7.0	[5.7–8.3]	2.9	[2.8–3.1]	41.0	[38.3–43.8]
Family composition																
Mother and father	34.8	[32.9–36.7]	16.9	[15.5–18.3]	14.3	[12.9–15.7]	12.1	[10.8–13.4]	20.5	[18.8–22.1]	5.6	[4.8–6.4]	2.7	[2.6–2.8]	33.6	[31.8–35.3]
Mother or father and guardian	21.2	[18.7–23.6]	10.4	[8.5–12.4]	6.4	[5.0–7.8]	6.4	[4.9–7.8]	11.3	[9.3–13.2]	2.9	[1.9–3.9]	2.2	[2.0–2.5]	24.2	[21.6–26.8]
Single parent (mother or father)	22.3	[20.2–24.3]	11.3	[9.6–13.0]	8.0	[6.7–9.4]	7.0	[5.8–8.2]	12.5	[10.8–14.2]	3.9	[2.9–4.9]	2.6	[2.4–2.8]	24.9	[22.8–27.0]
Other	13.0	[9.7–16.2]	6.2	[3.8–8.6]	4.1	[1.9–6.3]	4.1	[2.2–6.0]	7.5	[4.8–10.3]	1.1	[0.0–2.2]	2.3	[1.9–2.8]	19.5	[15.1–24.0]
Sector of high school last attended																
Public	28.5	[26.8–30.1]	14.0	[12.8–15.2]	11.1	[9.9–12.2]	9.4	[8.4–10.4]	16.4	[15.0–17.9]	4.5	[3.8–5.1]	2.6	[2.5–2.7]	28.8	[27.3–30.3]
Catholic	38.6	[33.4–43.7]	20.3	[16.1–24.5]	13.4	[10.5–16.2]	13.4	[10.4–16.4]	23.5	[19.1–28.0]	5.8	[3.6–7.9]	2.7	[2.5–3.0]	39.8	[35.0–44.5]
Other private	41.9	[33.1–50.6]	17.7	[11.8–23.7]	19.1	[13.3–25.0]	18.4	[12.1–24.6]	22.6	[16.9–28.2]	9.6	[5.2–14.1]	2.9	[2.4–3.4]	45.1	[36.7–53.5]
Urbanicity of high school last attended																
Urban	31.1	[28.3–33.9]	17.2	[15.0–19.4]	11.7	[9.6–13.7]	10.6	[9.0–12.3]	18.8	[16.5–21.1]	5.6	[4.4–6.8]	2.8	[2.6–3.0]	33.2	[30.4–35.9]
Suburban	31.4	[29.1–33.7]	14.1	[12.4–15.9]	12.8	[11.2–14.4]	10.5	[9.1–12.0]	17.9	[15.7–20.0]	5.0	[4.0–5.9]	2.6	[2.5–2.8]	30.5	[28.4–32.5]
Rural	21.5	[18.3–24.6]	10.3	[8.2–12.5]	7.6	[5.9–9.4]	7.1	[5.0–9.1]	11.7	[9.6–13.7]	2.5	[1.3–3.7]	2.4	[2.2–2.7]	23.1	[20.6–25.6]

† Not applicable.

Rounds to zero.

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

¹ Estimates are for those who took AP/IB courses. “Course credits” refer to standardized Carnegie units. A Carnegie unit is a standard of measurement used for secondary education that represents the completion of a course that meets one period per day for 1 year.

² Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 29.3 percent of high school seniors took at least one AP/IB course. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), “Base-year, 2002,” “First Follow-up, 2004,” and “High School Transcript Study, 2004.”

National Center for Education Statistics

Table 5. Percentage of high school seniors who completed high-level academic coursework, by selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Students completing high-level academic coursework	
	Pct.	95% CI
Total	26.8	[25.2–28.4]
Sex		
Male	25.5	[23.7–27.3]
Female	28.0	[26.2–29.9]
Race/ethnicity ¹		
White	30.9	[28.8–32.9]
Black	18.9	[16.0–21.9]
Hispanic	15.2	[12.8–17.6]
Asian	39.5	[35.4–43.7]
American Indian	11.5	[2.9–20.1]
Two or more races	21.8	[17.6–26.0]
First language learned to speak as a child		
Non-English	20.2	[17.5–22.8]
English	27.8	[26.1–29.5]
Highest level of parents' education		
High school or less	16.2	[14.5–17.8]
Some college	20.6	[18.8–22.4]
College graduation	34.8	[32.3–37.4]
Graduate/professional degree	43.8	[40.6–47.0]
Family income in 2001		
\$35,000 or lower	16.3	[14.6–18.0]
\$35,001–75,000	25.8	[23.8–27.8]
More than \$75,000	39.9	[37.2–42.6]
Family composition		
Mother and father	31.4	[29.4–33.3]
Mother or father and guardian	19.8	[17.4–22.1]
Single parent (mother or father)	20.9	[18.8–23.0]
Other	12.9	[9.8–16.0]
Sector of high school last attended		
Public	24.8	[23.2–26.5]
Catholic	53.0	[45.9–60.0]
Other private	44.7	[37.1–52.3]
Urbanicity of high school last attended		
Urban	26.5	[23.6–29.4]
Suburban	27.9	[25.6–30.2]
Rural	24.5	[21.1–27.9]

¹ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 26.8 percent of high school seniors completed high-level academic coursework. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades. High-level academic coursework consists of 4 years of English; 3 years of mathematics (including at least 1 year of a course higher than algebra II); 3 years of science (including at least 1 year of a course higher than biology); 3 years of social studies (including at least 1 year of U.S. or world history); and 2 years of a single non-English language.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base-year, 2002," "First Follow-up, 2004," and "High School Transcript Study, 2004."

National Center for Education Statistics

Table 6. Percentage of high school seniors who earned a 3.0 or higher grade point average (GPA) in high school, by selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Students earning a 3.0 or higher GPA for all courses		Students earning a 3.0 or higher GPA for all academic courses	
	Pct.	95% CI	Pct.	95% CI
Total	41.7	[40.3–43.1]	35.6	[34.3–36.9]
Sex				
Male	33.9	[32.3–35.5]	27.8	[26.3–29.3]
Female	49.4	[47.5–51.3]	43.3	[41.5–45.1]
Race/ethnicity ¹				
White	50.3	[48.7–51.9]	43.2	[41.7–44.7]
Black	17.9	[15.6–20.2]	13.4	[11.4–15.3]
Hispanic	26.2	[23.1–29.4]	22.0	[19.3–24.7]
Asian	56.1	[52.0–60.2]	51.4	[47.5–55.2]
American Indian	20.8	[11.2–30.4]	20.4	[10.8–30.0]
Two or more races	34.7	[29.7–39.7]	29.1	[24.3–34.0]
First language learned to speak as a child				
Non-English	33.5	[30.4–36.5]	28.9	[26.3–31.5]
English	43.0	[41.5–44.5]	36.7	[35.3–38.1]
Highest level of parents' education				
High school or less	30.4	[28.3–32.5]	24.2	[22.4–26.0]
Some college	35.3	[33.4–37.2]	28.8	[27.0–30.5]
College graduation	49.0	[46.8–51.2]	43.7	[41.5–45.8]
Graduate/professional degree	61.2	[58.5–63.9]	55.3	[52.6–58.0]
Family income in 2001				
\$35,000 or lower	28.7	[26.7–30.7]	23.7	[22.0–25.4]
\$35,001–75,000	42.6	[40.8–44.4]	36.1	[34.4–37.9]
More than \$75,000	54.9	[52.7–57.1]	48.2	[46.0–50.4]
Family composition				
Mother and father	48.9	[47.4–50.5]	42.4	[40.9–43.9]
Mother or father and guardian	31.8	[29.3–34.3]	25.7	[23.3–28.1]
Single parent (mother or father)	31.6	[29.1–34.0]	26.5	[24.3–28.8]
Other	20.6	[16.4–24.9]	16.6	[12.8–20.3]
Sector of high school last attended				
Public	40.3	[38.9–41.8]	34.2	[32.9–35.6]
Catholic	54.5	[49.6–59.4]	48.4	[43.7–53.1]
Other private	63.2	[58.1–68.3]	58.3	[52.6–64.0]
Urbanicity of high school last attended				
Urban	35.9	[33.5–38.4]	31.2	[28.8–33.5]
Suburban	44.5	[42.5–46.5]	38.0	[36.2–39.8]
Rural	44.5	[41.5–47.4]	37.3	[34.5–40.0]

¹ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 41.7 percent of high school seniors earned a 3.0 or higher GPA for all courses taken. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base-year, 2002," "First Follow-up, 2004," and "High School Transcript Study, 2004."

National Center for Education Statistics

Table 7. Percentage of high school seniors who demonstrated proficiency in specific mathematics knowledge and skills, by selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	Mathematics proficiency level ¹									
	Simple arithmetical operations on whole numbers		Simple operations with decimals, fractions, powers, and roots		Simple problem solving, requiring the understanding of low- level mathematical concepts		Understanding of intermediate-level mathematical concepts		Solving complex multistep word problems	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Total	96.0	[95.7–96.3]	78.5	[77.3–79.6]	62.4	[60.8–63.9]	35.1	[33.7–36.6]	3.9	[3.5–4.3]
Sex										
Male	96.0	[95.5–96.4]	79.6	[78.2–81.0]	64.1	[62.4–65.8]	38.0	[36.4–39.6]	5.1	[4.5–5.6]
Female	96.1	[95.7–96.4]	77.4	[76.0–78.8]	60.6	[58.9–62.4]	32.3	[30.6–33.9]	2.7	[2.3–3.1]
Race/ethnicity ²										
White	97.6	[97.3–97.8]	85.7	[84.7–86.7]	72.4	[71.0–73.9]	43.6	[42.1–45.2]	4.9	[4.4–5.4]
Black	92.2	[91.2–93.2]	59.1	[56.0–62.1]	35.8	[32.7–38.9]	12.1	[10.3–13.8]	0.5	[0.2–0.8]
Hispanic	92.8	[91.8–93.7]	64.6	[62.0–67.2]	42.5	[39.5–45.5]	18.3	[16.0–20.5]	1.1	[0.8–1.5]
Asian	97.7	[97.0–98.3]	86.1	[83.4–88.8]	73.4	[69.6–77.3]	49.6	[44.8–54.3]	10.9	[8.1–13.7]
American Indian	94.5	[90.9–98.0]	66.4	[55.5–77.3]	43.0	[31.3–54.7]	16.3	[9.6–23.0]	1.0	[0.0–2.4]
Two or more races	95.1	[93.5–96.7]	77.6	[73.6–81.6]	61.0	[56.0–65.9]	31.6	[27.4–35.8]	2.5	[1.7–3.3]
First language learned to speak as a child										
Non-English	92.5	[91.5–93.6]	65.4	[62.5–68.3]	45.7	[42.4–49.0]	23.3	[20.5–26.0]	3.4	[2.5–4.4]
English	96.6	[96.3–96.9]	80.5	[79.4–81.7]	65.0	[63.5–66.4]	37.0	[35.6–38.4]	3.9	[3.5–4.3]
Highest level of parents' education										
High school or less	93.4	[92.8–94.0]	66.5	[64.6–68.4]	45.4	[43.2–47.7]	19.5	[18.0–21.1]	1.1	[0.7–1.3]
Some college	96.0	[95.5–96.4]	77.4	[75.9–78.9]	58.8	[56.9–60.8]	29.4	[27.8–30.9]	2.1	[1.8–2.5]
College graduation	97.4	[96.9–97.8]	84.6	[83.0–86.1]	71.7	[69.7–73.6]	43.7	[41.5–46.0]	5.0	[4.3–5.7]
Graduate/professional degree	98.0	[97.5–98.5]	89.8	[88.1–91.4]	81.0	[78.8–83.2]	57.2	[54.7–59.8]	9.8	[8.5–11.1]

See notes at end of table.

National Center for Education Statistics

Table 7. Percentage of high school seniors who demonstrated proficiency in specific mathematics knowledge and skills, by selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	Mathematics proficiency level ¹									
	Simple arithmetical operations on whole numbers		Simple operations with decimals, fractions, powers, and roots		Simple problem solving, requiring the understanding of low- level mathematical concepts		Understanding of intermediate-level mathematical concepts		Solving complex multistep word problems	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Family income in 2001										
\$35,000 or lower	93.1	[92.4–93.7]	65.1	[63.3–67.0]	44.3	[42.3–46.3]	18.7	[17.3–20.0]	1.2	[0.9–1.5]
\$35,001–75,000	96.5	[96.0–96.9]	80.3	[78.9–81.7]	63.7	[61.8–65.5]	35.1	[33.4–36.8]	3.3	[2.9–3.7]
More than \$75,000	98.6	[98.3–98.9]	90.5	[89.4–91.7]	80.3	[78.7–81.9]	53.3	[51.3–55.3]	7.7	[6.7–8.6]
Family composition										
Mother and father	96.9	[96.6–97.3]	82.9	[81.7–84.1]	68.7	[67.1–70.2]	41.4	[39.8–43.0]	5.0	[4.4–5.5]
Mother or father and guardian	95.8	[95.1–96.5]	75.9	[73.8–77.9]	57.0	[54.4–59.6]	28.2	[25.9–30.5]	2.4	[1.8–3.0]
Single parent (mother or father)	94.5	[93.8–95.2]	70.7	[68.6–72.8]	51.9	[49.5–54.3]	26.0	[24.1–27.9]	2.3	[1.8–2.8]
Other	90.7	[88.6–92.8]	62.7	[58.2–67.1]	41.8	[37.1–46.4]	14.6	[12.0–17.2]	0.9	[0.2–1.5]
Sector of high school last attended										
Public	95.7	[95.4–96.1]	77.2	[76.0–78.5]	60.5	[58.9–62.2]	33.4	[31.8–34.8]	3.5	[3.1–3.9]
Catholic	99.3	[99.1–99.5]	93.0	[91.6–94.4]	83.3	[80.9–85.7]	54.8	[51.1–58.5]	6.1	[4.8–7.4]
Other private	98.9	[98.4–99.4]	93.0	[91.1–95.0]	83.3	[79.5–87.0]	57.1	[51.7–62.5]	10.5	[7.7–13.3]
Urbanicity of high school last attended										
Urban	95.0	[94.3–95.7]	74.9	[72.5–77.3]	57.2	[54.2–60.1]	30.5	[28.0–33.0]	3.6	[2.9–4.3]
Suburban	96.5	[96.1–96.9]	80.3	[78.8–81.7]	65.4	[63.4–67.4]	38.6	[36.5–40.6]	4.3	[3.6–4.9]
Rural	96.5	[96.0–97.0]	80.4	[78.4–82.3]	63.8	[61.1–66.6]	34.7	[32.3–37.2]	3.3	[2.7–3.9]

¹ Mathematics proficiency level measures students' probability of mastering specific mathematics knowledge and skills. For each of the five mastery levels presented in this table, mastery of a higher level implies proficiency at lower levels.

² Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 96.0 percent of high school seniors demonstrated proficiency in simple arithmetical operations on whole numbers. Estimates in this table are based on all high school seniors in the spring of 2004.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base-year, 2002" and "First Follow-up, 2004."

National Center for Education Statistics

Table 8. Percentage distribution of high school seniors, by high school completion status and selected student, family, and high school characteristics: 2004

Selected student, family, and high school characteristics	High school completion status ¹									
	Students who completed a regular or honors diploma		Students who completed with an alternative credential ²		Students who were still enrolled in school		Dropouts ³		Exit status unknown ⁴	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Total	89.6	[88.2–90.9]	0.7	[0.5–0.9]	0.7	[0.5–0.9]	2.1	[1.7–2.4]	7.0	[5.7–8.2]
Sex										
Male	88.1	[86.6–89.6]	0.7	[0.4–0.9]	0.9	[0.6–1.2]	2.8	[2.3–3.4]	7.5	[6.1–8.9]
Female	91.0	[89.4–92.5]	0.7	[0.4–1.0]	0.6	[0.3–0.8]	1.3	[1.0–1.6]	6.5	[5.0–7.9]
Race/ethnicity ⁵										
White	92.2	[90.7–93.7]	0.5	[0.3–0.7]	0.4	[0.3–0.6]	1.3	[0.9–1.6]	5.5	[4.1–7.0]
Black	84.0	[81.0–87.0]	1.4	[0.6–2.2]	1.7	[0.8–2.5]	2.8	[1.8–3.8]	10.1	[7.3–12.9]
Hispanic	83.8	[80.6–87.0]	0.7	[0.2–1.1]	0.7	[0.2–1.1]	4.6	[3.3–5.8]	10.2	[7.0–13.5]
Asian	91.1	[88.3–94.0]	0.1	[0.0–0.2]	0.5	[0.1–1.0]	1.3	[0.5–2.2]	7.0	[4.3–9.6]
American Indian	79.0	[69.7–88.3]	0.6	[0.0–1.7]	5.5	[0.0–12.0]	3.3	[0.0–6.7]	11.6	[5.0–18.1]
Two or more races	88.7	[85.3–92.2]	1.1	[0.0–2.2]	1.1	[0.1–2.1]	3.1	[1.3–4.9]	6.0	[3.4–8.6]
First language learned to speak as a child										
Non-English	85.3	[82.5–88.2]	0.6	[0.2–1.1]	0.8	[0.3–1.3]	3.6	[2.3–4.9]	9.6	[6.8–12.4]
English	90.2	[88.9–91.5]	0.7	[0.5–0.9]	0.7	[0.5–0.9]	1.8	[1.5–2.2]	6.6	[5.3–7.8]
Highest level of parents' education										
High school or less	87.0	[85.1–88.9]	1.3	[0.9–1.8]	0.8	[0.5–1.2]	3.0	[2.2–3.7]	7.9	[6.2–9.6]
Some college	88.0	[86.3–89.8]	0.7	[0.4–1.0]	0.7	[0.4–1.1]	2.6	[2.0–3.3]	7.9	[6.3–9.5]
College graduation	91.8	[90.1–93.5]	0.2	[0.0–0.4]	0.7	[0.3–1.1]	1.3	[0.8–1.8]	6.0	[4.4–7.6]
Graduate/professional degree	93.4	[91.9–94.8]	0.3	[0.1–0.6]	0.5	[0.2–0.9]	0.6	[0.2–1.0]	5.1	[3.8–6.4]
Family income in 2001										
\$35,000 or lower	85.4	[83.5–87.4]	1.3	[0.8–1.7]	0.9	[0.5–1.2]	3.2	[2.5–3.8]	9.3	[7.5–11.0]
\$35,001–75,000	90.2	[88.8–91.7]	0.6	[0.3–0.8]	0.8	[0.5–1.2]	2.0	[1.5–2.5]	6.4	[5.0–7.7]
More than \$75,000	93.1	[91.6–94.7]	0.2	[0.1–0.4]	0.3	[0.1–0.6]	0.9	[0.6–1.3]	5.4	[3.9–6.8]
Family composition										
Mother and father	91.9	[90.7–93.2]	0.5	[0.3–0.6]	0.6	[0.4–0.8]	1.4	[1.1–1.8]	5.5	[4.3–6.8]
Mother or father and guardian	87.4	[85.1–89.7]	0.9	[0.4–1.4]	1.1	[0.5–1.6]	2.4	[1.6–3.3]	8.2	[6.1–10.3]
Single parent (mother or father)	85.5	[83.1–88.0]	0.8	[0.3–1.2]	0.8	[0.4–1.1]	3.2	[2.4–4.1]	9.7	[7.4–12.0]
Other	81.5	[76.9–86.0]	2.7	[0.7–4.8]	1.0	[0.0–2.1]	4.4	[2.1–6.7]	10.4	[6.8–13.9]
Sector of high school last attended										
Public	89.2	[87.9–90.6]	0.7	[0.5–0.9]	0.7	[0.5–1.0]	2.2	[1.8–2.6]	7.1	[5.7–8.4]
Catholic	96.6	[93.7–99.4]	#	[†]	0.3	[0.0–0.6]	0.2	[0.0–0.4]	3.0	[0.1–5.8]
Other private	91.4	[87.2–95.7]	0.3	[0.0–0.7]	0.7	[0.0–1.6]	0.7	[0.2–1.3]	6.8	[2.7–11.0]

See notes at end of table.

National Center for Education Statistics

Table 8. Percentage distribution of high school seniors, by high school completion status and selected student, family, and high school characteristics: 2004—Continued

Selected student, family, and high school characteristics	High school completion status ¹									
	Students who completed a regular or honors diploma		Students who completed with an alternative credential ²		Students who were still enrolled in school		Dropouts ³		Exit status unknown ⁴	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Urbanicity of high school last attended										
Urban	84.6	[82.2–86.9]	0.8	[0.4–1.3]	0.8	[0.5–1.1]	3.2	[2.4–3.9]	10.6	[8.3–12.9]
Suburban	93.0	[91.7–94.4]	0.5	[0.3–0.7]	0.7	[0.4–1.0]	1.5	[1.1–1.9]	4.3	[3.0–5.5]
Rural	89.6	[85.3–93.8]	0.9	[0.5–1.3]	0.6	[0.2–1.1]	1.7	[1.1–2.3]	7.2	[3.1–11.3]

† Not applicable.

Rounds to zero.

¹ High school completion status indicates a student's mode of leaving high school as of August 2004 and is based on the transcript from the last high school attended.

² An alternative credential includes a General Educational Development (GED) certificate, certificate of attendance, and diploma with special education adjustment.

³ Dropouts are students who were enrolled as seniors in spring 2004 but did not complete high school and were not enrolled in school according to their last high school transcript.

⁴ Students who did not have a known exit status including those who had transferred schools.

⁵ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 89.6 percent of high school seniors graduated with a regular or honors high school diploma as of August 2004. Estimates in this table are based on spring 2004 high school seniors who had at least 3 years of transcript information between 9th and 12th grades. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base-year, 2002" and "First Follow-up, 2004."

National Center for Education Statistics

Table 9. Percentage of 2004 high school seniors taking remedial courses in postsecondary education, by the type of institution students first attended and selected student, family, and high school characteristics: 2006

Selected student, family, and high school characteristics	First attended 4-year institution						First attended 2-year institution					
	Remedial reading		Remedial writing		Remedial mathematics		Remedial reading		Remedial writing		Remedial mathematics	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Total	16.2	[15.1–17.2]	24.8	[23.4–26.2]	25.8	[24.4–27.2]	26.9	[25.0–28.8]	29.8	[28.0–31.7]	38.7	[36.8–40.6]
Sex												
Male	16.2	[14.5–18.0]	24.2	[22.0–26.5]	24.7	[22.7–26.7]	26.1	[23.4–28.7]	29.1	[26.2–32.0]	37.5	[34.7–40.3]
Female	16.1	[14.6–17.5]	25.2	[23.3–27.2]	26.8	[24.8–28.7]	27.6	[24.9–30.3]	30.5	[27.9–33.1]	39.8	[37.1–42.5]
Race/ethnicity ¹												
White	15.1	[13.8–16.5]	24.1	[22.3–25.8]	23.7	[21.9–25.4]	22.8	[20.6–25.1]	27.2	[24.7–29.7]	36.6	[34.1–39.2]
Black	16.2	[12.8–19.6]	19.9	[15.9–23.9]	29.7	[25.2–34.3]	34.5	[28.8–40.2]	30.6	[25.6–35.6]	40.5	[34.7–46.2]
Hispanic	22.2	[17.4–27.0]	30.9	[26.0–35.8]	36.2	[31.4–41.0]	32.1	[27.2–36.9]	34.5	[29.7–39.3]	44.0	[39.0–49.0]
Asian	21.4	[17.9–24.9]	33.5	[29.6–37.3]	28.4	[24.4–32.4]	40.1	[33.9–46.4]	44.2	[38.8–49.5]	46.4	[39.4–53.4]
American Indian	‡	[†]	‡	[†]	‡	[†]	‡	[†]	‡	[†]	‡	[†]
Two or more races	12.4	[7.5–17.3]	22.5	[14.7–30.3]	25.7	[18.0–33.5]	20.0	[10.4–29.6]	25.6	[15.5–35.7]	27.6	[17.7–37.4]
First language learned												
to speak as a child												
Non-English	27.0	[22.9–31.0]	36.5	[32.0–40.9]	31.8	[27.8–35.9]	37.0	[32.4–41.7]	41.4	[36.5–46.3]	46.7	[41.6–51.7]
English	15.0	[13.8–16.1]	23.5	[22.0–25.0]	25.2	[23.7–26.7]	24.8	[22.8–26.8]	27.5	[25.3–29.6]	37.1	[35.0–39.1]
Highest level of parents' education												
High school or less	20.6	[17.6–23.6]	27.8	[24.3–31.4]	32.9	[29.5–36.4]	30.4	[27.0–33.7]	32.7	[29.2–36.3]	40.5	[36.6–44.5]
Some college	17.3	[14.8–19.8]	25.9	[23.2–28.6]	27.5	[24.5–30.4]	25.0	[21.9–28.0]	27.8	[24.8–30.8]	36.9	[34.1–39.7]
College graduation	15.6	[13.5–17.6]	23.5	[21.1–25.8]	24.1	[21.7–26.5]	24.0	[19.8–28.1]	29.8	[25.4–34.2]	38.7	[34.0–43.4]
Graduate/professional degree	13.2	[11.1–15.2]	23.3	[20.5–26.1]	22.2	[19.6–24.7]	30.3	[24.4–36.2]	29.7	[23.9–35.6]	40.1	[34.3–46.0]

See notes at end of table.

National Center for Education Statistics

Table 9. Percentage of 2004 high school seniors taking remedial courses in postsecondary education, by the type of institution students first attended and selected student, family, and high school characteristics: 2006—Continued

Selected student, family, and high school characteristics	First attended 4-year institution						First attended 2-year institution					
	Remedial reading		Remedial writing		Remedial mathematics		Remedial reading		Remedial writing		Remedial mathematics	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
Family income in 2001												
\$35,000 or lower	19.8	[17.0–22.7]	27.2	[24.0–30.3]	31.0	[27.5–34.4]	31.1	[28.1–34.1]	32.5	[29.6–35.5]	40.9	[37.5–44.2]
\$35,001–75,000	15.1	[13.3–16.8]	22.6	[20.5–24.7]	26.1	[23.7–28.6]	25.6	[22.8–28.4]	28.7	[25.6–31.8]	37.5	[34.6–40.3]
More than \$75,000	15.4	[13.6–17.3]	25.7	[23.3–28.0]	23.0	[21.0–25.1]	22.9	[19.0–26.8]	27.8	[23.5–32.0]	37.6	[33.2–41.9]
Family composition												
Mother and father	16.3	[14.9–17.6]	25.7	[24.0–27.5]	24.6	[23.0–26.2]	24.9	[22.4–27.3]	29.1	[26.5–31.6]	37.7	[34.9–40.5]
Mother or father and guardian	15.1	[11.7–18.5]	20.7	[17.0–24.4]	26.6	[22.2–30.9]	29.3	[24.2–34.4]	27.5	[23.0–32.0]	41.8	[36.7–46.8]
Single parent (mother or father)	16.0	[13.2–18.8]	23.2	[20.2–26.2]	28.9	[25.4–32.4]	27.7	[23.6–31.9]	31.1	[26.7–35.4]	38.0	[33.5–42.5]
Other	20.0	[10.4–29.6]	29.6	[18.3–40.9]	37.0	[26.0–48.0]	41.1	[31.3–50.8]	43.4	[33.1–53.7]	43.6	[34.2–52.9]
Highest mathematics course taken												
Pre-algebra or below	25.1	[8.3–41.8]	31.1	[13.4–48.8]	38.2	[20.0–56.5]	41.3	[31.7–50.9]	39.0	[30.0–48.0]	49.5	[41.1–58.0]
Algebra I/geometry	17.0	[11.7–22.3]	23.5	[17.1–30.0]	41.3	[34.0–48.6]	30.6	[27.0–34.3]	34.6	[30.7–38.6]	44.1	[39.8–48.5]
Algebra II	21.2	[18.0–24.4]	30.9	[27.2–34.7]	36.2	[32.2–40.2]	28.0	[24.7–31.3]	29.6	[26.2–33.0]	40.8	[36.9–44.6]
Trigonometry/analytic geometry/statistics	15.9	[13.2–18.6]	25.1	[21.9–28.3]	25.2	[21.9–28.4]	25.4	[20.9–29.9]	29.1	[24.6–33.5]	34.2	[29.4–39.0]
Pre-calculus/calculus	13.9	[12.5–15.3]	22.4	[20.5–24.3]	20.4	[18.6–22.1]	17.7	[14.1–21.3]	21.1	[17.0–25.2]	25.2	[21.0–29.3]
Highest science course taken												
Low-level science	‡	[†]	‡	[†]	‡	[†]	36.2	[25.8–46.7]	36.2	[26.2–46.2]	42.7	[31.3–54.2]
Secondary physical science/basic biology	25.3	[8.5–42.1]	25.0	[8.9–41.2]	29.0	[15.1–43.0]	35.9	[21.8–50.1]	33.3	[22.9–43.7]	42.9	[31.5–54.2]
General biology	18.5	[14.4–22.6]	28.7	[23.6–33.7]	33.1	[28.5–37.8]	30.5	[27.1–33.8]	32.3	[28.8–35.8]	43.2	[39.4–47.0]
Chemistry I or physics I	17.1	[15.0–19.2]	25.7	[23.1–28.3]	27.6	[25.1–30.2]	26.7	[23.5–29.9]	30.0	[26.6–33.3]	38.1	[34.9–41.4]
Chemistry I and physics I	15.9	[13.7–18.0]	24.3	[21.6–27.0]	23.3	[20.6–26.0]	22.4	[18.0–26.9]	25.1	[19.2–30.9]	29.2	[23.9–34.4]
Chemistry II, physics II, or advanced biology	13.2	[11.2–15.2]	22.4	[19.7–25.0]	22.0	[19.3–24.7]	19.1	[14.5–23.7]	25.2	[20.3–30.1]	31.9	[26.3–37.5]

See notes at end of table.

National Center for Education Statistics

Table 9. Percentage of 2004 high school seniors taking remedial courses in postsecondary education, by the type of institution students first attended and selected student, family, and high school characteristics: 2006—Continued

Selected student, family, and high school characteristics	First attended 4-year institution						First attended 2-year institution					
	Remedial reading		Remedial writing		Remedial mathematics		Remedial reading		Remedial writing		Remedial mathematics	
	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI	Pct.	95% CI
High-level academic coursework												
Did not complete	17.5	[15.8–19.2]	27.0	[24.9–29.2]	29.4	[27.3–31.5]	28.5	[26.4–30.6]	31.4	[29.3–33.5]	39.8	[37.5–42.1]
Completed	14.3	[12.7–15.9]	22.3	[20.4–24.2]	21.6	[19.5–23.7]	19.6	[14.7–24.4]	21.1	[16.1–26.1]	29.6	[24.4–34.7]
Mathematics achievement test in senior year												
Lowest quarter	23.8	[18.8–28.8]	30.6	[25.5–35.8]	44.6	[38.7–50.5]	41.5	[37.4–45.5]	40.6	[36.8–44.5]	49.1	[45.4–52.8]
Middle two quarters	18.2	[16.5–19.9]	27.4	[25.2–29.5]	30.1	[27.8–32.4]	23.4	[21.3–25.6]	27.4	[25.1–29.7]	37.5	[35.1–39.9]
Highest quarter	12.6	[10.9–14.3]	21.0	[18.8–23.1]	18.0	[16.0–19.9]	11.3	[7.8–14.7]	17.3	[12.6–21.9]	21.7	[16.9–26.5]
High school GPA												
2.0 or lower	19.8	[13.0–26.6]	20.9	[13.9–27.9]	36.1	[26.9–45.3]	35.4	[30.1–40.8]	35.1	[30.0–40.1]	42.5	[36.8–48.1]
2.1–3.0	18.2	[16.0–20.5]	27.5	[24.5–30.5]	31.4	[28.4–34.3]	27.7	[24.9–30.6]	30.5	[27.8–33.3]	41.5	[38.6–44.4]
Higher than 3.0	14.8	[13.5–16.1]	23.7	[22.1–25.3]	22.6	[21.1–24.1]	22.0	[18.7–25.4]	26.2	[23.1–29.4]	30.5	[27.1–33.8]
Sector of high school last attended												
Public	16.3	[15.1–17.5]	24.6	[23.0–26.2]	26.0	[24.5–27.6]	27.3	[25.3–29.2]	29.8	[27.9–31.8]	39.0	[37.0–41.0]
Catholic	16.5	[13.7–19.3]	26.6	[23.1–30.2]	26.2	[22.8–29.5]	24.8	[18.5–31.0]	29.7	[23.3–36.1]	35.1	[29.1–41.1]
Other private	13.8	[11.3–16.3]	25.5	[22.2–28.9]	22.3	[18.3–26.4]	13.9	[9.4–18.5]	28.9	[20.8–36.9]	28.8	[19.9–37.7]
Urbanicity of high school last attended												
Urban	15.5	[13.8–17.2]	24.7	[22.4–27.0]	26.7	[24.2–29.3]	30.5	[26.5–34.6]	31.8	[27.8–35.7]	41.7	[37.6–45.7]
Suburban	16.0	[14.5–17.5]	25.3	[23.2–27.3]	25.5	[23.6–27.3]	26.5	[24.0–29.0]	29.5	[26.9–32.1]	36.6	[34.1–39.1]
Rural	18.0	[14.9–21.0]	23.6	[20.3–26.9]	25.1	[21.7–28.6]	22.7	[19.5–25.9]	27.8	[24.1–31.5]	39.3	[35.2–43.4]

† Not applicable.

‡ Reporting standards not met. (Too few cases for a reliable estimate.)

¹ Black includes African American, Hispanic includes Latino, Asian includes Native Hawaiian or other Pacific Islander, and American Indian includes Alaska Native. All race categories exclude individuals of Hispanic or Latino origin.

NOTE: See the Technical Notes for the definition of 95% CI (confidence interval). This table shows, for example, that 16.2 percent of high school seniors who first enrolled in a 4-year institution took remedial reading after they enrolled in postsecondary education. Estimates in this table are based on spring 2004 high school seniors who had enrolled in postsecondary education by 2006.

Postsecondary remedial courses are courses provided in reading, writing, mathematics, or other subjects for students lacking the skills necessary to perform college-level work required by the institution they attend. Remedial coursetaking was self-reported by students.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Education Longitudinal Study of 2002 (ELS:2002), "Base-year, 2002," "First Follow-up, 2004," and "Second Follow-up, 2006."

Glossary

This glossary includes descriptions of the variables used in the Issue Tables, all of which are found in the Education Longitudinal Study of 2002 (ELS:02) database. Variables can be downloaded from the ELS:02/06 CD, which includes the restricted-use base-year, first follow-up, and high school transcript data and the electronic codebook. Information on the procedure for obtaining this CD is available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008346>. The index below shows the variables organized by category. The glossary items are listed in alphabetical order in the text by variable name (displayed in bold letters along the right-hand column).

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Family income in 2001**BYINCOME**

This variable indicates the total family income parents earned from all sources in 2001. It was recoded into three levels of family income: \$35,000 or lower, \$35,001–75,000, more than \$75,000.

Family composition**F1FCOMP**

This variable indicates the student's family composition and was constructed using the reports of parents in 2002 and supplemented by the reports of the first follow-up student participants (freshening sample) in 2004. It was recoded into four categories: mother and father, mother or father and guardian, single parent (mother or father), and other.

Highest level of parent's education**F1PARED**

This variable indicates the highest level of education reported by either parent in 2002. If missing, parents' education reported by students in the 2004 first follow-up survey was used. This variable was recoded into four categories: high school or less, some college, college graduation, graduate/professional degree.

High-level academic coursework**F1RACADC**

This transcript-based dichotomous variable indicates whether a student completed high-level academic coursework in high school. High-level academic coursework consists of 4 years of English; 3 years of mathematics (including at least 1 year of a course higher than algebra II); 3 years of science (including at least 1 year of a course higher than biology); 3 years of social studies (including at least 1 year of U.S. or world history); and 2 years of a single non-English language. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Race/ethnicity**F1RACE**

This variable indicates the student's race/ethnicity and is recoded to contain the following categories: White, Black (including African American), Hispanic (including Latino), Asian (including Native Hawaiian or other Pacific Islander), American Indian (including Alaska Native), and two or more races. All race categories exclude individuals of Hispanic or Latino origin.

GPA for all academic courses**F1RAGP**

This transcript-based variable indicates a student's overall grade point average (GPA) based on all academic courses taken from 9th through 12th grade. Academic subjects include English, mathematics, science, social studies, non-English language, and fine arts.

Took any AP/IB course**F1RAPIB**

This transcript-based variable indicates the total number of Carnegie units a student earned in any Advanced Placement (AP) or International Baccalaureate (IB) course during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Took any AP/IB English**F1RAPENP**

This transcript-based variable indicates the total number of Carnegie units a student earned in AP/IB English during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Took any AP/IB mathematics **F1RAPMAP**

This transcript-based variable indicates the total number of Carnegie units a student earned in AP/IB mathematics during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Took any AP/IB non-English language **F1RAPNEP**

This transcript-based variable indicates the total number of Carnegie units a student earned in AP/IB non-English language courses during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Took any AP/IB science **F1RAPSCP**

This transcript-based variable indicates the total number of Carnegie units a student earned in AP/IB science during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Took any AP/IB social studies **F1RAPSOP**

This transcript-based variable indicates the total number of Carnegie units a student earned in AP/IB social studies during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Credits earned in English **F1RENG_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in English during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Credits earned in fine arts **F1RFIN_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in fine arts during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

GPA for all courses **F1RGP**

This transcript-based variable indicates a student's overall grade point average (GPA) based on all courses taken from 9th through 12th grade.

Credits earned in all academic subjects **F1RHTAC**

This transcript-based variable indicates the total number of Carnegie units a student earned in academic subjects during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Academic subjects include mathematics, science, English, social studies, fine arts, and non-English language. Academic course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Highest mathematics course taken **F1RMAPIP**

This transcript-based variable indicates the highest mathematics course taken by a student during high school. It was recoded into the following categories: pre-algebra or below, algebra I/geometry, algebra II, trigonometry/analytic geometry/statistics, and pre-calculus/calculus.

Credits earned in mathematics **F1RMAT_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in mathematics during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Credits earned in non-English language **F1RNON_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in a non-English language during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Sector **F1RSLCTR**

This transcript-based variable indicates the sector of high school that a student last attended in 2004 and contains three categories: public, Catholic, and other private school.

Urbanicity **F1RSLURB**

This transcript-based variable indicates the urbanicity of the high school that a student last attended in 2004 and contains three categories: urban (school is in a large or mid-size central city); suburban (school is in a large or small town or is on the urban fringe of a large or mid-size city); and rural (school is in a rural area). NCES used the Common Core of Data (CCD) locale codes for public schools.

Credits earned in science **F1RSCI_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in science during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

Highest science course taken **F1RSCPIP**

This transcript-based variable indicates the highest science course taken by a student during high school. It was recoded into the following categories: low-level science, secondary physical science/basic biology, general biology, chemistry I/physics I, chemistry I and physics I, chemistry II/physics II/advanced biology.

Credits earned in social studies **F1RSOC_C**

This transcript-based variable indicates the total number of Carnegie units a student earned in social studies during high school. A Carnegie unit is equivalent to a 1-year academic course taken one period a day, 5 days a week. Course classifications are based upon the 1998 revision of the Secondary School Taxonomy.

High school completion status as of August 2004 **F1RTROUT**

This transcript-based variable indicates a student's mode of leaving high school as of August 2004 and is based on the transcript from the last high school attended. The variable was recoded into five categories: graduates with a regular or honors high school diploma; graduates with an alternative credential (combining General Educational Development [GED] certificate, certificate of attendance, and diploma with special education adjustments); students who were still enrolled in school; dropouts (i.e., students who were enrolled as seniors in spring 2004 but did not complete high school and were not enrolled in school according to their last high school transcript); and students who did not have a known exit status including those who had transferred schools.

Took and planned to take AP test F1S21D
This dichotomous variable indicates whether a student has taken or is planning to take Advanced Placement (AP) tests in high school.

First language learned to speak as a child F1STLANG
This dichotomous variable indicates whether the first language a student learned to speak as a child was English or non-English.

Mathematics proficiency level 1 F1TX1MPP
Based on a mathematics achievement test students took in their senior year, this variable indicates a student's probability of proficiency at mathematics level 1: simple arithmetical operations on whole numbers (i.e., the probability that a student would be able to perform simple arithmetical operations on whole numbers in senior year).

Mathematics proficiency level 2 F1TX2MPP
Based on a mathematics achievement test students took in their senior year, this variable indicates a student's probability of proficiency at mathematics level 2: simple operations with decimals, fractions, powers, and roots (i.e., the probability that a student would be able to perform simple operations with decimals, fractions, powers, and roots in senior year).

Mathematics proficiency level 3 F1TX3MPP
Based on a mathematics achievement test students took in their senior year, this variable indicates a student's probability of proficiency at mathematics level 3: simple problem solving that requires the understanding of low-level mathematical concepts (i.e., the probability that a student would be able to perform simple problem solving that requires the understanding of low-level mathematical concepts in senior year).

Mathematics proficiency level 4 F1TX4MPP
Based on a mathematics achievement test students took in their senior year, this variable indicates a student's probability of proficiency at mathematics level 4: understanding of intermediate-level mathematical concepts and/or multi-step solutions to word problems (i.e., the probability that a student would be able to perform problem solving that requires understanding of intermediate-level mathematical concepts or multi-step solutions to word problems in senior year).

Mathematics proficiency level 5 F1TX5MPP
Based on a mathematics achievement test students took in their senior year, this variable indicates a student's probability of proficiency at mathematics level 5: complex multi-step word problem solving that requires advanced mathematics materials (i.e., the probability that a student would be able to perform complex multi-step word problem solving that requires advanced mathematics material in senior year).

Took remedial course to improve reading skills F2B16A
This dichotomous variable indicates whether students took remedial reading courses after enrolling in postsecondary education to improve their reading skills.

Took remedial course to improve writing skills F2B16B
This dichotomous variable indicates whether students took remedial writing courses after enrolling in postsecondary education to improve their writing skills.

Took remedial course to improve mathematics skills**F2B16C**

This dichotomous variable indicates whether students took remedial mathematics courses after enrolling in postsecondary education to improve their mathematics skills.

Sex**F2SEX**

This dichotomous variable indicates a student's sex: male or female.

Technical Notes

Confidence Intervals

The 95% confidence interval (CI) is a measure of the margin of error introduced by the survey sample. The 95% CI is defined as the interval around the sample estimate that, were the sample to be replicated numerous times, is likely to contain the true population parameter 95% of the time. For a random variable with a normal distribution, the 95% CI for a mean is $\bar{X} \pm t_p * \sigma_{\bar{x}}$, where \bar{X} is the sample mean, t_p is a Student or normal distribution constant for the 95% probability, and $\sigma_{\bar{x}}$ is the standard error of the mean. In comparing two estimates in the table, if the confidence intervals for the two estimates of the same parameter for different groups do not overlap, the user can assume that the two estimates are significantly different ($p < .05$). For a 95% CI, $t_p = 1.96$.

CIs are bound at the minimum and maximum possible values for percentages and at the minimum possible value for amounts. This means that the CIs are bound at zero at the lower bound for both percentages and amounts, and at 100 at the upper bound for percentages. This bounding may result in asymmetrical intervals. Bounding will be apparent for low estimates (i.e., near zero) or high estimates (i.e., near 100 percent).

Data Analysis

The Education Longitudinal Study of 2002 (ELS:02) sample design involved stratification, the disproportionate sampling of certain strata, and multistage probability sampling. The resulting statistics are more variable than they would have been if they had been based on data from a simple random sample of the same size. As a result, simple random sample techniques for estimating sampling errors cannot be applied to these data. Several methods such as Taylor Series approximations, Balanced Repeated Replication, and Jackknife Repeated Replication can be used to estimate correct standard errors. This set of Issue Tables used a SAS macro to call SUDAAN (an advanced statistical program that takes into account the complex sampling design) and applied the Taylor Series approximation method to generate appropriate standard errors for the complex sampling designs used by ELS:02.

Dataset Methodology

For an overview of the ELS:02 survey methodology, see the *Education Longitudinal Study of 2002 (ELS:02) Base-Year to Second Follow-up Public Use Data File Document* (NCES 2008-347), available at

<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008347>.

Quality of Estimates: Unit Response Rates and Bias Analysis

NCES Statistical Standard 4-4-1 states that “Any survey stage of data collection with a unit or item response rate less than 85 percent must be evaluated for the potential magnitude of nonresponse bias before the data or any analysis using the data may be released” (U.S. Department of Education 2003). From the selected sample, weighted item response rates were calculated for all variables used in this set of Issue Tables by dividing the weighted number of valid responses by the weighted population for which the item was applicable. All items included in this set of Issue Tables have a response rate of more than 85 percent.