

CHAPTER 6

International Comparisons of Education

This chapter offers a broad perspective on education across the nations of the world. It also provides an international context for examining the condition of education in the United States. Insights into the educational practices and outcomes of the United States are obtained by comparing them with those of other countries. The National Center for Education Statistics (NCES) carries out a variety of activities in order to provide statistical data for international comparisons of education.

This chapter presents data drawn from materials prepared by the United Nations Educational, Scientific, and Cultural Organization (UNESCO); the Organization for Economic Cooperation and Development (OECD); and the International Association for the Evaluation of Educational Achievement (IEA). Basic summary data on enrollments, teachers, enrollment ratios, and finances were synthesized from information appearing in *Education at a Glance*, published by OECD, and from data collected by UNESCO. Even though their tabulations are carefully prepared, international data users should be cautioned about the many problems of definition and reporting involved in the collection of data about the educational systems of the world (see the OECD and UNESCO entries in Appendix A: Guide to Sources).

Also presented in this chapter are data from the Trends in International Mathematics and Science Study (TIMSS), carried out under the aegis of IEA and supported by NCES. This survey was formerly known as the Third International Mathematics and Science Study. TIMSS, conducted every 4 years, is an assessment of fourth- and eighth-graders in mathematics and science. In 1995, TIMSS collected data for both grade 4 and grade 8. In 1999, TIMSS collected data for grade 8 only. In 2003 and 2007, data were again collected at both grade levels. TIMSS offers comparisons of mathematics and science achievement between years for those countries that participated in more than one of the grade 4 data collection years (1995, 2003, and 2007) or more than one of the grade 8 data collection years (1995, 1999, 2003, and 2007).

This chapter includes additional information on performance scores of 15-year-olds in the areas of reading, mathematics, and science literacy from the Program for

International Student Assessment (PISA). PISA also measures general, or cross-curricular, competencies such as learning strategies. While this study focuses on OECD countries, data from some non-OECD countries are also provided.

Further information on survey methodologies is in Appendix A: Guide to Sources and in the publications cited in the table source notes.

Population

Among the reporting OECD countries in 2007, Mexico had the largest percentage of its population made up of young people ages 5 to 14 (21 percent), followed by Turkey (19 percent) (table 405). Countries with relatively small percentages of people in this age group included Italy, Japan, and Spain (all at 9 percent) and the Czech Republic, Germany, Greece, Hungary, and Portugal (all at 10 percent). In the United States, the proportion of 5- to 14-year-olds was 13 percent, which was higher than in most of the other OECD countries.

Enrollments

In 2008, about 1.4 billion students were enrolled in schools around the world (table 403). Of these students, 696 million were in elementary-level programs, 526 million were in secondary programs, and 159 million were in post-secondary programs. From 2000 to 2008, enrollment changes varied from region to region. Changes in elementary enrollment ranged from increases of 41 percent in Africa, 2 percent in Asia, and 2 percent in Oceania to decreases of 11 percent in Europe, 3 percent in Central and South America, and 2 percent in Northern America (defined in UNESCO tabulations as including the United States, Canada, Greenland, Bermuda, St. Pierre, and Miquelon) (table F, table 403, and figure 26). Over the same period, enrollments generally increased at the secondary level. Secondary enrollment increased by 44 percent in Africa, 24 percent in Asia, 9 percent in Northern America, 8 percent in Central and South America, and 3 percent in Oceania, but decreased by 15 percent in Europe.

Table F. Population and enrollment at different levels in major areas of the world: 2000 and 2008

[In millions]

Area of the world	Population	Enrollment		
		Elementary	Secondary	Postsecondary
Africa				
2000.....	803.0	108.4	37.7	6.3
2008.....	969.4	153.2	54.4	9.3
Asia				
2000.....	3,650.2	398.8	259.0	40.6
2008.....	4,004.4	408.3	321.5	75.6
Europe				
2000.....	771.2	41.7	70.5	25.1
2008.....	777.5	37.0	59.9	33.0
Central and South America				
2000.....	520.4	69.7	54.7	11.1
2008.....	577.7	67.7	59.1	19.7
Northern America				
2000.....	313.4	27.4	25.1	14.4
2008.....	337.7	26.9	27.3	19.6
Oceania				
2000.....	30.4	3.1	3.4	1.0
2008.....	34.1	3.2	3.5	1.4

SOURCE: United Nations Educational, Scientific, and Cultural Organization, unpublished tabulations, and U.S. Department of Commerce, Census Bureau, International Data Base.

At the postsecondary level, enrollments increased in all major areas of the world from 2000 to 2008 (table F, table 403, and figure 26). Postsecondary enrollment rose by 86 percent in Asia, 77 percent in Central and South America, 47 percent in Africa, 36 percent in Northern America, 33 percent in Oceania, and 32 percent in Europe. These increases are due to both growth in the percentages of people attending postsecondary institutions and population increases.

In 2007, the reporting OECD country with the highest proportion of 22- to 25-year-olds enrolled in postsecondary education was Finland (39 percent), followed by Denmark and the Republic of Korea (both at 34 percent), Poland (31 percent), Sweden (30 percent), and Norway (29 percent) (table 406). The United States' proportion of enrolled 22- to 25-year-olds was 24 percent. Also in 2007, the reporting OECD country with the highest proportion of 18- to 21-year-olds enrolled in postsecondary education was the Republic of Korea (69 percent), followed by Greece (47 percent), the United States (45 percent), and Belgium (43 percent). Postsecondary enrollment varied among countries due partially to differences in how postsecondary education is defined and the age at which postsecondary education begins. For example, programs classified as postsecondary education in some countries may be classified as long-duration secondary education in other countries.

Achievement

On the 2007 TIMSS mathematics assessment, U.S. fourth-graders' average score (529) was higher than the average mathematics scores of fourth-graders in 23 of the 35 other participating educational systems, lower than the scores in 8 educational systems, and not measurably different from the scores in the remaining 4 educational systems

(table 412). (Average scale scores from the TIMSS assessment are based on a range of possible scores from 0 to 1,000. Most participating educational systems represent countries; however, some represent subnational entities with separate educational systems, such as Hong Kong SAR.¹) The educational systems that outperformed the United States in fourth-grade mathematics—namely, Chinese Taipei, England, Hong Kong SAR, Japan, Kazakhstan, Latvia, the Russian Federation, and Singapore—were all located in Asia or Europe. In 2007, U.S. eighth-graders' average mathematics score (508) was higher than the average scores of eighth-graders in 37 of the 47 other participating educational systems, lower than the scores in 5 educational systems, and not measurably different from the scores in the remaining 5 educational systems (table 413). All of the educational systems that outperformed the United States in eighth-grade mathematics were in Asia (Chinese Taipei, Hong Kong SAR, Japan, the Republic of Korea, and Singapore).

On the 2007 TIMSS science assessment, U.S. fourth-graders' average score (539) was higher than the average science scores of fourth-graders in 25 of the 35 other participating educational systems, lower than the scores in 4 educational systems (all of them located in Asia), and not measurably different from the scores in the remaining 6 educational systems (table 417). The educational systems that outperformed the United States in fourth-grade science were Chinese Taipei, Hong Kong SAR, Japan, and Singapore. In 2007, U.S. eighth-graders' average science score (520) was higher than the average scores of eighth-graders in 35 of the 47 other educational systems, lower than the scores in 9 educational systems (all located in Asia or Europe), and not measurably different from the scores in the remaining 3 educational systems (table 418). The educational systems that outperformed the United States in eighth-grade science were Chinese Taipei, the Czech Republic, England, Hungary, Japan, the Republic of Korea, the Russian Federation, Slovenia, and Singapore.

On the 2009 PISA, U.S. 15-year-olds' average score in reading literacy was 500, which was not measurably different from the OECD average of 493 (table 408). (Possible scores on PISA assessments range from 0 to 1,000.) The average reading literacy score in the United States was lower than the average score in 6 of the 33 other OECD countries, higher than the average score in 13 of the other OECD countries, and not measurably different from the average score in 14 of the OECD countries. Comparable reading literacy results were also reported for 31 non-OECD jurisdictions, 3 of which had higher average scores than the United States. In all participating OECD countries and non-OECD jurisdictions, girls outperformed boys in reading. The U.S. gender gap in reading (25 points) was smaller than the OECD average gap (39 points) and smaller than the gaps in 24 of the OECD countries and 21 of the non-OECD jurisdictions.

¹ Hong Kong SAR is a Special Administrative Region (SAR) of the People's Republic of China.

In mathematics literacy, U.S. 15-year-olds' average score of 487 on the 2009 PISA was lower than the OECD average score of 496. The average mathematics literacy score in the United States was lower than the average score in 17 of the 33 other OECD countries, higher than the average score in 5 of the other OECD countries, and not measurably different from the average score in 11 of the OECD countries. In 6 of the 31 non-OECD jurisdictions, the mathematics literacy scores of 15-year-olds were higher than the average score in the United States. In science literacy, the average score of 15-year-olds in the United States was not measurably different from the OECD average score. The U.S. average science literacy score was lower than the average score in 12 of the 33 other OECD countries, higher than the average score in 9 of the other OECD countries, and not measurably different from the average score in 12 of the OECD countries. In 6 of the 31 non-OECD jurisdictions, the science literacy scores of 15-year-olds were higher than the average score in the United States.

Educational Attainment

In 2008, the percentage of 25- to 64-year-olds who had completed high school varied among reporting OECD countries (table 420). Countries with relatively high percentages included the Czech Republic (91 percent), the Slovak Republic (90 percent), and the United States (89 percent). Relatively low percentages of 25- to 64-year-olds were high school completers in Portugal (28 percent), Turkey (30 percent), and Mexico (34 percent).

In 2008, OECD countries reporting relatively high percentages of 25- to 64-year-olds with a bachelor's or higher degree included Norway (34 percent), the United States (32 percent), and the Netherlands (30 percent) (table 421). Countries with relatively low percentages of 25- to 64-year-olds who had attained a bachelor's or higher degree included Austria (11 percent) and Turkey (12 percent).

Degrees

In OECD countries, the number of bachelor's degrees conferred per 100 people at the typical age at graduation in 2007 ranged from 15 in Chile, 17 in Turkey, and 18 in Mexico to 61 in Australia and 63 in Iceland (table 422 and figure 27). In the United States, the number was 37 degrees per 100 people. In 28 of the 30 OECD countries reporting data in 2007, the number was higher for women than for men.

The percentages of undergraduate degrees awarded in mathematics and science fields—including natural sciences, mathematics and computer science, and engineering—varied across the 30 reporting OECD countries in 2007 (table 423). Two of the reporting OECD countries awarded more than 30 percent of their undergraduate degrees in mathematics and science fields: the Republic of Korea (36 percent) and Portugal (33 percent). Four of the countries awarded 15

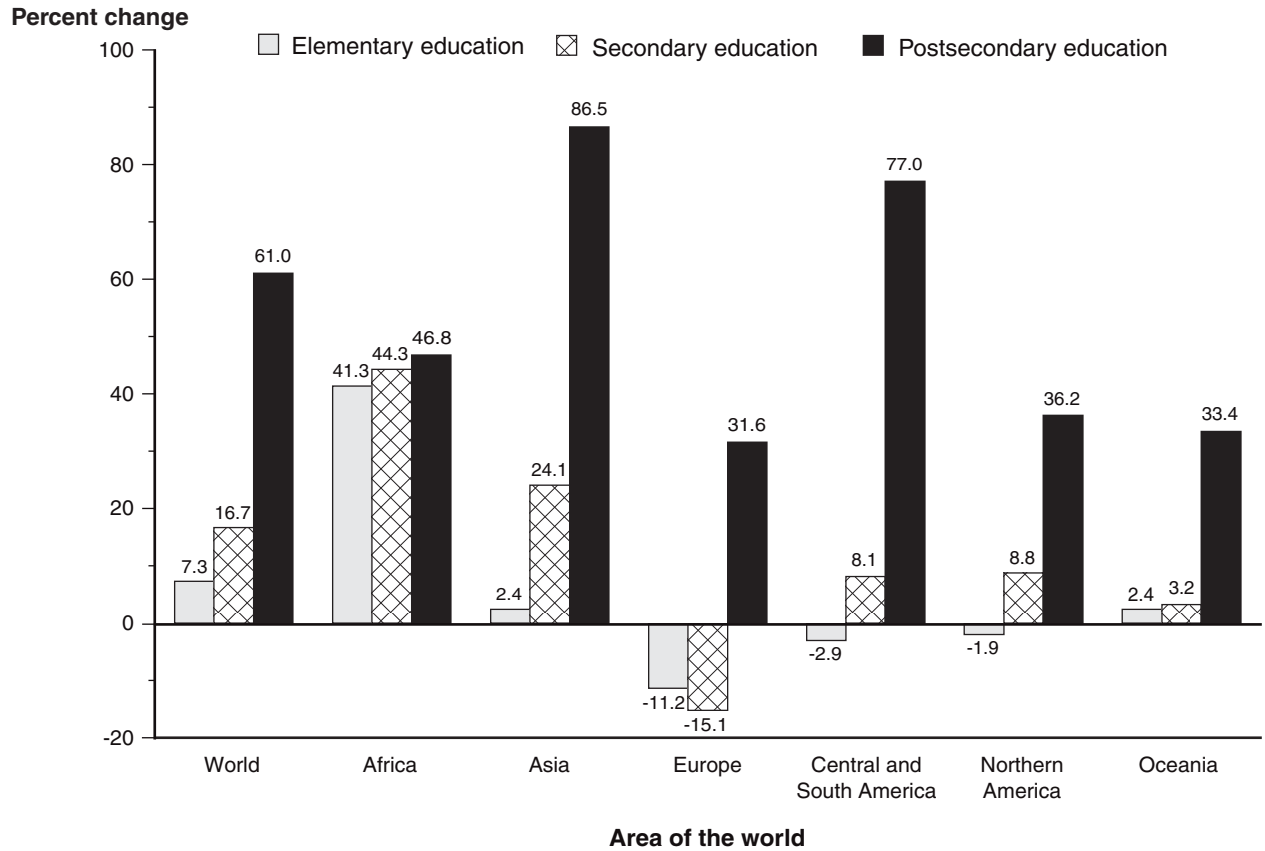
percent or less of their undergraduate degrees in mathematics and science fields: Norway and Iceland (13 percent each), the Netherlands (14 percent), and Hungary (15 percent). In 2007, the United States awarded 16 percent of its undergraduate degrees in mathematics and science fields, a lower percentage than most other reporting countries. The percentages of graduate degrees awarded in mathematics and science fields also ranged widely across countries in 2007 (table 424). Nine of the reporting OECD countries awarded more than 29 percent of their graduate degrees in mathematics and science fields: Japan (48 percent), Austria (47 percent), Portugal and the Republic of Korea (39 percent each), Finland (35 percent), Germany and the Slovak Republic (32 percent each), Switzerland (31 percent), and France (30 percent). Seven OECD countries awarded 15 percent or less of their graduate degrees in mathematics and science fields: Hungary (8 percent); Chile, Iceland, and Poland (11 percent each); the United States and Mexico (13 percent each); and the Netherlands (15 percent).

Finances

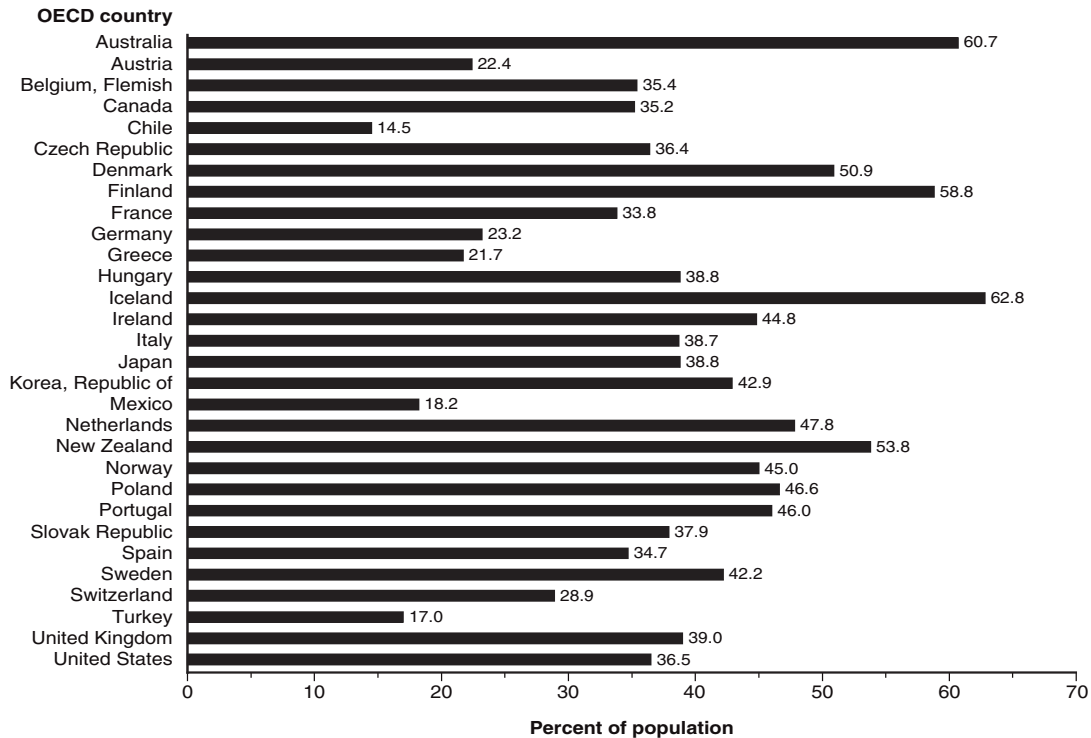
In 2007, per student expenditures at the elementary level of education were over \$8,500 in 7 of the 28 OECD countries reporting finance data (table 425). Specifically, Luxembourg spent \$14,000 per student at the elementary education level; the United States spent \$10,200; Norway spent \$9,900; Iceland spent \$9,600; Denmark and Switzerland each spent \$9,200; and Austria spent \$8,700. At the secondary level, six countries had expenditures of over \$10,000 per student: Luxembourg (\$17,900); Switzerland (\$14,000); Norway (\$12,000); the United States (\$11,300); Austria (\$10,600); and the Netherlands (\$10,200). At the higher education level, the following eight countries had expenditures of at least \$15,000 per student in 2007: the United States (\$27,000); Switzerland (\$20,900); Sweden (\$18,400); Norway (\$17,100); Denmark (\$16,500); the Netherlands (\$16,000); the United Kingdom (\$15,500); and Austria (\$15,000). These expenditures were adjusted to U.S. dollars using the purchasing-power-parity (PPP) index. This index is considered more stable and comparable than indexes using currency exchange rates.

A comparison of public direct expenditures on education as a percentage of gross domestic product (GDP) in reporting OECD countries shows that national investment in education in 2007 ranged from 3.1 percent in Chile, 3.3 percent in Japan, and 3.4 percent in the Slovak Republic to 7.0 percent in Iceland, 6.6 percent in Denmark, and 6.1 percent in Sweden (table 426 and figure 28). Among reporting OECD countries, the average public investment in education in 2007 was 4.8 percent of GDP. In the United States, the public expenditure on education as a percentage of GDP was 5.0 percent.

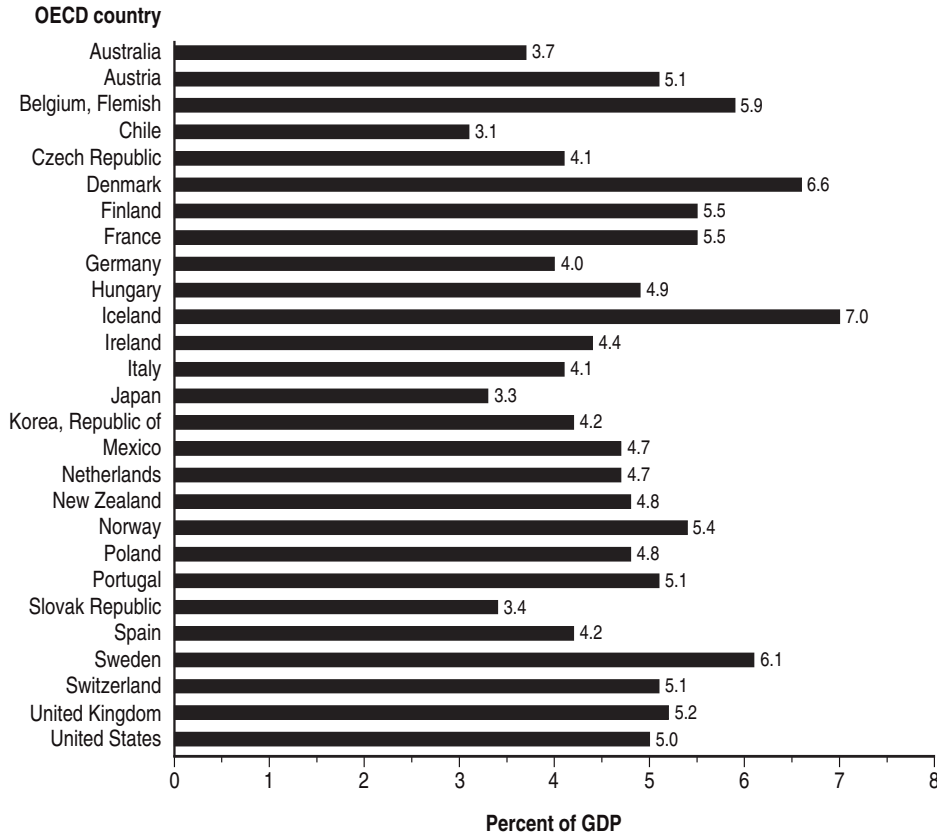
Figure 26. Percentage change in enrollment, by major areas of the world and level of education: 2000 to 2008



NOTE: Northern America includes Bermuda, Canada, Greenland, St. Pierre and Miquelon, and the United States of America. Hawaii is included in Northern America rather than Oceania. Central and South America includes Latin America and the Caribbean. Oceania includes American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and the Republic of Vanuatu. Data include imputed values for nonrespondent countries.
 SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), unpublished tabulations.

Figure 27. Bachelor's degree recipients as a percentage of the population of the typical ages of graduation, by country: 2007

NOTE: Includes graduates of any age.

SOURCE: Organization for Economic Cooperation and Development (OECD); *Education at a Glance, 2010*; and Online Education Database.**Figure 28. Public direct expenditures on education as a percentage of the gross domestic product (GDP), by country: 2007**

NOTE: Includes all OECD countries for which comparable data are available. Includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions, or households.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance, 2010*.

Table 403. Population, school enrollment, and teachers, by major areas of the world: Selected years, 1980 through 2008

[In thousands]

Year and selected characteristic	Major areas of the world						
	World total ¹	Africa ²	Asia ^{1,3}	Europe ⁴	Central and South America ⁵	Northern America ⁵	Oceania ⁶
1	2	3	4	5	6	7	8
1980							
Population, all ages ⁷	4,452,687	478,507	2,613,558	725,484	360,675	251,929	22,534
Enrollment, all levels	856,971	78,036	495,155	131,633	87,291	60,041	4,815
First (elementary) level ⁸	541,556	62,134	336,174	52,471	65,414	22,611	2,752
Second level ⁹	264,379	14,360	144,755	62,734	16,969	23,913	1,647
Third level ¹⁰	51,037	1,542	14,227	16,428	4,908	13,516	416
Teachers, all levels	38,285	2,338	19,641	8,225	3,730	4,079	272
First (elementary) level ⁸	19,044	1,661	10,874	2,541	2,260	1,580	129
Second level ⁹	15,398	584	7,554	4,387	1,083	1,679	112
Third level ¹⁰	3,843	94	1,213	1,297	387	820	31
1990							
Population, all ages ⁷	5,288,828	630,406	3,152,386	759,222	442,871	277,533	26,410
Enrollment, all levels	980,474	107,871	569,179	131,255	104,968	62,007	5,194
First (elementary) level ⁸	596,853	80,640	364,213	48,968	75,505	24,810	2,717
Second level ⁹	315,008	24,378	181,652	63,366	22,194	21,569	1,849
Third level ¹⁰	68,613	2,853	23,314	18,922	7,269	15,628	628
Teachers, all levels	47,105	3,791	24,455	9,398	5,131	4,000	330
First (elementary) level ⁸	22,626	2,390	12,692	2,812	3,006	1,582	143
Second level ⁹	19,380	1,241	9,947	5,076	1,520	1,449	146
Third level ¹⁰	5,100	160	1,816	1,509	605	969	41
1995							
Population, all ages ⁷	5,699,913	712,842	3,411,346	768,521	482,720	296,092	28,393
Enrollment, all levels	1,103,756	130,794	644,609	137,839	116,821	66,510	7,183
First (elementary) level ⁸	649,480	95,928	394,304	47,344	82,279	26,501	3,124
Second level ⁹	372,724	30,899	219,415	69,448	26,087	23,984	2,891
Third level ¹⁰	81,552	3,966	30,890	21,047	8,455	16,026	1,167
Teachers, all levels	52,047	4,486	26,955	10,113	5,784	4,269	439
First (elementary) level ⁸	24,356	2,811	13,499	2,863	3,374	1,649	161
Second level ⁹	21,746	1,471	11,273	5,561	1,696	1,528	217
Third level ¹⁰	5,945	205	2,183	1,689	714	1,092	61
2000							
Population, all ages ⁷	6,088,684	803,049	3,650,241	771,153	520,409	313,398	30,435
Enrollment, all levels	1,198,194	152,413	698,385	137,363	135,506	66,969	7,558
First (elementary) level ⁸	649,189	108,386	398,826	41,712	69,701	27,435	3,130
Second level ⁹	450,406	37,704	259,002	70,535	54,665	25,117	3,384
Third level ¹⁰	98,599	6,323	40,558	25,117	11,140	14,417	1,044
Teachers, all levels	56,771	4,956	29,771	10,421	6,518	4,651	455
First (elementary) level ⁸	25,575	2,879	15,255	2,737	2,743	1,806	155
Second level ⁹	24,543	1,790	12,085	5,813	2,924	1,684	247
Third level ¹⁰	6,653	287	2,430	1,871	852	1,161	53
2005							
Population, all ages ⁷	6,469,130	903,845	3,873,443	774,642	556,242	328,269	32,689
Enrollment, all levels	1,333,484	192,565	782,992	135,142	142,472	72,433	7,881
First (elementary) level ⁸	685,990	135,774	413,156	38,473	68,660	26,780	3,147
Second level ⁹	509,595	48,494	307,728	64,847	58,048	27,039	3,440
Third level ¹⁰	137,899	8,296	62,108	31,823	15,764	18,614	1,295
Teachers, all levels	63,971	5,995	34,215	10,617	7,679	4,991	475
First (elementary) level ⁸	26,918	3,515	15,789	2,658	2,931	1,865	160
Second level ⁹	28,042	2,155	14,587	5,730	3,542	1,777	250
Third level ¹⁰	9,011	325	3,839	2,228	1,205	1,350	65
2008							
Population, all ages ⁷	6,700,766	969,422	4,004,394	777,477	577,680	337,719	34,074
Enrollment, all levels	1,380,725	216,870	805,424	129,944	146,501	73,892	8,093
First (elementary) level ⁸	696,347	153,183	408,329	37,029	67,683	26,917	3,206
Second level ⁹	525,665	54,405	321,458	59,873	59,096	27,340	3,494
Third level ¹⁰	158,713	9,283	75,637	33,042	19,722	19,636	1,393
Teachers, all levels	67,606	6,584	36,880	10,467	7,877	5,311	487
First (elementary) level ⁸	27,845	3,763	16,451	2,617	2,918	1,932	163
Second level ⁹	29,651	2,458	16,097	5,495	3,483	1,862	255
Third level ¹⁰	10,110	362	4,332	2,355	1,475	1,518	69

¹Enrollment and teacher data exclude the Democratic People's Republic of Korea.

²Excludes Rodrigues and other small islands.

³Includes five countries of the former Union of Soviet Socialist Republics (U.S.S.R.), Arab states, and both the Asian and the European portions of Turkey.

⁴Includes all countries of the former U.S.S.R. except Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, and Turkmenistan.

⁵Northern America includes Bermuda, Canada, Greenland, St. Pierre and Miquelon, and the United States of America. Hawaii is included in Northern America rather than in Oceania. Central and South America includes Latin America and the Caribbean.

⁶Includes American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and the Republic of Vanuatu.

⁷Estimate of midyear population.

⁸First-level enrollment generally consists of elementary school, grades 1–6.

⁹Second-level enrollment includes general education, teacher training (at the second level), and technical and vocational education. This level generally corresponds to secondary education in the United States, grades 7–12.

¹⁰Third-level enrollment includes college and university enrollment, and technical and vocational education beyond the secondary school level.

NOTE: Detail may not sum to totals because of rounding. Data in this table include imputed values for nonrespondent countries. Some data have been revised from previously published figures.

SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), *Statistical Yearbook*, 1999, and unpublished tabulations; and U.S. Department of Commerce, Census Bureau, International Data Base, retrieved June 29, 2010, from <http://www.census.gov/ipc/www/idb/region.php>. (This table was prepared July 2010.)

Table 404. Selected population and enrollment statistics for countries with populations over 10 million in 2008, by continent: Selected years, 1990 through 2008

Country ¹	Midyear population (in millions)			Persons per square kilometer, 2008	First level ²						Second level ³						Third level ⁴					
	1990	2000	2008		Enrollment (in thousands)			Gross enrollment ratio ⁵			Enrollment (in thousands)			Gross enrollment ratio ⁵			Enrollment (in thousands)			Gross enrollment ratio ⁵		
					1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08
	2	3	4		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
World total⁶	5,289	6,089	6,701	53	596,853	649,189	696,347	99	99	107	315,008	450,406	525,665	52	60	67	68,613	98,599	158,713	14	19	26
Africa																						
Algeria ⁸	25	30	34	14	4,189	4,843	3,942	100	108	108	2,176	—	—	61	—	—	286	—	—	11	—	—
Angola.....	8	10	13	10	990	—	3,932	92	—	128	186	355	—	12	14	—	7	—	—	1	—	—
Burkina Faso.....	8	12	15	56	852	852	1,742	33	45	73	99	190	424	7	10	18	5	11	7	42	1	1
Cameroon.....	12	15	18	39	1,964	2,237	3,201	101	86	111	500	700	1,128	28	27	37	33	66	7	148	3	4
Chad.....	6	8	10	8	525	914	1,496	54	66	83	60	137	—	8	10	11	3	3	11,12	6	19	1
Cote d'Ivoire.....	12	17	20	64	1,415	1,944	2,356	73	74	74	361	620	—	22	23	7	30	13	—	—	—	6
Democratic Rep. of the Congo.....	39	52	67	29	4,562	—	9,973	60	—	90	1,097	—	3,129	13	—	21	13	—	—	35	14	—
Egypt ⁸	55	65	77	78	6,964	7,947	—	94	93	7	5,507	8,028	—	76	76	—	628	15,16	—	2,488	16	15,16
Ethiopia.....	48	64	83	83	2,466	5,847	12,742	33	55	98	866	1,195	3,696	14	14	33	34	68	—	265	1	1
Ghana ⁸	15	20	23	103	1,945	2,561	3,625	75	83	105	—	1,057	1,724	36	40	55	10	11	—	—	—	—
Kenya ⁸	23	31	38	67	5,392	5,035	6,869	95	95	112	618	1,909	3,107	24	10	39	58	35	11	89	—	—
Madagascar.....	12	16	20	35	1,571	2,208	4,020	103	104	152	323	—	945	18	10	—	30	36	—	32	62	3
Malawi.....	10	12	15	155	1,401	2,695	3,198	68	135	120	61	487	636	8	31	29	5	4	—	—	—	—
Mali.....	8	11	13	11	395	1,017	1,823	26	59	91	84	258	7	18	7	35	5	20	—	68	1	2
Morocco ⁸	24	28	31	69	2,484	3,670	3,879	67	92	107	1,194	1,541	—	35	38	—	256	276	—	401	11	9
Mozambique ⁸	13	18	21	27	1,260	2,544	4,904	67	75	114	160	124	512	8	6	21	5	12	—	12	—	—
Niger.....	8	11	15	12	369	579	1,389	29	32	58	77	106	232	7	7	11	—	—	—	13	—	—
Nigeria ⁸	97	123	146	161	13,607	19,151	—	91	95	—	2,908	4,290	—	25	25	7	208	11,17	—	4	11,17	—
Rwanda.....	7	8	10	423	1,100	1,432	2,190	70	105	151	70	130	288	8	11	22	2	18	—	12	7	45
Senegal.....	7	9	12	61	708	1,108	1,618	59	68	84	—	250	593	16	16	31	19	—	—	91	14	3
South Africa.....	38	45	49	40	6,952	7,445	—	122	106	—	2,742	4,142	—	74	86	—	439	19	—	—	—	13
Sudan ⁸	26	34	42	18	2,043	2,567	4,352	53	47	69	732	980	1,580	24	25	33	60	15	—	204	7	—
Tunisia.....	8	10	10	67	1,406	1,414	1,036	113	115	107	565	1,104	1,259	45	76	7	92	69	—	180	351	9
Uganda.....	17	24	31	159	2,470	6,559	7,964	74	127	120	245	547	1,145	13	16	25	18	56	—	108	1	3
United Republic of Tanzania.....	25	34	40	45	3,379	4,382	8,602	70	68	—	110	167	—	5	—	—	7	13	—	—	—	—
Zambia.....	8	10	13	17	1,461	1,590	2,909	99	82	119	190	276	646	24	24	46	15	25	—	2	2	7
Zimbabwe.....	10	12	11	29	2,116	—	—	116	100	—	661	844	—	50	43	—	49	49	—	—	—	5
Asia																						
Afghanistan ⁸	13	22	28	42	623	749	4,888	27	22	106	182	—	—	9	—	—	24	—	—	2	—	—
Bangladesh.....	112	132	151	1,162	11,940	—	16,002	14	—	92	3,593	10,329	—	19	44	—	434	727	—	4	5	—
Cambodia.....	9	12	14	79	1,330	2,248	2,341	121	102	116	264	351	—	32	18	—	7	22	—	123	1	2
China.....	1,148	1,264	1,317	138	122,414	—	105,951	125	—	113	52,386	81,488	101,448	49	61	76	3,822	7,364	26,692	3	8	23
India.....	838	1,006	1,141	384	99,118	113,613	—	97	94	—	54,180	71,031	—	44	10	—	4,951	9,404	—	6	10	—
Indonesia.....	182	214	238	131	29,754	28,202	29,498	115	113	7	10,965	14,264	7	18,315	44	56	7	1,773	13	—	4,420	9
Iran, Islamic Republic of.....	58	69	75	49	9,370	8,288	7,028	112	109	128	5,085	9,955	8,187	55	82	80	312	15	—	1,405	3,392	10
Iraq.....	18	23	28	65	3,328	—	—	111	94	—	1,024	1,224	—	47	10	37	—	—	—	170	289	12
Japan.....	124	127	127	349	9,373	7,529	7,166	100	100	102	11,026	8,782	7,356	97	101	101	2,899	3,982	3,939	30	13	48
Kazakhstan.....	16	15	15	6	1,197	1,208	956	87	97	108	2,144	2,003	1,778	98	93	92	537	370	—	720	40	28
Korea, North (DPR).....	20	21	23	187	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Korea, South (Republic of).....	43	47	48	499	4,869	4,030	3,680	105	101	105	4,560	3,959	3,959	90	97	97	1,691	3,003	3,204	39	78	98
Malaysia.....	18	23	27	83	2,456	3,026	—	94	97	—	1,456	2,205	—	56	65	—	121	549	—	7	26	—
Myanmar.....	40	47	52	80	5,385	4,858	5,110	106	103	117	1,281	2,268	—	23	38	53	196	13	—	—	—	4
Nepal ⁸	19	25	28	197	2,789	3,780	4,419	108	118	9	709	1,348	—	23	35	—	94	94	—	—	5	4
Pakistan.....	119	152	178	232	11,451	13,987	18,176	61	69	14	85	4,345	—	9,340	23	—	—	—	—	974	3	—
Philippines.....	65	81	96	322	10,427	—	13,411	111	—	110	4,034	—	6,509	73	—	82	1,709	—	2,651	28	—	29
Saudi Arabia.....	16	21	25	12	1,877	—	3,211	73	—	98	893	—	2,885	44	—	95	154	404	—	667	12	22
Sri Lanka ⁸	17	19	21	327	2,112	—	1,631	106	—	101	2,082	—	—	74	—	—	55	13,23	—	—	5	13,23
Syrian Arab Republic.....	13	16	21	116	2,452	2,775	2,356	108	104	124	914	1,069	2,626	52	41	74	222	—	—	—	—	18
Taiwan.....	20	22	23	711	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Thailand.....	55	62	66	130	6,957	6,101	5,565	99	94	93	2,230	—	4,729	30	—	74	1,156	1,900	2,430	19	12	37
Turkey.....	57	67	76	99	6,862	6,562	6,760	99	98	99	3,808	5,658	6,709	47	70	82	750	1,588	2,533	13	23	38
Uzbekistan.....	21	25	27	64	1,778	2,602	2,071	81	99	93	3,295	3,566	4,497	99	88	101	603	305	299	30	13	10
Vietnam.....	67	79	88	282	8,862	10,063	6,872	103	106	—	3,236	7,926	9,543	32	65	—	130	732	1,655	2	10	7
Yemen.....	12	17	22	42	2,679	2,464	3,282	79	74	7	85	212	1,151	7	—	—	53	13	—	—	4	13

See notes at end of table.

Table 404. Selected population and enrollment statistics for countries with populations over 10 million in 2008, by continent: Selected years, 1990 through 2008—Continued

Country ¹	Midyear population (in millions)			Persons per square kilo- meter, 2008	First level ²						Second level ³						Third level ⁴						
	1990	2000	2008		Enrollment (in thousands)			Gross enrollment ratio ⁵			Enrollment (in thousands)			Gross enrollment ratio ⁵			Enrollment (in thousands)			Gross enrollment ratio ⁵			
					1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	1989-90	1999-2000	2007-08	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Europe																							
Belgium.....	10	10	10	344	719	774	733	101	106	103	769	1,058	817	103	146	108	276	356	402	40	58	63	
Czech Republic.....	10	10	10	132	546	645	460	96	103	103	1,268	958	904	91	88	95	118 ²⁴	254	395	16 ²⁴	29	59	
France.....	58	61	64	100	4,149	3,885	4,139	108	105	110	5,522	5,929	5,899	99	109	113	1,699	2,015	2,165	40	53	55	
Germany ²⁵	79	82	82	236	3,431	3,656	3,236	101	106	105	7,398	8,307	7,907	98	99	102	2,049	—	—	34	—	—	
Greece.....	10	11	11	82	813	645	—	98	96	—	851	739	—	93	89	—	283	422	—	36	51	—	
Italy ⁶	57	58	58	198	3,056	2,836	—	103	103	—	5,118	4,404	—	83	93	—	1,452	1,770	—	32	49	—	
Netherlands ⁶	15	16	17	491	1,082	1,279	1,286	102	108	107	1,402	1,379	1,461	120	123	121	479	488	602	40	52	61	
Poland ⁶	38	39	39	127	5,189	3,319	—	98	99	—	1,888	3,988	—	81	100	—	545	1,580	—	22	50	—	
Portugal.....	10	10	11	117	1,020	811	—	123	124	—	670	831	—	67	107	—	186	374	—	23	48	—	
Romania ⁶	23	22	22	96	1,253	1,189	865	91	103	100	2,838	2,226	1,934	92	81	92	193	453	1,057	10	24	66	
Russian Federation.....	148	147	141	14	7,596	6,138	4,969	109	106	97	13,956	—	10,087	93	—	85	5,100	—	9,446	52	—	77	
Spain ⁶	39	41	46	92	2,820	2,540	2,625	109	105	107	4,755	3,246	3,069	104	111	120	1,222	1,829	1,781	37	59	71	
Ukraine ⁶	52	49	46	79	3,991	2,079	1,573	89	109	98	3,408	5,204	3,499	93	99	94	1,652	1,812	2,848	47	49	79	
United Kingdom ⁶	57	59	62	255	4,533	4,632	4,465	104	101	106	4,336	5,315	5,356	85	102	99	1,258	2,024	2,329	30	58	57	
North America																							
Canada.....	28	31	33	4	2,376	2,456	—	103	99	—	2,292	2,519	—	101	103	—	1,917	1,212	—	95	59	—	
Cuba.....	11	11	11	104	888	1,046	871	98	111	102	1,002	790	866	89	79	91	242	159	987	21	22	122	
Guatemala.....	9	11	13	121	1,165	1,909	2,501	78	104	114	295 ¹³	504	903	23 ¹³	38	57	70 ¹²	—	—	8 ¹²	—	—	
Mexico.....	85	100	110	57	14,402	14,766	14,699	114	111	114	6,704	9,094	11,444	53	73	90	1,311	1,963	2,623	15	20	27	
United States.....	250	282	304	33	22,429	24,973	24,677	102	100	99	19,270	22,594	24,693	93	93	94	13,819	13,203	18,248	75	68	83	
South America																							
Argentina.....	33	37	40	15	4,965	4,728	—	106	115	—	2,160	3,428	—	71	88	—	1,008 ¹³	1,767 ⁷	—	38 ¹³	53 ⁷	—	
Brazil.....	151	176	196	23	28,944	20,212	17,812	106	151	127	3,499	26,097	23,646	38	104	101	1,540 ²⁶	2,781	5,958	11 ²⁶	16	34	
Chile.....	13	15	16	22	1,991	1,799	—	100	100	—	720	1,391	—	73	83	—	262 ¹³	452	—	21 ¹³	37	—	
Colombia.....	33	39	43	39	4,247	5,221	5,286	102	119	120	2,378 ¹³	3,569	4,772	50 ¹³	72	91	487	934	1,487	13	24	35	
Ecuador.....	10	12	14	52	1,846	1,925	2,041 ⁷	116	115	118 ⁷	786 ²⁷	917	1,247 ⁷	55 ²⁷	57	76 ⁷	207	—	535	20	—	42	
Peru.....	22	26	29	23	3,855	4,338	3,855	118	122	109	1,698	2,374	2,609	67	85	89	678	—	—	30	—	—	
Venezuela.....	19	23	26	30	4,053	3,328	3,439	96	102	103	281	1,543	2,224	35	59	81	550	668	2,109	29	28	79	
Oceania																							
Australia ⁸	17	19	21	3	1,583	1,906	1,978	108	101	106	1,278	2,589	2,538	82	162	149	485 ²⁸	845	1,118	36 ²⁸	65	77	

—Not available.

#Rounds to zero.

¹Selection based on total population for midyear 2008.

²First-level enrollment consists of elementary school, typically corresponding to grades 1–6 in the United States.

³Second-level enrollment includes general education, teacher training (at the second level), and technical and vocational education. This level generally corresponds to secondary education in the United States, grades 7–12.

⁴Third-level enrollment includes college and university enrollment, and technical and vocational education beyond the secondary school level.

⁵Data represent the total enrollment of all ages in the school level divided by the population of the specific age groups that correspond to the school level. Adjustments have been made for the varying lengths of first and second level programs. Ratios may exceed 100 because some countries have many students from outside the normal age range.

⁶Enrollment totals and ratios exclude Democratic People's Republic of Korea. Data do not include adult education or special education provided outside regular schools.

⁷Estimated by the UNESCO Institute for Statistics.

⁸Classification or data coverage of levels has been revised. Data by level may not be comparable over time.

⁹Policy change in 1999–2000: introduction of free universal primary education.

¹⁰General education enrollment only. Excludes teacher training and vocational education enrollments.

¹¹Excludes nonuniversity institutions (such as teacher training colleges and technical colleges) and excludes distance-learning universities.

¹²Data for 1992–93.

¹³Data for 1991–92.

¹⁴National estimation.

¹⁵Excludes private institutions.

¹⁶Data refer to universities and exclude Al Azhar.

¹⁷Data for 1993–94.

¹⁸Data for 1985–86.

¹⁹Not including the former Independent States of Transke, Bophuthatswana, Venda, and Ciskei.

²⁰Estimated.

²¹Data refer to government aided and maintained schools only.

²²Includes preprimary education.

²³Excludes some nonuniversity institutions.

²⁴Includes full-time students only.

²⁵Data include both former East and West Germany.

²⁶Not including former ISCED level 7.

²⁷Including vocational education.

²⁸Data do not include Vocational Education and Training Institutes (VETS).

NOTE: Some data have been revised from previously published figures.

SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), *Statistical Yearbook, 1999*, unpublished tabulations; and tables 3B, 5, and 14, retrieved June 30, 2010, from <http://stats.uis.unesco.org/unesco/ReportFolders/ReportFolders.aspx>. U.S. Department of Commerce, Census Bureau, International Data Base, retrieved June 30, 2010, from <http://www.census.gov/ipc/www/icb/region.php>. (This table was prepared July 2010.)

Table 405. School-age populations as a percentage of total population, by age group and country: Selected years, 1985 through 2007

Country	5- to 14-year-olds as a percent of total population												15- to 19-year-olds as a percent of total population												
	1985 ¹	1990 ¹	1995 ¹	1996	1998	1999	2002	2003	2004	2005	2006	2007	1985 ²	1990 ²	1995 ²	1996	1998	1999	2002	2003	2004	2005	2006	2007	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
OECD average³	—	—	12	13	13	13	13	13	13	13	12	12	—	—	6	7	7	7	7	7	7	7	7	7	7
Australia.....	14	13	13	14	14	14	14	14	14	13	13	13	7	6	6	7	7	7	7	7	7	7	7	7	7
Austria.....	—	—	—	—	—	—	12	12	11	11	11	—	—	—	—	—	—	6	6	6	6	6	6	6	6
Belgium.....	11	11	11	12	12	12	12	12	12	12	12	11	6	5	5	6	6	6	6	6	6	6	6	6	6
Canada.....	13	12	12	13	14	14	—	13	13	13	13	12	6	5	5	7	7	7	—	7	7	7	7	7	7
Chile.....	—	—	—	—	—	—	19	18	18	18	17	16	—	—	—	—	—	—	9	9	9	9	9	9	9
Czech Republic.....	(⁴)	(⁴)	12	13	13	12	12	11	11	10	10	10	(⁴)	(⁴)	6	8	8	7	7	7	7	7	6	6	6
Denmark.....	12	10	10	11	11	12	12	13	13	13	13	13	6	6	5	6	6	5	5	5	5	5	6	6	6
Finland.....	11	12	11	13	13	13	12	12	12	12	12	12	6	5	5	6	6	6	6	6	6	6	6	6	6
France.....	13	12	12	13	13	13	12	12	12	12	12	12	6	6	5	7	7	7	7	6	6	7	6	6	6
Germany ⁵	9	9	10	11	11	11	11	10	10	10	10	10	6	4	4	5	6	6	6	6	6	6	6	6	6
Greece.....	—	—	11	12	11	11	10	10	10	10	10	10	—	5	6	7	7	7	6	6	6	6	5	5	5
Hungary.....	—	—	—	—	—	—	12	11	11	11	11	10	—	—	—	—	—	—	6	6	6	6	6	6	6
Iceland.....	16	15	14	16	16	16	16	16	15	15	15	14	7	7	6	8	8	8	7	7	7	7	7	7	7
Ireland.....	18	18	15	17	16	15	14	14	14	14	13	13	8	8	8	9	9	9	8	8	8	7	7	7	7
Italy.....	13	10	9	10	10	10	10	10	10	9	9	9	6	6	5	6	6	5	5	5	5	5	5	5	5
Japan.....	14	12	10	11	11	10	10	10	9	9	9	9	6	7	5	7	6	6	6	6	5	5	5	5	5
Korea, Republic of.....	—	—	14	15	14	14	14	14	14	14	14	13	—	—	7	9	9	8	7	7	6	7	7	7	7
Luxembourg.....	10	10	11	12	12	12	13	13	13	13	13	12	5	4	4	5	6	6	6	6	6	6	6	6	6
Mexico.....	—	—	—	—	—	—	22	22	22	21	21	21	—	—	—	—	—	—	10	10	10	10	10	10	10
Netherlands.....	12	11	11	12	12	12	12	12	12	12	12	12	7	5	5	6	6	6	6	6	6	6	6	6	6
New Zealand.....	15	13	13	15	15	15	15	15	15	15	14	14	7	7	6	7	7	7	7	7	7	7	8	8	8
Norway.....	13	11	11	13	13	13	13	14	14	13	13	13	6	6	5	6	6	6	6	6	6	6	6	6	7
Poland.....	—	—	—	—	—	—	13	13	12	12	12	11	—	—	—	—	—	—	9	8	8	8	8	8	7
Portugal.....	—	—	—	—	—	—	10	11	10	10	10	10	—	—	—	—	—	—	6	6	6	6	6	6	6
Slovak Republic.....	(⁴)	(⁴)	—	—	—	—	13	13	13	12	12	11	(⁴)	(⁴)	—	—	—	—	8	8	8	8	8	8	7
Spain.....	15	13	10	11	11	10	10	10	10	9	9	9	7	7	6	8	7	7	6	6	6	5	5	5	5
Sweden.....	11	10	11	12	13	13	13	13	13	12	12	11	5	5	5	6	6	6	6	6	6	6	6	7	7
Switzerland.....	11	10	10	12	12	12	12	12	11	11	11	11	6	5	5	6	6	6	6	6	6	6	6	6	6
Turkey.....	21	21	20	20	21	21	—	19	19	19	19	19	9	9	9	11	11	11	—	9	9	9	9	9	9
United Kingdom.....	11	11	12	13	13	13	13	13	13	12	12	12	6	5	5	6	6	6	6	6	6	7	7	7	7
United States.....	13	13	13	15	14	15	15	14	14	14	14	13	6	5	6	7	7	7	7	7	7	7	7	7	7
Reporting partner countries																									
Brazil.....	—	—	—	—	—	—	20	21	20	19	19	18	—	—	—	—	—	—	11	11	10	10	10	10	9
Estonia.....	(⁴)	(⁴)	—	—	—	—	—	—	—	11	10	10	(⁴)	(⁴)	—	—	—	—	—	—	—	8	8	8	8
Israel.....	—	—	—	—	—	—	18	18	18	18	18	18	—	—	—	—	—	—	9	9	8	8	8	8	8
Russian Federation.....	(⁴)	(⁴)	14	—	—	—	14	12	12	11	10	10	(⁴)	(⁴)	—	—	—	—	8	9	9	9	9	8	8
Slovenia.....	(⁴)	(⁴)	—	—	—	—	—	—	—	—	10	10	(⁴)	(⁴)	—	—	—	—	—	—	—	6	6	6	6

—Not available.

¹Data are for the 5- to 13-year-old population.²Data are for the 14- to 17-year-old population.³Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.⁴Country did not exist in its current form in the given year.⁵Data for 1985 are for the former West Germany.SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, selected years, 1987 through 2001; and Online Education Database, retrieved June 10, 2010, from <http://stats.oecd.org/Index.aspx>. (This table was prepared June 2010.)

Table 406. Percentage of population enrolled in secondary and postsecondary education, by age group and country: Selected years, 1985 through 2007

Country	Secondary education, 2007							Postsecondary education (total tertiary education)														
	16 years old	17 years old	18 to 21 years old				18 to 21 years old					22 to 25 years old					26 to 29 years old					
			Total	18 years old	19 years old	20 years old	21 years old	1985	1990	1999	2005	2007	1985	1990	1999	2005	2007	1985	1990	1999	2005	2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
OECD average¹	91	83	25	53	27	14	9	—	—	25	29	28	—	—	18	22	23	—	—	8	9	9
Australia.....	93	79	25	38	25	20	17	—	—	31	34	34	—	—	15	21	22	—	—	8	10	10
Austria.....	91	76	19	46	19	8	4	—	—	15	16	17	—	—	20	20	22	—	—	12	9	11
Belgium.....	102	100	23	47	23	13	10	25	—	42	43	43	7	—	15	19	19	2	—	3	6	6
Canada.....	—	—	—	—	—	—	—	—	—	27	—	22	—	—	18	—	15	—	—	7	—	5
Chile.....	91	86	12	31	10	3	2	—	—	—	—	29	—	—	—	—	21	—	—	—	—	8
Czech Republic.....	100	96	32	82	37	7	3	(²)	(²)	17	23	24	(²)	(²)	12	21	24	(²)	(²)	4	6	7
Denmark.....	91	84	49	80	57	34	24	7	7	8	10	11	16	18	27	34	34	8	9	15	20	20
Finland.....	96	95	40	93	33	17	16	9	14	23	24	23	17	21	35	40	39	8	10	18	20	21
France.....	95	88	22	49	24	10	4	19	25	35	36	36	10	12	20	20	19	4	4	5	5	5
Germany ³	95	91	39	82	40	20	14	9	9	11	13	13	—	16	19	23	23	9	10	11	13	12
Greece.....	89	75	13	18	10	6	18	—	—	54	65	47	—	—	7	18	26	—	—	2	8	11
Hungary.....	95	92	25	62	22	11	6	—	—	20	29	30	—	—	14	23	24	—	—	5	9	9
Iceland.....	93	85	51	74	67	36	23	—	—	7	12	11	—	—	21	28	28	—	—	9	16	15
Ireland.....	101	79	9	31	4	1	1	—	21	33	38	38	—	—	11	13	13	—	—	3	5	6
Italy.....	89	83	26	75	20	6	3	—	—	22	29	27	—	—	21	23	25	—	—	7	8	8
Japan.....	96	95	1	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Korea, Republic of.....	91	92	1	5	#	#	#	—	—	51	65	69	—	—	26	32	34	—	—	6	6	7
Luxembourg.....	83	79	37	68	43	24	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mexico.....	58	44	13	18	28	3	2	—	—	12	16	17	—	—	8	9	9	—	—	1	3	3
Netherlands.....	98	86	37	61	42	28	16	14	18	26	29	31	12	13	20	24	25	6	5	5	7	7
New Zealand.....	87	70	13	25	12	9	7	—	21	29	34	34	—	15	14	23	22	—	—	8	11	11
Norway.....	95	93	41	88	42	20	11	9	14	19	19	20	14	17	28	30	29	6	8	12	14	14
Poland.....	97	95	35	92	36	12	5	—	—	21	31	33	—	—	21	30	31	—	—	5	6	6
Portugal.....	90	80	22	45	25	13	8	6	—	25	27	27	5	—	17	21	20	2	—	6	8	8
Slovak Republic.....	94	90	30	80	36	7	2	(²)	(²)	—	22	25	(²)	(²)	—	16	19	(²)	(²)	—	5	6
Spain.....	93	83	21	41	23	13	8	15	21	32	34	34	11	14	24	22	22	4	5	8	9	8
Sweden.....	99	97	39	93	28	17	13	8	9	16	17	16	11	11	25	32	30	7	6	12	16	15
Switzerland.....	91	87	39	78	47	20	9	6	6	10	12	12	11	12	17	20	21	5	6	9	10	11
Turkey.....	60	37	6	23	—	—	—	—	7	14	20	24	—	4	9	11	13	—	2	4	4	5
United Kingdom.....	90	74	12	26	10	6	5	15	16	29	28	29	7	11	12	13	13	—	—	6	7	7
United States.....	93	81	8	26	4	#	#	37	41	44	45	45	15	17	18	23	24	8	9	11	11	10
Reporting partner countries																						
Brazil.....	87	77	33	55	35	23	17	—	—	—	10	12	—	—	—	9	11	—	—	—	5	6
Estonia.....	96	89	27	73	21	8	4	(²)	(²)	—	32	31	(²)	(²)	—	22	23	(²)	(²)	—	12	11
Israel.....	94	90	6	20	2	1	#	—	—	—	12	12	—	—	—	25	26	—	—	—	15	18
Russian Federation.....	73	36	5	13	5	1	1	(²)	(²)	—	41	—	(²)	(²)	—	26	—	(²)	(²)	—	—	—
Slovenia.....	98	96	27	84	26	—	—	(²)	(²)	—	37	40	(²)	(²)	—	35	38	(²)	(²)	—	11	11

—Not available.

#Rounds to zero.

¹Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.²Country did not exist in its current form in the given year.³Data for 1985 are for the former West Germany.

NOTE: Data refer to programs classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 3, level 5A (first and second award), level 5B, and level 6. ISCED level 3 corresponds to secondary education in the United States. ISCED levels 5A (first and second award), 5B, and 6

together make up total tertiary education, which corresponds to 2-year and 4-year college undergraduate and graduate programs in the United States. Includes both full-time and part-time students. Some increases in enrollment rates may be due to more complete reporting by countries. Enrollment figures may not be directly comparable due to differing definitions of postsecondary (tertiary) education and the age at which it begins. Differences in reference dates between enrollment and population data can result in enrollment rates that exceed 100 percent.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, selected years, 1987 through 2001; and Online Education Database, retrieved June 10, 2010, from <http://stats.oecd.org/Index.aspx>. (This table was prepared June 2010.)

Table 407. Pupils per teacher in public and private elementary and secondary schools, by level of education and country: Selected years, 1985 through 2008

Country	Elementary								Junior high school (lower secondary)								Senior high school (upper secondary)							
	1985	1990	2000	2004	2005	2006	2007	2008	1985	1990	2000	2004	2005	2006	2007	2008	1985	1990	2000	2004	2005	2006	2007	2008
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
OECD average¹	—	—	17.7	17.3	17.1	16.5	16.3	16.1	—	—	—	15.0	14.2	13.8	13.6	13.5	—	—	13.7	13.2	13.5	13.1	13.1	13.2
Australia.....	13.8 ²	—	17.3	16.4	16.2	16.0	15.9	15.8	—	—	—	—	—	—	—	—	3.2	—	—	12.3 ^{3,4}	12.1 ^{3,4}	12.2 ^{3,4}	12.1 ^{3,4}	12.0 ^{3,4}
Austria.....	11.3	11.6	—	15.1	14.1	13.9	13.6	12.9	9.2	7.7	—	10.4	10.6	10.4	10.3	9.9	15.2	12.4	—	11.0	11.3	11.3	11.0	10.5
Belgium.....	—	—	15.0 ⁵	12.9	12.8	12.6	12.6 ⁶	12.6 ⁶	—	—	—	10.6	9.4	9.4	9.2 ⁶	8.1 ⁶	—	—	9.7 ^{4,7}	9.2 ⁷	9.9 ⁷	10.2 ⁷	10.2 ^{6,7}	10.8 ^{6,7}
Canada.....	18.1	17.1	18.1	—	—	—	—	—	16.0	15.5	18.1	—	—	—	—	—	16.0	15.3	19.5	—	—	—	16.4 ^{2,4,5,8}	16.3 ^{2,3,4}
Chile.....	—	—	—	27.1	25.9	25.5	24.7	24.1	—	—	—	44.3	25.9	25.5	24.7	24.1	—	—	—	26.8	26.6	26.3	25.7	25.2
Czech Republic.....	(⁹)	(⁹)	19.7	17.9	17.5	17.3	18.7	18.1	(⁹)	(⁹)	14.7	13.5	13.5	12.3	12.3	11.8	(⁹)	(⁹)	11.5	12.6	12.8	11.9	12.3	12.2
Denmark.....	12.7	11.2	10.4	—	—	—	—	—	10.2	9.3	11.4	11.3 ⁸	11.9 ⁸	11.4 ⁸	11.2 ⁸	10.1 ⁸	14.8	13.3	14.4	—	—	—	—	—
Finland.....	—	—	16.9	16.3	15.9	15.0	15.0	14.4	—	—	10.7	10.0	10.0	9.7	9.9	10.6	—	—	17.0 ^{7,10}	16.2 ^{7,10}	18.0 ^{7,10}	15.8 ^{7,10}	15.9 ⁷	15.9 ⁷
France.....	—	—	19.8	19.4	19.4	19.3 ⁶	19.7 ⁶	19.9 ⁶	—	—	14.7	14.1	14.2	14.1 ⁶	14.3 ⁶	14.6 ⁶	—	—	10.4	10.3	10.3	9.7 ⁶	9.6 ⁶	9.4 ⁶
Germany ¹¹	20.7	20.3	19.8	18.8	18.8	18.7	18.3	18.0	16.9	14.6	15.7	15.6	15.5	15.5	15.2	15.0	23.7	21.0	13.9	13.9	14.0	14.3	14.3	14.0
Greece.....	—	—	13.4	11.3	11.1	10.6	10.1	10.1 ¹²	—	—	10.8	8.2	7.9	8.0	7.7	7.7 ¹²	—	—	10.5	8.4	8.8	8.3	7.3	7.3 ¹²
Hungary.....	—	—	10.9	10.7	10.6	10.4	10.2	10.6	—	—	10.9	10.2	10.4	10.2	10.2	10.9	—	—	11.4 ⁷	12.3	12.2	12.3	12.1	12.3
Iceland.....	—	—	—	—	—	—	—	—	—	—	12.7 ⁸	11.4 ⁸	11.3 ⁸	10.6 ⁸	10.4 ⁸	10.0 ⁸	—	—	9.7	11.1	10.8 ⁷	10.8 ⁷	10.2 ⁷	10.6 ⁷
Ireland.....	—	—	21.5	18.3	17.9	19.4	17.9	17.8	—	—	—	—	—	—	—	—	7.2	8.3	15.9 ^{4,7}	14.3 ^{4,7}	15.5 ^{4,7}	14.6 ^{4,7}	13.2 ^{2,4,7}	12.8 ^{2,4,7}
Italy.....	12.8	10.7	11.0	10.7	10.6	10.7	10.5	10.6 ²	9.6	8.5	10.4	10.3	10.1	10.3	9.4	9.7 ²	10.8	10.7	10.2	11.5	11.0	11.0	10.8	11.8 ²
Japan.....	—	20.8 ²	20.9	19.6	19.4	19.2	19.0	18.8	—	18.6	16.8	15.3	15.1	14.9	14.8	14.7	—	16.2	14.0	13.2 ⁷	13.0 ⁷	12.7 ⁷	12.5 ⁷	12.3 ⁷
Korea, Republic of..	—	—	32.1	29.1	28.0	26.7	25.6	24.1	—	21.5	20.4	20.8	20.8	20.5	20.2	20.2	—	—	20.9	15.9	16.0	15.9	16.2	16.5
Luxembourg.....	—	—	15.9 ²	—	—	11.3 ²	11.2 ²	12.1 ²	—	—	—	—	—	—	—	—	—	—	9.2 ^{2,4}	9.0 ^{2,4}	9.0 ^{2,4}	9.0 ^{2,4,7}	9.0 ^{2,4}	9.1 ^{2,4}
Mexico.....	—	—	27.2	28.5	28.3	28.0	28.0	28.0	—	—	34.8	33.7	33.7	33.4	33.3	33.9	—	—	26.5	25.2	25.8	25.4	25.7	25.8
Netherlands.....	20.2	19.2	16.8 ⁵	15.9 ⁵	15.9 ⁵	15.3 ⁵	15.6 ⁵	15.8 ^{2,5}	12.7	12.4	—	—	—	—	—	—	—	—	17.1 ⁴	15.8 ⁴	16.2 ⁴	15.8 ^{4,7}	15.7 ^{4,7}	15.8 ^{2,4,7}
New Zealand.....	20.1	19.1	20.6	16.7	18.1	17.7	17.5	17.1	—	—	19.9	17.3	16.8	16.6	16.2	16.2	—	—	13.1	12.5	12.9	12.7	13.3	12.8
Norway.....	—	—	12.4	11.9 ²	—	10.9 ²	11.0 ²	10.8 ²	—	—	9.9	10.5 ²	—	10.2 ²	10.2 ²	10.1 ²	—	—	9.7	9.6 ^{2,7}	—	9.7 ^{2,7}	9.8 ^{2,7}	9.9 ^{2,7}
Poland.....	—	—	12.7	—	11.7	11.5	11.0	10.5	—	—	11.5	—	12.7	12.6	12.4	12.9	—	—	16.9	—	12.9	12.8	12.2	12.2
Portugal.....	—	—	12.1	11.1	10.8	10.6	11.8	11.3	—	—	10.4	10.0	8.2	8.3	7.9	8.1	—	—	7.9	7.3	8.0	7.5 ⁷	8.4 ⁷	7.3 ⁷
Slovak Republic.....	(⁹)	(⁹)	18.3	18.9	18.9	18.6	17.9	18.6	(⁹)	(⁹)	13.5	13.9	14.1	13.7	13.9	14.5	(⁹)	(⁹)	12.8	14.2	14.3	14.2	14.1	15.1
Spain.....	26.8	21.2	14.9	14.3	14.3	14.2	13.6	13.1	21.4	18.8	—	12.9	12.5	12.5	11.7	10.3	15.3	14.8	11.9 ⁴	8.0	8.1	7.8	7.7	8.7
Sweden.....	11.6	10.6	12.8	12.1	12.2	12.1	12.3	12.2	10.8	10.2	12.8	11.9	12.0	11.4	11.5	11.4	13.1	11.9	15.2	14.0	14.0	13.8	13.6	14.7
Switzerland.....	—	—	—	14.3 ²	14.6 ²	15.1 ²	14.8 ²	15.4 ²	—	—	—	11.2 ²	11.7 ²	12.3 ²	12.3 ²	12.1 ²	—	—	—	11.1 ²	10.5 ^{2,3}	10.5 ^{2,3}	10.6 ^{2,3}	10.4 ^{2,3}
Turkey.....	31.1	30.6	30.5	26.5	25.8	26.7	26.2	24.4	41.3	48.4	—	†	†	†	†	†	11.0	12.1	14.0	16.9	16.2	15.8	16.2	17.0
United Kingdom.....	19.7	22.0	21.2	21.1	20.7	19.8	19.4	20.2	—	18.5	17.6 ³	17.1	17.0	16.7	16.7	15.0	11.1	13.9	12.5 ³	12.3 ^{3,7}	11.8 ^{3,7}	11.6 ^{3,7}	11.3 ^{3,7}	12.4 ⁷
United States.....	17.0	15.6	15.8	15.0	14.9	14.6	14.6	14.3	16.5	15.9	16.3	15.2	15.1	14.7	14.7	14.8	16.2	15.8	14.1	16.0	16.0	15.7	15.6	15.6
Reporting partner countries																								
Brazil.....	—	—	—	23.5	22.9	22.5	25.8	24.5	—	—	—	18.8	18.1	17.6	22.3	21.2	—	—	—	18.3	17.6	17.0	20.2	18.4
Estonia.....	(⁹)	(⁹)	—	—	—	14.1	14.4	16.4	(⁹)	(⁹)	—	—	—	—	12.3	11.4	16.0	(⁹)	(⁹)	—	—	13.3	12.2 ⁷	12.4 ⁷
Israel.....	—	—	—	16.9	17.3	17.2	16.4	16.3	—	—	—	14.1	13.4	14.1	12.4	12.2	—	—	—	12.2	13.4	13.2	11.8	10.9
Russian Federation.	(⁹)	(⁹)	—	17.0	—	—	17.0 ²	17.3 ^{2,13}	(⁹)	(⁹)	—	—	—	—	—	—	(⁹)	(⁹)	—	10.3 ^{4,7}	11.2 ^{7,14}	9.9 ^{4,7,14}	8.8 ^{4,7,13}	8.7 ^{4,7,13}
Slovenia.....	(⁹)	(⁹)	—	—	15.0	14.9	15.2	15.8	(⁹)	(⁹)	—	—	11.1	10.2	9.5	8.9	(⁹)	(⁹)	—	—	14.6	14.0 ⁷	13.9 ⁷	13.7 ⁷

—Not available.

†Not applicable. This level of education does not exist within the national education structure; students in the age group normally associated with this education level are reported in other levels.

¹Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.²Public schools only.³Includes only general programs.⁴Includes junior high school data.⁵Includes preprimary data.⁶Excludes independent private institutions.⁷Includes postsecondary non-higher-education.⁸Includes elementary school data.⁹Country did not exist in its current form in the given year.¹⁰Includes tertiary type B education (i.e., occupation-specific education corresponding to that offered at the associate's degree level in the United States).¹¹Data for 1985 are for the former West Germany.¹²Data included for Greece 2008 are from 2007.¹³Excludes part-time personnel in public institutions.¹⁴Excludes general programs.

NOTE: In the U.S. data in this table, elementary school corresponds to grades 1 through 6, junior high school corresponds to grades 7 through 9, and senior high school corresponds to grades 10 through 12.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database; *Annual National Accounts, Vol. 1, 1997*; and *Education at a Glance, 2002 through 2010*. (This table was prepared June 2010).

Table 408. Average reading literacy, mathematics literacy, and science literacy scores of 15-year-old students, by sex and country: 2009

Country or other jurisdiction	Reading literacy			Mathematics literacy			Science literacy		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1	2	3	4	5	6	7	8	9	10
OECD total¹	492 (1.2)	475 (1.4)	508 (1.2)	488 (1.2)	496 (1.3)	481 (1.3)	496 (1.2)	498 (1.5)	494 (1.3)
OECD average²	493 (0.5)	474 (0.6)	513 (0.5)	496 (0.5)	501 (0.6)	490 (0.6)	501 (0.5)	501 (0.6)	501 (0.6)
Australia	515 (2.3)	496 (2.9)	533 (2.6)	514 (2.5)	519 (3.0)	509 (2.8)	527 (2.5)	527 (3.1)	528 (2.8)
Austria	470 (2.9)	449 (3.8)	490 (4.0)	496 (2.7)	506 (3.4)	486 (4.0)	494 (3.2)	498 (4.2)	490 (4.4)
Belgium	506 (2.3)	493 (3.4)	520 (2.9)	515 (2.3)	526 (3.3)	504 (3.0)	507 (2.5)	510 (3.6)	503 (3.2)
Canada	524 (1.5)	507 (1.8)	542 (1.7)	527 (1.6)	533 (2.0)	521 (1.7)	529 (1.6)	531 (1.9)	526 (1.9)
Chile	449 (3.1)	439 (3.9)	461 (3.6)	421 (3.1)	431 (3.7)	410 (3.6)	447 (2.9)	452 (3.5)	443 (3.5)
Czech Republic	478 (2.9)	456 (3.7)	504 (3.0)	493 (2.8)	495 (3.9)	490 (3.0)	500 (3.0)	498 (4.0)	503 (3.2)
Denmark	495 (2.1)	480 (2.5)	509 (2.5)	503 (2.6)	511 (3.0)	495 (2.9)	499 (2.5)	505 (3.0)	494 (2.9)
Estonia	501 (2.6)	480 (2.9)	524 (2.8)	512 (2.6)	516 (2.9)	508 (2.9)	528 (2.7)	527 (3.1)	528 (3.1)
Finland	536 (2.3)	508 (2.6)	563 (2.4)	541 (2.2)	542 (2.5)	539 (2.5)	554 (2.3)	546 (2.7)	562 (2.6)
France	496 (3.4)	475 (4.3)	515 (3.4)	497 (3.1)	505 (3.8)	489 (3.4)	498 (3.6)	500 (4.6)	497 (3.5)
Germany	497 (2.7)	478 (3.6)	518 (2.9)	513 (2.9)	520 (3.6)	505 (3.3)	520 (2.8)	523 (3.7)	518 (3.3)
Greece	483 (4.3)	459 (5.5)	506 (3.5)	466 (3.9)	473 (5.4)	459 (3.3)	470 (4.0)	465 (5.1)	475 (3.7)
Hungary	494 (3.2)	475 (3.9)	513 (3.6)	490 (3.5)	496 (4.2)	484 (3.9)	503 (3.1)	503 (3.8)	503 (3.5)
Iceland	500 (1.4)	478 (2.1)	522 (1.9)	507 (1.4)	508 (2.0)	505 (1.9)	496 (1.4)	496 (2.1)	495 (2.0)
Ireland	496 (3.0)	476 (4.2)	515 (3.1)	487 (2.5)	491 (3.4)	483 (3.0)	508 (3.3)	507 (4.3)	509 (3.8)
Israel	474 (3.6)	452 (5.2)	495 (3.4)	447 (3.3)	451 (4.7)	443 (3.3)	455 (3.1)	453 (4.4)	456 (3.2)
Italy	486 (1.6)	464 (2.3)	510 (1.9)	483 (1.9)	490 (2.3)	475 (2.2)	489 (1.8)	488 (2.5)	490 (2.0)
Japan	520 (3.5)	501 (5.6)	540 (3.7)	529 (3.3)	534 (5.3)	524 (3.9)	539 (3.4)	534 (5.5)	545 (3.9)
Korea, Republic of	539 (3.5)	523 (4.9)	558 (3.8)	546 (4.0)	548 (6.2)	544 (4.5)	538 (3.4)	537 (5.0)	539 (4.2)
Luxembourg	472 (1.3)	453 (1.9)	492 (1.5)	489 (1.2)	499 (2.0)	479 (1.3)	484 (1.2)	487 (2.0)	480 (1.6)
Mexico	425 (2.0)	413 (2.1)	438 (2.1)	419 (1.8)	425 (2.1)	412 (1.9)	416 (1.8)	419 (2.0)	413 (1.9)
Netherlands	508 (5.1)	496 (5.1)	521 (5.3)	526 (4.7)	534 (4.8)	517 (5.1)	522 (5.4)	524 (5.3)	520 (5.9)
New Zealand	521 (2.4)	499 (3.6)	544 (2.6)	519 (2.3)	523 (3.2)	515 (2.9)	532 (2.6)	529 (4.0)	535 (2.9)
Norway	503 (2.6)	480 (3.0)	527 (2.9)	498 (2.4)	500 (2.7)	495 (2.8)	500 (2.6)	498 (3.0)	502 (2.8)
Poland	500 (2.6)	476 (2.8)	525 (2.9)	495 (2.8)	497 (3.0)	493 (3.2)	508 (2.4)	505 (2.7)	511 (2.8)
Portugal	489 (3.1)	470 (3.5)	508 (2.9)	487 (2.9)	493 (3.3)	481 (3.1)	493 (2.9)	491 (3.4)	495 (3.0)
Slovak Republic	477 (2.5)	452 (3.5)	503 (2.8)	497 (3.1)	498 (3.7)	495 (3.4)	490 (3.0)	490 (4.0)	491 (3.2)
Slovenia	483 (1.0)	456 (1.6)	511 (1.4)	501 (1.2)	502 (1.8)	501 (1.7)	512 (1.1)	505 (1.7)	519 (1.6)
Spain	481 (2.0)	467 (2.2)	496 (2.2)	483 (2.1)	493 (2.3)	474 (2.5)	488 (2.1)	492 (2.5)	485 (2.3)
Sweden	497 (2.9)	475 (3.2)	521 (3.1)	494 (2.9)	493 (3.1)	495 (3.3)	495 (2.7)	493 (3.0)	497 (3.2)
Switzerland	501 (2.4)	481 (2.9)	520 (2.7)	534 (3.3)	544 (3.7)	524 (3.4)	517 (2.8)	520 (3.2)	512 (3.0)
Turkey	464 (3.5)	443 (3.7)	486 (4.1)	445 (4.4)	451 (4.6)	440 (5.6)	454 (3.6)	448 (3.8)	460 (4.5)
United Kingdom	494 (2.3)	481 (3.5)	507 (2.9)	492 (2.4)	503 (3.2)	482 (3.3)	514 (2.5)	519 (3.6)	509 (3.2)
United States	500 (3.7)	488 (4.2)	513 (3.8)	487 (3.6)	497 (4.0)	477 (3.8)	502 (3.6)	509 (4.2)	495 (3.7)
Reporting partner countries									
Albania	385 (4.0)	355 (5.1)	417 (3.9)	377 (4.0)	372 (4.7)	383 (4.2)	391 (3.9)	377 (4.8)	406 (4.0)
Argentina	398 (4.6)	379 (5.1)	415 (4.9)	388 (4.1)	394 (4.5)	383 (4.4)	401 (4.6)	397 (5.1)	404 (4.8)
Azerbaijan	362 (3.3)	350 (3.7)	374 (3.3)	431 (2.8)	435 (3.1)	427 (3.0)	373 (3.1)	370 (3.4)	377 (3.2)
Brazil	412 (2.7)	397 (2.9)	425 (2.8)	386 (2.4)	394 (2.4)	379 (2.6)	405 (2.4)	407 (2.6)	404 (2.6)
Bulgaria	429 (6.7)	400 (7.3)	461 (5.8)	428 (5.9)	426 (6.2)	430 (6.0)	439 (5.9)	430 (6.8)	450 (5.3)
Colombia	413 (3.7)	408 (4.5)	418 (4.0)	381 (3.2)	398 (4.0)	366 (3.3)	402 (3.6)	413 (4.3)	392 (3.7)
Croatia	476 (2.9)	452 (3.4)	503 (3.7)	460 (3.1)	465 (3.6)	454 (3.9)	486 (2.8)	482 (3.5)	491 (3.9)
Dubai (UAE)	459 (1.1)	435 (1.7)	485 (1.5)	453 (1.1)	454 (1.5)	451 (1.6)	466 (1.2)	453 (1.8)	480 (1.6)
Hong Kong-China	533 (2.1)	518 (3.3)	550 (2.8)	555 (2.7)	561 (4.2)	547 (3.4)	549 (2.8)	550 (3.8)	548 (3.4)
Indonesia	402 (3.7)	383 (3.8)	420 (3.9)	371 (3.7)	371 (4.1)	372 (4.0)	383 (3.8)	378 (4.2)	387 (4.0)
Jordan	405 (3.3)	377 (4.7)	434 (4.1)	387 (3.7)	386 (5.1)	387 (5.2)	415 (3.5)	398 (5.5)	433 (4.2)
Kazakhstan	390 (3.1)	369 (3.2)	412 (3.4)	405 (3.0)	405 (3.1)	405 (3.3)	400 (3.1)	396 (3.4)	405 (3.5)
Kyrgyzstan	314 (3.2)	287 (3.8)	340 (3.2)	331 (2.9)	328 (3.4)	334 (2.8)	330 (2.9)	318 (3.7)	340 (2.9)
Latvia	484 (3.0)	460 (3.4)	507 (3.1)	482 (3.1)	483 (3.5)	481 (3.4)	494 (3.1)	490 (3.7)	497 (3.2)
Liechtenstein	499 (2.8)	484 (4.5)	516 (4.5)	536 (4.1)	547 (5.2)	523 (5.9)	520 (3.4)	527 (5.0)	511 (5.1)
Lithuania	468 (2.4)	439 (2.8)	498 (2.6)	477 (2.6)	474 (3.1)	480 (3.0)	491 (2.9)	483 (3.5)	500 (2.9)
Macao-China	487 (0.9)	470 (1.3)	504 (1.2)	525 (0.9)	531 (1.3)	520 (1.4)	511 (1.0)	510 (1.3)	512 (1.2)
Montenegro	408 (1.7)	382 (2.1)	434 (2.1)	403 (2.0)	408 (2.2)	396 (2.4)	401 (2.0)	395 (2.4)	408 (2.6)
Panama	371 (6.5)	354 (7.0)	387 (7.3)	360 (5.2)	362 (5.6)	357 (6.1)	376 (5.7)	375 (6.4)	377 (6.6)
Peru	370 (4.0)	359 (4.2)	381 (4.9)	365 (4.0)	374 (4.6)	356 (4.4)	369 (3.5)	372 (3.7)	367 (4.4)
Qatar	372 (0.8)	347 (1.3)	397 (1.0)	368 (0.7)	366 (1.2)	371 (1.0)	379 (0.9)	366 (1.4)	393 (1.0)
Romania	424 (4.1)	403 (4.6)	445 (4.3)	427 (3.4)	429 (3.9)	425 (3.8)	428 (3.4)	423 (3.9)	433 (3.7)
Russian Federation	459 (3.3)	437 (3.6)	482 (3.4)	468 (3.3)	469 (3.7)	467 (3.5)	478 (3.3)	477 (3.7)	480 (3.5)
Serbia	442 (2.4)	422 (3.3)	462 (2.5)	442 (2.9)	448 (3.8)	437 (3.2)	443 (2.4)	442 (3.1)	443 (2.8)
Shanghai-China	556 (2.4)	536 (3.0)	576 (2.3)	600 (2.8)	599 (3.7)	601 (3.1)	575 (2.3)	574 (3.1)	575 (2.3)
Singapore	526 (1.1)	511 (1.7)	542 (1.5)	562 (1.4)	565 (1.9)	559 (2.0)	542 (1.4)	541 (1.8)	542 (1.8)
Chinese Taipei	495 (2.6)	477 (3.7)	514 (3.6)	543 (3.4)	546 (4.8)	541 (4.8)	520 (2.6)	520 (3.7)	521 (4.0)
Thailand	421 (2.6)	400 (3.3)	438 (3.1)	419 (3.2)	421 (3.9)	417 (3.8)	425 (3.0)	418 (3.8)	431 (3.4)
Trinidad and Tobago	416 (1.2)	387 (1.9)	445 (1.6)	414 (1.3)	410 (2.3)	418 (1.5)	410 (1.2)	401 (2.1)	419 (1.4)
Tunisia	404 (2.9)	387 (3.2)	418 (3.0)	371 (3.0)	378 (3.3)	366 (3.2)	401 (2.7)	401 (2.9)	400 (2.8)
Uruguay	426 (2.6)	404 (3.2)	445 (2.8)	427 (2.6)	433 (3.0)	421 (2.9)	427 (2.6)	427 (3.2)	428 (2.6)

¹Illustrates how a country compares with the OECD area as a whole. Computed taking the OECD countries as a single entity, to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

²Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Standard errors appear in parentheses.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)

Table 409. Mean scores and percentage distribution of 15-year-old students scoring at each reading literacy proficiency level, by country: 2009

Country or other jurisdiction	Mean score		Percentage distribution at levels of proficiency ¹															
			Below level 1		Level 1b		Level 1a		Level 2		Level 3		Level 4		Level 5		Level 6	
1	2		3		4		5		6		7		8		9		10	
OECD total ²	492	(1.2)	1.1	(0.07)	4.8	(0.15)	13.8	(0.26)	24.4	(0.30)	27.9	(0.32)	19.9	(0.31)	7.0	(0.24)	1.0	(0.13)
OECD average ³	493	(0.5)	1.1	(0.05)	4.6	(0.08)	13.1	(0.13)	24.0	(0.16)	28.9	(0.16)	20.7	(0.16)	6.8	(0.10)	0.8	(0.03)
Australia.....	515	(2.3)	1.0	(0.12)	3.3	(0.27)	10.0	(0.39)	20.4	(0.57)	28.5	(0.73)	24.1	(0.65)	10.7	(0.54)	2.1	(0.31)
Austria.....	470	(2.9)	1.9	(0.42)	8.1	(0.81)	17.5	(0.99)	24.1	(0.96)	26.0	(0.92)	17.4	(0.85)	4.5	(0.45)	0.4	(0.13)
Belgium.....	506	(2.3)	1.1	(0.25)	4.7	(0.46)	11.9	(0.64)	20.3	(0.67)	25.8	(0.85)	24.9	(0.75)	10.1	(0.51)	1.1	(0.19)
Canada.....	524	(1.5)	0.4	(0.06)	2.0	(0.19)	7.9	(0.34)	20.2	(0.61)	30.0	(0.69)	26.8	(0.58)	11.0	(0.41)	1.8	(0.17)
Chile.....	449	(3.1)	1.3	(0.24)	7.4	(0.77)	21.9	(0.95)	33.2	(1.11)	25.6	(1.15)	9.3	(0.71)	1.3	(0.25)	#	(t)
Czech Republic.....	478	(2.9)	0.8	(0.29)	5.5	(0.60)	16.8	(1.06)	27.4	(0.99)	27.0	(1.00)	17.4	(0.97)	4.7	(0.45)	0.4	(0.12)
Denmark.....	495	(2.1)	0.4	(0.11)	3.1	(0.30)	11.7	(0.72)	26.0	(0.94)	33.1	(1.21)	20.9	(1.11)	4.4	(0.45)	0.3	(0.12)
Estonia.....	501	(2.6)	0.3	(0.13)	2.4	(0.38)	10.6	(0.86)	25.6	(1.26)	33.8	(1.00)	21.2	(0.81)	5.4	(0.52)	0.6	(0.20)
Finland.....	536	(2.3)	0.2	(0.07)	1.5	(0.20)	6.4	(0.44)	16.7	(0.62)	30.1	(0.85)	30.6	(0.88)	12.9	(0.74)	1.6	(0.24)
France.....	496	(3.4)	2.3	(0.52)	5.6	(0.53)	11.8	(0.84)	21.1	(1.03)	27.2	(1.04)	22.4	(1.07)	8.5	(0.83)	1.1	(0.25)
Germany.....	497	(2.7)	0.8	(0.23)	4.4	(0.46)	13.3	(0.79)	22.2	(0.87)	28.8	(1.09)	22.8	(0.88)	7.0	(0.57)	0.6	(0.15)
Greece.....	483	(4.3)	1.4	(0.38)	5.6	(0.86)	14.3	(1.07)	25.6	(1.06)	29.3	(1.20)	18.2	(0.98)	5.0	(0.54)	0.6	(0.17)
Hungary.....	494	(3.2)	0.6	(0.23)	4.7	(0.82)	12.3	(0.95)	23.8	(1.24)	31.0	(1.25)	21.6	(1.11)	5.8	(0.67)	0.3	(0.13)
Iceland.....	500	(1.4)	1.1	(0.18)	4.2	(0.43)	11.5	(0.71)	22.2	(0.80)	30.6	(0.94)	21.9	(0.84)	7.5	(0.62)	1.0	(0.19)
Ireland.....	496	(3.0)	1.5	(0.36)	3.9	(0.47)	11.8	(0.71)	23.3	(1.00)	30.6	(0.91)	21.9	(0.91)	6.3	(0.50)	0.7	(0.22)
Israel.....	474	(3.6)	3.9	(0.66)	8.0	(0.66)	14.7	(0.63)	22.5	(0.96)	25.5	(0.95)	18.1	(0.73)	6.4	(0.54)	1.0	(0.16)
Italy.....	486	(1.6)	1.4	(0.23)	5.2	(0.32)	14.4	(0.45)	24.0	(0.54)	28.9	(0.55)	20.2	(0.48)	5.4	(0.30)	0.4	(0.10)
Japan.....	520	(3.5)	1.3	(0.36)	3.4	(0.49)	8.9	(0.66)	18.0	(0.84)	28.0	(0.88)	27.0	(0.95)	11.5	(0.71)	1.9	(0.36)
Korea, Republic of.....	539	(3.5)	0.2	(0.15)	0.9	(0.30)	4.7	(0.63)	15.4	(1.01)	33.0	(1.23)	32.9	(1.42)	11.9	(0.96)	1.0	(0.20)
Luxembourg.....	472	(1.3)	3.1	(0.27)	7.3	(0.45)	15.7	(0.59)	24.0	(0.70)	27.0	(0.65)	17.3	(0.61)	5.2	(0.43)	0.5	(0.15)
Mexico.....	425	(2.0)	3.2	(0.34)	11.4	(0.48)	25.5	(0.56)	33.0	(0.57)	21.2	(0.59)	5.3	(0.39)	0.4	(0.07)	#	(t)
Netherlands.....	508	(5.1)	0.1	(0.05)	1.8	(0.31)	12.5	(1.36)	24.7	(1.53)	27.6	(1.24)	23.5	(1.66)	9.1	(1.00)	0.7	(0.22)
New Zealand.....	521	(2.4)	0.9	(0.22)	3.2	(0.45)	10.2	(0.58)	19.3	(0.75)	25.8	(0.76)	24.8	(0.81)	12.9	(0.76)	2.9	(0.38)
Norway.....	503	(2.6)	0.5	(0.14)	3.4	(0.39)	11.0	(0.66)	23.6	(0.84)	30.9	(0.86)	22.1	(1.16)	7.6	(0.87)	0.8	(0.20)
Poland.....	500	(2.6)	0.6	(0.15)	3.1	(0.35)	11.3	(0.66)	24.5	(1.08)	31.0	(0.98)	22.3	(0.99)	6.5	(0.55)	0.7	(0.15)
Portugal.....	489	(3.1)	0.6	(0.14)	4.0	(0.41)	13.0	(0.97)	26.4	(1.09)	31.6	(1.09)	19.6	(0.92)	4.6	(0.48)	0.2	(0.10)
Slovak Republic.....	477	(2.5)	0.8	(0.28)	5.6	(0.62)	15.9	(0.83)	28.1	(1.04)	28.5	(1.14)	16.7	(0.79)	4.2	(0.48)	0.3	(0.11)
Slovenia.....	483	(1.0)	0.8	(0.09)	5.2	(0.34)	15.2	(0.49)	25.6	(0.71)	29.2	(0.86)	19.3	(0.80)	4.3	(0.54)	0.3	(0.12)
Spain.....	481	(2.0)	1.2	(0.18)	4.7	(0.39)	13.6	(0.64)	26.8	(0.84)	32.6	(0.95)	17.7	(0.68)	3.2	(0.29)	0.2	(0.08)
Sweden.....	497	(2.9)	1.5	(0.25)	4.3	(0.38)	11.7	(0.71)	23.5	(0.99)	29.8	(0.98)	20.3	(0.92)	7.7	(0.59)	1.3	(0.25)
Switzerland.....	501	(2.4)	0.7	(0.15)	4.1	(0.38)	12.1	(0.62)	22.7	(0.70)	29.7	(0.78)	22.6	(0.82)	7.4	(0.68)	0.7	(0.22)
Turkey.....	464	(3.5)	0.8	(0.19)	5.6	(0.63)	18.1	(0.98)	32.2	(1.16)	29.1	(1.07)	12.4	(1.11)	1.8	(0.38)	#	(t)
United Kingdom.....	494	(2.3)	1.0	(0.20)	4.1	(0.35)	13.4	(0.64)	24.9	(0.72)	28.8	(0.84)	19.8	(0.79)	7.0	(0.47)	1.0	(0.19)
United States.....	500	(3.7)	0.6	(0.13)	4.0	(0.45)	13.1	(0.84)	24.4	(0.86)	27.6	(0.83)	20.6	(0.90)	8.4	(0.75)	1.5	(0.42)

See notes at end of table.

Table 409. Mean scores and percentage distribution of 15-year-old students scoring at each reading literacy proficiency level, by country: 2009—Continued

Country or other jurisdiction	Mean score		Percentage distribution at levels of proficiency ¹															
			Below level 1		Level 1b		Level 1a		Level 2		Level 3		Level 4		Level 5		Level 6	
1	2		3		4		5		6		7		8		9		10	
Reporting partner countries																		
Albania.....	385	(4.0)	11.3	(0.92)	18.7	(1.32)	26.6	(1.18)	25.6	(1.33)	14.4	(1.18)	3.1	(0.48)	0.2	(0.11)	‡	(†)
Argentina.....	398	(4.6)	10.8	(1.10)	15.8	(1.25)	25.0	(1.30)	25.4	(1.22)	16.0	(1.04)	6.0	(0.83)	0.9	(0.23)	0.1	(0.05)
Azerbaijan.....	362	(3.3)	9.7	(1.05)	26.1	(1.14)	36.9	(1.21)	21.5	(1.17)	5.3	(0.77)	0.5	(0.15)	#	(†)	‡	(†)
Brazil.....	412	(2.7)	5.0	(0.38)	16.0	(0.67)	28.6	(0.81)	27.1	(0.78)	15.9	(0.86)	6.1	(0.53)	1.2	(0.21)	0.1	(0.05)
Bulgaria.....	429	(6.7)	8.0	(1.09)	12.9	(1.36)	20.1	(1.35)	23.4	(1.15)	21.8	(1.43)	11.0	(1.14)	2.6	(0.50)	0.2	(0.08)
Colombia.....	413	(3.7)	4.2	(0.71)	13.9	(0.99)	29.0	(1.22)	30.6	(1.11)	17.1	(1.03)	4.6	(0.48)	0.5	(0.16)	#	(†)
Croatia.....	476	(2.9)	1.0	(0.21)	5.0	(0.45)	16.5	(0.97)	27.4	(1.02)	30.6	(1.21)	16.4	(0.97)	3.1	(0.40)	0.1	(0.10)
Dubai (UAE).....	459	(1.1)	3.7	(0.23)	9.4	(0.45)	17.9	(0.50)	25.4	(0.71)	23.5	(0.77)	14.8	(0.71)	4.8	(0.49)	0.5	(0.18)
Hong Kong-China.....	533	(2.1)	0.2	(0.08)	1.5	(0.30)	6.6	(0.59)	16.1	(0.75)	31.4	(0.90)	31.8	(0.89)	11.2	(0.70)	1.2	(0.26)
Indonesia.....	402	(3.7)	1.7	(0.38)	14.1	(1.31)	37.6	(1.64)	34.3	(1.35)	11.2	(1.35)	1.0	(0.34)	‡	(†)	‡	(†)
Jordan.....	405	(3.3)	6.9	(0.62)	13.6	(0.78)	27.6	(0.96)	31.8	(0.98)	16.5	(0.99)	3.4	(0.44)	0.2	(0.09)	‡	(†)
Kazakhstan.....	390	(3.1)	7.5	(0.65)	20.4	(0.99)	30.7	(0.88)	24.1	(0.93)	13.1	(0.87)	3.7	(0.49)	0.4	(0.12)	‡	(†)
Kyrgyzstan.....	314	(3.2)	29.8	(1.25)	29.7	(0.91)	23.8	(0.94)	11.5	(0.83)	4.2	(0.57)	1.0	(0.28)	0.1	(0.06)	‡	(†)
Latvia.....	484	(3.0)	0.4	(0.15)	3.3	(0.57)	13.9	(1.00)	28.8	(1.45)	33.5	(1.21)	17.2	(1.01)	2.9	(0.44)	‡	(†)
Liechtenstein.....	499	(2.8)	‡	(†)	2.8	(1.15)	12.8	(1.83)	24.0	(2.85)	31.1	(2.76)	24.6	(2.34)	4.2	(1.39)	‡	(†)
Lithuania.....	468	(2.4)	0.9	(0.26)	5.5	(0.56)	17.9	(0.87)	30.0	(1.03)	28.6	(0.94)	14.1	(0.80)	2.8	(0.38)	0.1	(0.06)
Macao-China.....	487	(0.9)	0.3	(0.09)	2.6	(0.25)	12.0	(0.43)	30.6	(0.63)	34.8	(0.67)	16.9	(0.50)	2.8	(0.25)	0.1	(0.05)
Montenegro.....	408	(1.7)	5.9	(0.53)	15.8	(0.80)	27.8	(0.81)	28.0	(0.88)	16.8	(0.85)	5.0	(0.46)	0.6	(0.17)	‡	(†)
Panama.....	371	(6.5)	13.3	(1.83)	23.1	(1.78)	28.9	(1.79)	20.7	(1.43)	10.1	(1.36)	3.4	(0.68)	0.5	(0.23)	‡	(†)
Peru.....	370	(4.0)	14.1	(0.93)	22.0	(1.01)	28.7	(1.10)	22.1	(0.94)	10.1	(0.86)	2.6	(0.51)	0.4	(0.21)	#	(†)
Qatar.....	372	(0.8)	17.8	(0.33)	22.4	(0.48)	23.2	(0.63)	18.3	(0.44)	11.1	(0.48)	5.4	(0.27)	1.5	(0.16)	0.2	(0.07)
Romania.....	424	(4.1)	4.1	(0.69)	12.7	(1.08)	23.6	(1.25)	31.6	(1.31)	21.2	(1.31)	6.1	(0.71)	0.7	(0.17)	‡	(†)
Russian Federation.....	459	(3.3)	1.6	(0.35)	6.8	(0.58)	19.0	(0.79)	31.6	(0.97)	26.8	(0.88)	11.1	(0.66)	2.8	(0.43)	0.3	(0.11)
Serbia.....	442	(2.4)	2.0	(0.36)	8.8	(0.67)	22.1	(0.87)	33.2	(1.02)	25.3	(0.96)	7.9	(0.56)	0.8	(0.16)	#	(†)
Shanghai-China.....	556	(2.4)	0.1	(0.04)	0.6	(0.14)	3.4	(0.47)	13.3	(0.86)	28.5	(1.16)	34.7	(1.04)	17.0	(0.99)	2.4	(0.45)
Singapore.....	526	(1.1)	0.4	(0.11)	2.7	(0.26)	9.3	(0.50)	18.5	(0.60)	27.6	(0.81)	25.7	(0.73)	13.1	(0.54)	2.6	(0.34)
Chinese Taipei.....	495	(2.6)	0.7	(0.18)	3.5	(0.35)	11.4	(0.63)	24.6	(0.80)	33.5	(1.09)	21.0	(0.97)	4.8	(0.76)	0.4	(0.20)
Thailand.....	421	(2.6)	1.2	(0.29)	9.9	(0.82)	31.7	(1.12)	36.8	(1.15)	16.7	(0.82)	3.3	(0.52)	0.3	(0.15)	‡	(†)
Trinidad and Tobago.....	416	(1.2)	9.6	(0.51)	14.2	(0.61)	21.0	(0.81)	25.0	(0.94)	19.0	(0.86)	8.9	(0.51)	2.1	(0.27)	0.2	(0.07)
Tunisia.....	404	(2.9)	5.5	(0.52)	15.0	(0.78)	29.6	(1.10)	31.5	(1.22)	15.1	(1.04)	3.1	(0.52)	0.2	(0.12)	‡	(†)
Uruguay.....	426	(2.6)	5.5	(0.58)	12.5	(0.68)	23.9	(0.70)	28.0	(0.73)	20.3	(0.73)	8.1	(0.51)	1.7	(0.26)	0.1	(0.06)

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Level 1b: Able to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text and make simple connections between adjacent pieces of information. Level 1a: Able to locate explicitly stated information, recognize the main theme in a text about a familiar topic, and make a simple connection between information in the text and common, everyday knowledge. Level 2: Able to locate information which may need to be inferred and may need to meet several conditions, recognize the main idea in a text, understand relationships, construe meaning within part of the text when the information is not prominent, and make comparisons or connections between the text and outside knowledge by drawing on personal experience and attitudes. Level 3: Able to recognize the relationship between several pieces of information that must meet multiple conditions; integrate parts of a text in order to identify a main idea, understand a relationship, or construe the meaning of a word or phrase; compare, contrast or categorize where the required information is not prominent or there is much competing information or other obstacles in the text; make connections, comparisons, and explanations; evaluate a feature of the text; and demonstrate an understanding of the text by relating it to everyday knowledge or by drawing on less common knowledge. Level 4: Able to locate and organize embedded information, interpret the meaning of language by taking into account the text as a whole, understand and apply categories in an unfamiliar context, use formal knowledge to hypothesize about or critically evaluate a text, and demonstrate an understanding of long or complex

texts with unfamiliar form or content. Level 5: Able to locate and organize deeply embedded information, infer relevant information in the text, perform critical evaluation or form a hypothesis by drawing on specialized knowledge, and fully understand texts with unfamiliar form or context. Level 6: Able to make multiple inferences, comparisons, and contrasts that are both detailed and precise; demonstrate full understanding of texts and integrate information from more than one text; deal with unfamiliar ideas in the presence of prominent competing information; generate abstract categories for interpretation; hypothesize about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives; and apply sophisticated understandings from beyond the text.

²Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

³Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics, and Science (Volume I)*. (This table was prepared December 2010.)

Table 410. Mean scores and percentage distribution of 15-year-old students scoring at each mathematics literacy proficiency level, by country: 2009

Country or other jurisdiction	Mean score	Percentage distribution at levels of proficiency ¹													
		Below level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
1	2	3		4		5		6		7		8		9	
OECD total ²	488 (1.2)	9.3 (0.25)	15.5 (0.33)	22.7 (0.31)	23.5 (0.24)	17.3 (0.30)	8.9 (0.24)	2.8 (0.16)							
OECD average ³	496 (0.5)	8.0 (0.12)	14.0 (0.13)	22.0 (0.15)	24.3 (0.17)	18.9 (0.15)	9.6 (0.12)	3.1 (0.08)							
Australia.....	514 (2.5)	5.1 (0.33)	10.8 (0.53)	20.3 (0.61)	25.8 (0.54)	21.7 (0.56)	11.9 (0.54)	4.5 (0.56)							
Austria.....	496 (2.7)	7.8 (0.75)	15.4 (0.90)	21.2 (0.88)	23.0 (0.89)	19.6 (0.93)	9.9 (0.70)	3.0 (0.35)							
Belgium.....	515 (2.3)	7.7 (0.63)	11.3 (0.54)	17.5 (0.69)	21.8 (0.73)	21.3 (0.76)	14.6 (0.56)	5.8 (0.44)							
Canada.....	527 (1.6)	3.1 (0.25)	8.3 (0.42)	18.8 (0.48)	26.5 (0.86)	25.0 (0.68)	13.9 (0.45)	4.4 (0.27)							
Chile.....	421 (3.1)	21.7 (1.19)	29.4 (1.09)	27.3 (0.98)	14.8 (0.96)	5.6 (0.59)	1.2 (0.29)	0.1 (0.09)							
Czech Republic.....	493 (2.8)	7.0 (0.83)	15.3 (0.82)	24.2 (1.00)	24.4 (1.09)	17.4 (0.81)	8.5 (0.64)	3.2 (0.39)							
Denmark.....	503 (2.6)	4.9 (0.49)	12.1 (0.80)	23.0 (0.91)	27.4 (1.06)	21.0 (0.89)	9.1 (0.83)	2.5 (0.47)							
Estonia.....	512 (2.6)	3.0 (0.42)	9.6 (0.68)	22.7 (0.86)	29.9 (0.94)	22.7 (0.81)	9.8 (0.79)	2.2 (0.43)							
Finland.....	541 (2.2)	1.7 (0.25)	6.1 (0.45)	15.6 (0.83)	27.1 (0.95)	27.8 (0.87)	16.7 (0.79)	4.9 (0.53)							
France.....	497 (3.1)	9.5 (0.88)	13.1 (1.07)	19.9 (0.94)	23.8 (1.12)	20.1 (1.01)	10.4 (0.72)	3.3 (0.48)							
Germany.....	513 (2.9)	6.4 (0.63)	12.2 (0.72)	18.8 (0.88)	23.1 (0.87)	21.7 (0.92)	13.2 (0.87)	4.6 (0.46)							
Greece.....	466 (3.9)	11.3 (1.22)	19.1 (1.01)	26.4 (1.25)	24.0 (1.05)	13.6 (0.78)	4.9 (0.56)	0.8 (0.16)							
Hungary.....	490 (3.5)	8.1 (0.99)	14.2 (0.95)	23.2 (1.18)	26.0 (1.24)	18.4 (1.02)	8.1 (0.79)	2.0 (0.45)							
Iceland.....	507 (1.4)	5.7 (0.43)	11.3 (0.52)	21.3 (0.88)	27.3 (0.90)	20.9 (0.90)	10.5 (0.67)	3.1 (0.40)							
Ireland.....	487 (2.5)	7.3 (0.63)	13.6 (0.74)	24.5 (1.09)	28.6 (1.20)	19.4 (0.92)	5.8 (0.59)	0.9 (0.20)							
Israel.....	447 (3.3)	20.5 (1.17)	18.9 (0.90)	22.5 (0.92)	20.1 (0.87)	12.0 (0.71)	4.7 (0.51)	1.2 (0.28)							
Italy.....	483 (1.9)	9.1 (0.44)	15.9 (0.48)	24.2 (0.59)	24.6 (0.48)	17.3 (0.57)	7.4 (0.40)	1.6 (0.15)							
Japan.....	529 (3.3)	4.0 (0.57)	8.5 (0.65)	17.4 (0.90)	25.7 (1.08)	23.5 (1.04)	14.7 (0.88)	6.2 (0.78)							
Korea, Republic of.....	546 (4.0)	1.9 (0.49)	6.2 (0.72)	15.6 (0.99)	24.4 (1.21)	26.3 (1.30)	17.7 (0.97)	7.8 (0.96)							
Luxembourg.....	489 (1.2)	9.6 (0.53)	14.4 (0.57)	22.7 (0.72)	23.1 (0.98)	19.0 (0.82)	9.0 (0.61)	2.3 (0.36)							
Mexico.....	419 (1.8)	21.9 (0.79)	28.9 (0.59)	28.3 (0.61)	15.6 (0.56)	4.7 (0.36)	0.7 (0.11)	# (†)							
Netherlands.....	526 (4.7)	2.8 (0.59)	10.6 (1.33)	19.0 (1.37)	23.9 (0.98)	23.9 (1.25)	15.4 (1.18)	4.4 (0.52)							
New Zealand.....	519 (2.3)	5.3 (0.53)	10.2 (0.54)	19.1 (0.84)	24.4 (0.88)	22.2 (0.98)	13.6 (0.74)	5.3 (0.45)							
Norway.....	498 (2.4)	5.5 (0.50)	12.7 (0.83)	24.3 (0.93)	27.5 (1.02)	19.7 (0.86)	8.4 (0.58)	1.8 (0.34)							
Poland.....	495 (2.8)	6.1 (0.54)	14.4 (0.75)	24.0 (0.88)	26.1 (0.77)	19.0 (0.85)	8.2 (0.61)	2.2 (0.41)							
Portugal.....	487 (2.9)	8.4 (0.62)	15.3 (0.83)	23.9 (0.93)	25.0 (1.03)	17.7 (0.79)	7.7 (0.63)	1.9 (0.35)							
Slovak Republic.....	497 (3.1)	7.0 (0.68)	14.0 (0.79)	23.2 (1.08)	25.0 (1.54)	18.1 (1.24)	9.1 (0.69)	3.6 (0.63)							
Slovenia.....	501 (1.2)	6.5 (0.40)	13.8 (0.60)	22.5 (0.67)	23.9 (0.69)	19.0 (0.79)	10.3 (0.57)	3.9 (0.36)							
Spain.....	483 (2.1)	9.1 (0.48)	14.6 (0.58)	23.9 (0.58)	26.6 (0.63)	17.7 (0.62)	6.7 (0.39)	1.3 (0.16)							
Sweden.....	494 (2.9)	7.5 (0.65)	13.6 (0.72)	23.4 (0.81)	25.2 (0.75)	19.0 (0.88)	8.9 (0.64)	2.5 (0.35)							
Switzerland.....	534 (3.3)	4.5 (0.40)	9.0 (0.65)	15.9 (0.63)	23.0 (0.92)	23.5 (0.80)	16.3 (0.78)	7.8 (0.75)							
Turkey.....	445 (4.4)	17.7 (1.35)	24.5 (1.11)	25.2 (1.18)	17.4 (1.07)	9.6 (0.90)	4.4 (0.91)	1.3 (0.46)							
United Kingdom.....	492 (2.4)	6.2 (0.46)	14.0 (0.71)	24.9 (0.88)	27.2 (1.10)	17.9 (0.96)	8.1 (0.63)	1.8 (0.27)							
United States.....	487 (3.6)	8.1 (0.72)	15.3 (0.98)	24.4 (0.97)	25.2 (0.95)	17.1 (0.93)	8.0 (0.85)	1.9 (0.46)							

See notes at end of table.

Table 410. Mean scores and percentage distribution of 15-year-old students scoring at each mathematics literacy proficiency level, by country: 2009—Continued

Country or other jurisdiction	Mean score	Percentage distribution at levels of proficiency ¹												
		Below level 1	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
1	2	3	4	5	6	7	8	9						
Reporting partner countries														
Albania.....	377 (4.0)	40.5 (1.76)	27.2 (1.22)	20.2 (1.25)	9.1 (0.85)	2.6 (0.58)	0.4 (0.16)	#	(t)					
Argentina.....	388 (4.1)	37.2 (1.75)	26.4 (1.11)	20.8 (1.09)	10.9 (0.95)	3.9 (0.66)	0.8 (0.26)	0.1 (0.07)						
Azerbaijan.....	431 (2.8)	11.5 (0.96)	33.8 (1.24)	35.3 (1.29)	14.8 (1.04)	3.6 (0.51)	0.9 (0.34)	0.2 (0.12)						
Brazil.....	386 (2.4)	38.1 (1.25)	31.0 (0.91)	19.0 (0.75)	8.1 (0.64)	3.0 (0.32)	0.7 (0.19)	0.1 (0.05)						
Bulgaria.....	428 (5.9)	24.5 (1.91)	22.7 (1.08)	23.4 (1.11)	17.5 (1.36)	8.2 (0.90)	3.0 (0.70)	0.8 (0.36)						
Colombia.....	381 (3.2)	38.8 (2.02)	31.6 (1.30)	20.3 (1.28)	7.5 (0.66)	1.6 (0.33)	0.1 (0.06)	#	(t)					
Croatia.....	460 (3.1)	12.4 (0.85)	20.8 (0.94)	26.7 (0.83)	22.7 (0.97)	12.5 (0.84)	4.3 (0.51)	0.6 (0.22)						
Dubai (UAE).....	453 (1.1)	17.6 (0.49)	21.2 (0.59)	23.0 (0.79)	19.6 (0.63)	12.1 (0.55)	5.3 (0.39)	1.2 (0.19)						
Hong Kong-China.....	555 (2.7)	2.6 (0.40)	6.2 (0.53)	13.2 (0.67)	21.9 (0.84)	25.4 (0.91)	19.9 (0.82)	10.8 (0.78)						
Indonesia.....	371 (3.7)	43.5 (2.21)	33.1 (1.54)	16.9 (1.14)	5.4 (0.91)	0.9 (0.32)	0.1 (0.05)	‡	(t)					
Jordan.....	387 (3.7)	35.4 (1.67)	29.9 (1.20)	22.9 (1.03)	9.5 (0.94)	2.1 (0.44)	0.3 (0.17)	#	(t)					
Kazakhstan.....	405 (3.0)	29.6 (1.31)	29.6 (0.94)	23.5 (0.88)	12.0 (0.80)	4.2 (0.48)	0.9 (0.29)	0.3 (0.19)						
Kyrgyzstan.....	331 (2.9)	64.8 (1.43)	21.8 (0.98)	9.3 (0.76)	3.3 (0.51)	0.7 (0.24)	#	(t)	‡					
Latvia.....	482 (3.1)	5.8 (0.69)	16.7 (1.15)	27.2 (1.04)	28.2 (1.08)	16.4 (1.01)	5.1 (0.50)	0.6 (0.15)						
Liechtenstein.....	536 (4.1)	3.0 (0.99)	6.5 (1.61)	15.0 (2.18)	26.2 (2.26)	31.2 (3.25)	13.0 (2.45)	5.0 (1.42)						
Lithuania.....	477 (2.6)	9.0 (0.79)	17.3 (0.85)	26.1 (1.10)	25.3 (0.98)	15.4 (0.77)	5.7 (0.56)	1.3 (0.26)						
Macao-China.....	525 (0.9)	2.8 (0.25)	8.2 (0.46)	19.6 (0.58)	27.8 (0.90)	24.5 (0.78)	12.8 (0.43)	4.3 (0.28)						
Montenegro.....	403 (2.0)	29.6 (1.07)	28.8 (1.00)	24.6 (1.04)	12.2 (0.68)	3.8 (0.35)	0.9 (0.20)	0.1 (0.05)						
Panama.....	360 (5.2)	51.5 (2.90)	27.3 (1.72)	13.9 (1.51)	5.6 (0.92)	1.4 (0.36)	0.4 (0.22)	#	(t)					
Peru.....	365 (4.0)	47.6 (1.81)	25.9 (1.16)	16.9 (1.26)	6.8 (0.70)	2.1 (0.43)	0.5 (0.18)	0.1 (0.06)						
Qatar.....	368 (0.7)	51.1 (0.56)	22.7 (0.64)	13.1 (0.48)	7.2 (0.35)	4.2 (0.25)	1.5 (0.17)	0.3 (0.08)						
Romania.....	427 (3.4)	19.5 (1.42)	27.5 (1.15)	28.6 (1.39)	17.3 (1.02)	5.9 (0.77)	1.2 (0.33)	0.1 (0.08)						
Russian Federation.....	468 (3.3)	9.5 (0.92)	19.0 (1.16)	28.5 (1.03)	25.0 (1.00)	12.7 (0.87)	4.3 (0.57)	1.0 (0.27)						
Serbia.....	442 (2.9)	17.6 (1.04)	22.9 (0.84)	26.5 (1.07)	19.9 (0.97)	9.5 (0.62)	2.9 (0.41)	0.6 (0.18)						
Shanghai-China.....	600 (2.8)	1.4 (0.26)	3.4 (0.38)	8.7 (0.63)	15.2 (0.79)	20.8 (0.79)	23.8 (0.80)	26.6 (1.19)						
Singapore.....	562 (1.4)	3.0 (0.26)	6.8 (0.57)	13.1 (0.56)	18.7 (0.80)	22.8 (0.62)	20.0 (0.87)	15.6 (0.63)						
Chinese Taipei.....	543 (3.4)	4.2 (0.48)	8.6 (0.65)	15.5 (0.68)	20.9 (0.88)	22.2 (0.86)	17.2 (0.92)	11.3 (1.16)						
Thailand.....	419 (3.2)	22.1 (1.37)	30.4 (0.92)	27.3 (1.09)	14.0 (0.85)	4.9 (0.57)	1.0 (0.27)	0.3 (0.22)						
Trinidad and Tobago.....	414 (1.3)	30.1 (0.79)	23.1 (0.97)	21.2 (0.89)	15.4 (0.63)	7.7 (0.44)	2.1 (0.25)	0.3 (0.15)						
Tunisia.....	371 (3.0)	43.4 (1.66)	30.2 (1.46)	18.7 (0.90)	6.1 (0.69)	1.3 (0.44)	0.2 (0.16)	#	(t)					
Uruguay.....	427 (2.6)	22.9 (1.16)	24.6 (1.08)	25.1 (0.99)	17.0 (0.73)	7.9 (0.55)	2.1 (0.34)	0.3 (0.12)						

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Level 1: Able to answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. Level 2: Able to interpret and recognize situations in contexts that require no more than direct inference; extract relevant information from a single source; employ basic algorithms, formulae, procedures, or conventions; and employ direct reasoning for literal interpretations of results. Level 3: Able to execute clearly described procedures, select and apply simple problem solving strategies, interpret and use representations based on different information sources, and develop short communications reporting one's interpretations, results, and reasoning. Level 4: Able to work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions, select and integrate different representations, reason with some insight, and construct and communicate explanations and arguments based on one's interpretations and actions. Level 5: Able to develop and work with models for complex situations, select and evaluate appropriate problem solving strategies, work strategically using broad, well-developed thinking and reasoning skills, and communicate one's interpretations and reasoning. Level 6: Able to

conceptualize, generalize, and utilize information; link different information sources and representations; perform advanced mathematical thinking and reasoning; develop new approaches and strategies for attacking novel situations; and formulate and precisely communicate actions and reflections regarding findings and interpretations.

²Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

³Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)

Table 411. Mean scores and percentage distribution of 15-year-old students scoring at each science literacy proficiency level, by country: 2009

Country or other jurisdiction	Mean score	Percentage distribution at levels of proficiency ¹													
		Below Level 1		Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
1	2	3		4		5		6		7		8		9	
OECD total ²	496 (1.2)	5.4 (0.19)	14.6 (0.32)	24.8 (0.28)	27.1 (0.25)	19.6 (0.32)	7.3 (0.25)	1.1 (0.10)							
OECD average ³	501 (0.5)	5.0 (0.10)	13.0 (0.14)	24.4 (0.16)	28.6 (0.17)	20.6 (0.16)	7.4 (0.10)	1.1 (0.04)							
Australia.....	527 (2.5)	3.4 (0.27)	9.2 (0.48)	20.0 (0.59)	28.4 (0.65)	24.5 (0.66)	11.5 (0.58)	3.1 (0.50)							
Austria.....	494 (3.2)	6.7 (0.83)	14.3 (0.99)	23.8 (1.00)	26.6 (1.04)	20.6 (1.03)	7.1 (0.61)	1.0 (0.19)							
Belgium.....	507 (2.5)	6.4 (0.57)	11.7 (0.61)	20.7 (0.65)	27.2 (0.76)	24.0 (0.82)	9.0 (0.59)	1.1 (0.19)							
Canada.....	529 (1.6)	2.0 (0.21)	7.5 (0.37)	20.9 (0.49)	31.2 (0.62)	26.2 (0.65)	10.5 (0.45)	1.6 (0.15)							
Chile.....	447 (2.9)	8.4 (0.83)	23.9 (1.07)	35.2 (0.94)	23.6 (1.07)	7.9 (0.69)	1.1 (0.22)	# (†)							
Czech Republic.....	500 (3.0)	4.7 (0.57)	12.6 (0.90)	25.6 (0.97)	28.8 (1.25)	19.9 (0.87)	7.2 (0.58)	1.2 (0.22)							
Denmark.....	499 (2.5)	4.1 (0.42)	12.5 (0.65)	26.0 (0.77)	30.6 (1.07)	20.1 (0.85)	5.9 (0.55)	0.9 (0.23)							
Estonia.....	528 (2.7)	1.3 (0.31)	7.0 (0.72)	21.3 (1.07)	34.3 (1.10)	25.7 (1.07)	9.0 (0.63)	1.4 (0.26)							
Finland.....	554 (2.3)	1.1 (0.19)	4.9 (0.41)	15.3 (0.73)	28.8 (0.95)	31.2 (1.08)	15.4 (0.74)	3.3 (0.34)							
France.....	498 (3.6)	7.1 (0.82)	12.2 (0.83)	22.1 (1.25)	28.8 (1.32)	21.7 (1.02)	7.3 (0.70)	0.8 (0.22)							
Germany.....	520 (2.8)	4.1 (0.51)	10.7 (0.81)	20.1 (0.86)	27.3 (1.08)	25.0 (1.18)	10.9 (0.68)	1.9 (0.29)							
Greece.....	470 (4.0)	7.2 (1.07)	18.1 (1.04)	29.8 (0.96)	27.9 (1.20)	14.0 (0.95)	2.8 (0.31)	0.3 (0.11)							
Hungary.....	503 (3.1)	3.8 (0.93)	10.4 (0.86)	25.5 (1.13)	33.2 (1.32)	21.8 (1.19)	5.1 (0.55)	0.3 (0.13)							
Iceland.....	496 (1.4)	5.5 (0.48)	12.5 (0.63)	25.8 (0.75)	30.4 (0.94)	18.8 (0.84)	6.1 (0.43)	0.8 (0.19)							
Ireland.....	508 (3.3)	4.4 (0.69)	10.7 (1.01)	23.3 (1.17)	29.9 (0.99)	22.9 (0.95)	7.5 (0.68)	1.2 (0.23)							
Israel.....	455 (3.1)	13.9 (1.06)	19.2 (0.72)	26.0 (1.04)	24.1 (0.76)	12.8 (0.72)	3.5 (0.36)	0.5 (0.13)							
Italy.....	489 (1.8)	6.1 (0.39)	14.5 (0.50)	25.5 (0.63)	29.5 (0.54)	18.6 (0.53)	5.3 (0.29)	0.5 (0.07)							
Japan.....	539 (3.4)	3.2 (0.52)	7.5 (0.68)	16.3 (0.87)	26.6 (0.83)	29.5 (0.98)	14.4 (0.73)	2.6 (0.39)							
Korea, Republic of.....	538 (3.4)	1.1 (0.32)	5.2 (0.68)	18.5 (1.15)	33.1 (1.13)	30.4 (1.14)	10.5 (0.90)	1.1 (0.31)							
Luxembourg.....	484 (1.2)	8.4 (0.52)	15.3 (0.88)	24.3 (0.69)	27.1 (0.87)	18.2 (0.91)	6.0 (0.49)	0.7 (0.12)							
Mexico.....	416 (1.8)	14.5 (0.60)	32.8 (0.64)	33.6 (0.60)	15.8 (0.61)	3.1 (0.27)	0.2 (0.05)	# (†)							
Netherlands.....	522 (5.4)	2.6 (0.53)	10.6 (1.33)	21.8 (1.53)	26.9 (1.07)	25.3 (1.69)	11.2 (1.10)	1.5 (0.30)							
New Zealand.....	532 (2.6)	4.0 (0.53)	9.4 (0.52)	18.1 (1.01)	25.8 (0.88)	25.1 (0.74)	14.0 (0.72)	3.6 (0.36)							
Norway.....	500 (2.6)	3.8 (0.48)	11.9 (0.92)	26.6 (0.95)	31.1 (0.71)	20.1 (0.82)	5.9 (0.65)	0.5 (0.16)							
Poland.....	508 (2.4)	2.3 (0.33)	10.9 (0.69)	26.1 (0.80)	32.1 (0.81)	21.2 (0.97)	6.8 (0.49)	0.8 (0.19)							
Portugal.....	493 (2.9)	3.0 (0.35)	13.5 (0.92)	28.9 (1.08)	32.3 (1.08)	18.1 (1.00)	3.9 (0.51)	0.3 (0.13)							
Slovak Republic.....	490 (3.0)	5.0 (0.58)	14.2 (0.89)	27.6 (1.03)	29.2 (0.95)	17.7 (0.85)	5.6 (0.53)	0.7 (0.20)							
Slovenia.....	512 (1.1)	3.1 (0.22)	11.7 (0.45)	23.7 (0.66)	28.7 (1.05)	23.0 (0.72)	8.7 (0.61)	1.2 (0.27)							
Spain.....	488 (2.1)	4.6 (0.37)	13.6 (0.75)	27.9 (0.67)	32.3 (0.69)	17.6 (0.57)	3.7 (0.26)	0.2 (0.05)							
Sweden.....	495 (2.7)	5.8 (0.51)	13.4 (0.75)	25.6 (0.80)	28.4 (0.84)	18.7 (0.86)	7.1 (0.56)	1.0 (0.22)							
Switzerland.....	517 (2.8)	3.5 (0.31)	10.6 (0.58)	21.3 (1.09)	29.8 (1.02)	24.1 (1.03)	9.2 (0.73)	1.5 (0.23)							
Turkey.....	454 (3.6)	6.9 (0.81)	23.0 (1.13)	34.5 (1.16)	25.2 (1.24)	9.1 (1.13)	1.1 (0.29)	# (†)							
United Kingdom.....	514 (2.5)	3.8 (0.34)	11.2 (0.68)	22.7 (0.73)	28.8 (0.97)	22.2 (0.83)	9.5 (0.61)	1.9 (0.25)							
United States.....	502 (3.6)	4.2 (0.54)	13.9 (0.93)	25.0 (0.87)	27.5 (0.80)	20.1 (0.94)	7.9 (0.78)	1.3 (0.28)							

See notes at end of table.

Table 411. Mean scores and percentage distribution of 15-year-old students scoring at each science literacy proficiency level, by country: 2009—Continued

Country or other jurisdiction	Mean score	Percentage distribution at levels of proficiency ¹												
		Below Level 1	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
1	2	3	4	5	6	7	8	9						
Reporting partner countries														
Albania.....	391 (3.9)	26.3 (1.55)	31.0 (1.28)	27.7 (1.24)	12.9 (1.34)	2.0 (0.38)	0.1 (0.06)	†	(†)					
Argentina.....	401 (4.6)	25.2 (1.70)	27.2 (1.37)	26.7 (1.20)	15.4 (1.12)	4.8 (0.69)	0.6 (0.18)	#	(†)					
Azerbaijan.....	373 (3.1)	31.5 (1.68)	38.5 (1.13)	22.4 (1.07)	6.7 (0.76)	0.8 (0.22)	#	(†)	(†)					
Brazil.....	405 (2.4)	19.7 (0.90)	34.5 (0.99)	28.8 (0.90)	12.6 (0.81)	3.9 (0.38)	0.6 (0.11)	#	(†)					
Bulgaria.....	439 (5.9)	16.5 (1.63)	22.3 (1.55)	26.6 (1.31)	21.0 (1.36)	10.9 (1.01)	2.4 (0.48)	0.2	(0.12)					
Colombia.....	402 (3.6)	20.4 (1.81)	33.7 (1.23)	30.2 (1.40)	13.1 (1.04)	2.5 (0.34)	0.1 (0.05)	#	(†)					
Croatia.....	486 (2.8)	3.6 (0.47)	14.9 (0.99)	30.0 (1.07)	31.1 (1.03)	16.7 (0.98)	3.5 (0.57)	0.2	(0.10)					
Dubai (UAE).....	466 (1.2)	11.0 (0.47)	19.5 (0.57)	26.0 (0.78)	22.9 (0.73)	14.9 (0.59)	4.8 (0.35)	0.8	(0.21)					
Hong Kong-China.....	549 (2.8)	1.4 (0.31)	5.2 (0.61)	15.1 (0.73)	29.4 (0.99)	32.7 (0.99)	14.2 (0.94)	2.0	(0.30)					
Indonesia.....	383 (3.8)	24.6 (1.77)	41.0 (1.54)	27.0 (1.55)	6.9 (1.01)	0.5 (0.22)	#	(†)	(†)					
Jordan.....	415 (3.5)	18.0 (1.20)	27.6 (1.13)	32.2 (1.21)	17.6 (1.12)	4.1 (0.51)	0.5 (0.18)	#	(†)					
Kazakhstan.....	400 (3.1)	22.4 (1.31)	33.0 (1.08)	27.9 (1.14)	12.8 (0.82)	3.6 (0.62)	0.3 (0.16)	#	(†)					
Kyrgyzstan.....	330 (2.9)	52.9 (1.32)	29.0 (0.94)	13.3 (0.76)	4.0 (0.54)	0.7 (0.20)	#	(†)	(†)					
Latvia.....	494 (3.1)	2.3 (0.56)	12.5 (1.00)	29.1 (1.07)	35.5 (1.16)	17.6 (1.06)	3.0 (0.47)	0.1	(0.08)					
Liechtenstein.....	520 (3.4)	1.4 (0.74)	9.9 (1.94)	23.8 (3.07)	29.8 (3.67)	25.4 (2.67)	9.0 (1.74)	0.7	(0.67)					
Lithuania.....	491 (2.9)	3.5 (0.65)	13.5 (0.77)	28.9 (1.02)	32.4 (1.18)	17.0 (0.84)	4.3 (0.41)	0.4	(0.13)					
Macao-China.....	511 (1.0)	1.5 (0.21)	8.1 (0.36)	25.2 (0.77)	37.8 (0.74)	22.7 (0.98)	4.5 (0.47)	0.2	(0.08)					
Montenegro.....	401 (2.0)	22.2 (1.01)	31.4 (0.98)	29.4 (1.04)	13.6 (0.79)	3.1 (0.39)	0.2 (0.15)	†	(†)					
Panama.....	376 (5.7)	32.8 (2.74)	32.4 (1.96)	23.2 (1.93)	9.3 (1.19)	2.2 (0.46)	0.2 (0.12)	†	(†)					
Peru.....	369 (3.5)	35.3 (1.50)	33.0 (1.29)	21.7 (1.21)	8.0 (0.79)	1.8 (0.37)	0.2 (0.12)	#	(†)					
Qatar.....	379 (0.9)	36.4 (0.58)	28.8 (0.54)	18.8 (0.56)	9.8 (0.30)	4.8 (0.23)	1.3 (0.14)	0.1	(0.05)					
Romania.....	428 (3.4)	11.9 (1.13)	29.5 (1.57)	34.1 (1.73)	19.7 (1.18)	4.4 (0.59)	0.4 (0.12)	#	(†)					
Russian Federation.....	478 (3.3)	5.5 (0.67)	16.5 (1.06)	30.7 (1.14)	29.0 (1.15)	13.9 (0.91)	3.9 (0.50)	0.4	(0.17)					
Serbia.....	443 (2.4)	10.1 (0.82)	24.3 (0.96)	33.9 (1.17)	23.6 (0.75)	7.1 (0.57)	1.0 (0.18)	#	(†)					
Shanghai-China.....	575 (2.3)	0.4 (0.11)	2.8 (0.36)	10.5 (0.66)	26.0 (0.99)	36.1 (1.12)	20.4 (0.96)	3.9	(0.45)					
Singapore.....	542 (1.4)	2.8 (0.24)	8.7 (0.52)	17.5 (0.58)	25.4 (0.83)	25.7 (0.70)	15.3 (0.67)	4.6	(0.50)					
Chinese Taipei.....	520 (2.6)	2.2 (0.34)	8.9 (0.60)	21.1 (0.91)	33.3 (1.04)	25.8 (1.10)	8.0 (0.74)	0.8	(0.22)					
Thailand.....	425 (3.0)	12.2 (1.10)	30.6 (1.01)	34.7 (1.34)	17.5 (0.95)	4.4 (0.51)	0.6 (0.27)	#	(†)					
Trinidad and Tobago.....	410 (1.2)	25.1 (0.87)	24.9 (0.92)	25.2 (0.88)	16.0 (0.79)	7.1 (0.40)	1.8 (0.23)	0.1	(0.07)					
Tunisia.....	401 (2.7)	21.3 (1.17)	32.4 (1.08)	30.9 (1.00)	13.0 (0.85)	2.2 (0.43)	0.2 (0.12)	#	(†)					
Uruguay.....	427 (2.6)	17.0 (0.94)	25.6 (0.86)	29.3 (1.01)	19.5 (1.02)	7.1 (0.51)	1.4 (0.22)	0.1	(0.04)					

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Level 1: Able to present scientific explanations that are obvious and that follow explicitly from given evidence. Level 2: Able to provide possible explanations in familiar contexts, draw conclusions based on simple investigations, and make literal interpretations of the results of scientific inquiry or technological problem solving. Level 3: Able to select facts to explain phenomena and apply simple models or inquiry strategies, develop short statements using facts, and make decisions based on scientific knowledge. Level 4: Able to select and integrate explanations from different disciplines of science or technology, link those explanations directly to aspects of life situations, and communicate decisions using scientific knowledge and evidence. Level 5: Able to apply scientific concepts and knowledge to many complex life situations, select and evaluate appropriate scientific evidence, bring critical insights to situations, and construct explanations based on evidence and arguments based on critical analysis. Level 6: Able to consistently explain and apply scientific knowledge in a variety of complex life situations, use evidence from different sources to justify decisions, clearly and

consistently demonstrate advanced scientific thinking and reasoning, and develop arguments in support of recommendations and decisions that center on personal, social, or global situations.

²Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

³Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)

Table 412. Average fourth-grade mathematics scores, by content and cognitive domain, index of time spent doing mathematics homework, and country: 2007

Country or other jurisdiction	Average score									Index of time spent doing mathematics homework (TMH) in a normal school week ³																
	Content domain ¹				Cognitive domain ²					High TMH		Medium TMH		Low TMH												
	Mathematics overall	Number	Geometric shapes and measures	Data display	Knowing	Applying	Reasoning	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score													
1	2	3	4	5	6	7	8	9	10	11	12	13	14													
International average...	—	(†)	—	(†)	—	(†)	—	(†)	—	(†)	21	(0.2)	469	(1.0)	58	(0.2)	479	(0.7)	21	(0.2)	468	(1.5)				
Algeria ⁴	378	(5.2)	391	(5.0)	383	(4.5)	361	(5.2)	384	(5.4)	376	(5.2)	387	(4.7)	35	(1.7)	397	(6.6)	54	(1.5)	385	(6.0)	11	(1.0)	373	(9.1)
Armenia ⁴	500	(4.3)	522	(4.0)	483	(4.7)	458	(4.3)	518	(4.8)	493	(4.1)	489	(4.7)	31	(1.5)	510	(5.3)	64	(1.4)	503	(3.7)	5	(0.7)	509	(24.8)
Australia.....	516	(3.5)	496	(3.7)	536	(3.1)	534	(3.1)	509	(4.2)	523	(3.5)	516	(3.4)	7	(0.7)	508	(10.6)	42	(1.5)	517	(3.9)	51	(1.8)	525	(4.4)
Austria.....	505	(2.0)	502	(2.2)	509	(2.4)	508	(2.6)	505	(2.0)	507	(1.8)	506	(2.2)	16	(0.8)	493	(3.9)	76	(1.0)	511	(2.1)	8	(0.8)	501	(5.0)
Chinese Taipei.....	576	(1.7)	581	(1.9)	556	(2.2)	567	(2.0)	584	(1.7)	569	(1.7)	566	(1.9)	17	(0.9)	568	(4.0)	63	(1.4)	584	(1.7)	20	(1.3)	569	(3.8)
Colombia ⁴	355	(5.0)	360	(4.3)	361	(4.8)	363	(5.9)	360	(5.2)	357	(5.1)	372	(4.9)	29	(1.5)	384	(5.5)	58	(1.4)	369	(4.8)	13	(1.4)	354	(6.9)
Czech Republic.....	486	(2.8)	482	(2.8)	494	(2.8)	493	(3.3)	473	(2.4)	496	(2.7)	493	(3.4)	8	(0.6)	473	(4.7)	65	(2.0)	489	(2.9)	28	(1.9)	491	(4.6)
Denmark ⁵	523	(2.4)	509	(2.9)	544	(2.6)	529	(3.4)	513	(2.7)	528	(2.5)	524	(2.1)	23	(1.2)	514	(3.3)	52	(1.2)	524	(2.7)	25	(1.4)	538	(3.8)
El Salvador ⁴	330	(4.1)	317	(3.9)	333	(4.3)	367	(3.5)	312	(4.1)	339	(3.7)	356	(4.0)	24	(1.2)	345	(6.3)	62	(1.2)	340	(4.6)	14	(1.1)	346	(6.5)
England.....	541	(2.9)	531	(3.2)	548	(2.7)	547	(2.5)	544	(3.6)	540	(3.1)	537	(3.1)	3	(0.4)	525	(11.2)	31	(1.6)	547	(5.0)	66	(1.6)	544	(2.9)
Georgia ^{4,6}	438	(4.2)	464	(3.8)	415	(4.8)	414	(4.6)	450	(4.0)	433	(4.5)	437	(4.2)	27	(1.5)	451	(5.6)	71	(1.5)	449	(4.4)	2	(0.4)	†	(†)
Germany ⁴	525	(2.3)	521	(2.2)	528	(2.0)	534	(3.1)	514	(2.0)	531	(2.2)	528	(2.5)	19	(0.8)	517	(3.4)	76	(0.9)	534	(2.4)	5	(0.6)	496	(10.0)
Hong Kong SAR ⁷	607	(3.6)	606	(3.8)	599	(3.1)	585	(2.7)	617	(3.5)	599	(3.4)	589	(3.5)	18	(1.1)	599	(6.2)	78	(1.1)	613	(3.5)	4	(0.5)	562	(6.2)
Hungary.....	510	(3.5)	510	(3.7)	510	(3.3)	504	(3.5)	511	(3.4)	507	(3.5)	509	(3.8)	21	(1.0)	517	(4.3)	75	(1.1)	518	(3.5)	4	(0.7)	493	(16.6)
Iran, Islamic Republic of.....	402	(4.1)	398	(3.6)	429	(3.3)	400	(4.0)	410	(3.6)	405	(3.7)	410	(3.8)	34	(1.7)	424	(5.8)	51	(1.6)	401	(4.5)	15	(1.4)	386	(6.9)
Italy.....	507	(3.1)	505	(3.2)	509	(3.0)	506	(3.4)	514	(3.2)	501	(2.9)	509	(3.1)	18	(1.3)	498	(4.7)	62	(1.6)	508	(3.8)	19	(1.8)	515	(3.9)
Japan.....	568	(2.1)	561	(2.2)	566	(2.2)	578	(2.8)	565	(2.1)	566	(2.0)	563	(2.1)	11	(0.9)	542	(4.6)	64	(1.9)	573	(2.4)	25	(1.9)	572	(3.5)
Kazakhstan ⁸	549	(7.1)	556	(6.6)	542	(7.4)	522	(5.8)	559	(7.3)	547	(7.2)	539	(6.1)	42	(2.0)	549	(9.3)	56	(1.9)	552	(7.3)	2	(0.3)	†	(†)
Kuwait ⁸	316	(3.6)	321	(3.5)	316	(3.6)	318	(4.7)	326	(4.6)	305	(4.4)	—	(†)	17	(0.9)	313	(6.4)	63	(1.7)	336	(3.8)	20	(1.4)	350	(6.9)
Latvia ⁸	537	(2.3)	536	(2.1)	532	(2.6)	536	(3.0)	530	(2.2)	540	(2.5)	537	(2.5)	34	(1.3)	534	(3.2)	65	(1.3)	545	(2.6)	1	(0.2)	†	(†)
Lithuania ⁶	530	(2.4)	533	(2.3)	518	(2.4)	530	(2.9)	520	(2.8)	539	(2.4)	526	(2.5)	29	(1.3)	526	(3.5)	68	(1.3)	537	(2.5)	3	(0.5)	530	(10.7)
Morocco ⁴	341	(4.7)	353	(4.7)	365	(4.3)	316	(6.1)	354	(4.8)	346	(4.7)	—	(†)	24	(1.6)	360	(9.1)	61	(1.9)	352	(5.3)	16	(1.7)	350	(12.7)
Netherlands ⁹	535	(2.1)	535	(2.2)	522	(2.3)	543	(2.3)	525	(2.2)	540	(2.0)	534	(2.4)	1	(0.2)	†	(†)	10	(0.9)	507	(4.7)	89	(0.9)	541	(2.3)
New Zealand.....	492	(2.3)	478	(2.7)	502	(2.3)	513	(2.6)	482	(2.5)	495	(2.3)	503	(2.8)	8	(0.5)	469	(5.3)	38	(1.1)	487	(3.7)	54	(1.4)	509	(2.4)
Norway.....	473	(2.5)	461	(2.8)	490	(3.0)	487	(2.6)	461	(2.9)	479	(2.8)	489	(2.7)	12	(1.0)	465	(7.4)	53	(1.8)	478	(2.9)	35	(2.1)	487	(3.4)
Qatar ¹⁰	296	(1.0)	292	(1.2)	296	(1.4)	326	(1.6)	293	(1.3)	296	(1.2)	—	(†)	20	(0.6)	301	(3.1)	61	(0.7)	315	(2.3)	19	(0.5)	311	(3.3)
Russian Federation.....	544	(4.9)	546	(4.4)	538	(5.1)	530	(4.9)	538	(4.5)	547	(4.8)	540	(4.8)	37	(1.4)	541	(5.7)	61	(1.3)	550	(5.0)	1	(0.3)	†	(†)
Scotland ⁹	494	(2.2)	481	(2.6)	503	(2.6)	516	(2.2)	489	(2.6)	500	(2.4)	497	(2.2)	3	(0.3)	453	(10.7)	30	(1.7)	484	(3.1)	67	(1.8)	505	(2.9)
Singapore.....	599	(3.7)	611	(4.3)	570	(3.7)	583	(3.2)	620	(4.0)	590	(3.7)	578	(3.8)	34	(0.9)	607	(4.4)	52	(0.9)	603	(3.7)	15	(0.8)	581	(5.6)
Slovak Republic.....	496	(4.5)	495	(3.9)	499	(4.3)	492	(4.2)	492	(3.9)	498	(4.0)	499	(4.0)	10	(0.6)	481	(4.0)	79	(1.2)	508	(3.2)	11	(1.0)	496	(9.1)
Slovenia.....	502	(1.8)	485	(1.9)	522	(1.8)	518	(2.5)	497	(1.8)	504	(1.9)	505	(2.1)	19	(0.9)	487	(3.2)	79	(1.0)	510	(2.1)	3	(0.3)	479	(9.0)
Sweden.....	503	(2.5)	490	(2.5)	508	(2.3)	529	(2.7)	482	(2.5)	508	(2.2)	519	(2.5)	5	(0.6)	472	(6.4)	34	(1.2)	493	(2.9)	60	(1.4)	513	(3.0)
Tunisia ⁴	327	(4.5)	352	(4.5)	334	(4.5)	307	(4.8)	343	(4.9)	329	(4.8)	—	(†)	33	(1.7)	362	(5.5)	53	(1.4)	352	(4.8)	14	(1.2)	342	(7.7)
Ukraine.....	469	(2.9)	480	(2.9)	457	(2.8)	462	(3.2)	472	(3.0)	466	(3.1)	474	(3.2)	37	(1.3)	475	(3.3)	61	(1.3)	475	(3.4)	1	(0.2)	†	(†)
United States ^{5,11}	529	(2.4)	524	(2.7)	522	(2.5)	543	(2.4)	541	(2.6)	524	(2.6)	523	(2.2)	12	(0.5)	522	(3.6)	65	(1.2)	535	(2.8)	23	(1.3)	528	(3.2)
Yemen ¹⁰	224	(6.0)	—	(†)	—	(†)	—	(†)	—	(†)	—	(†)	—	(†)	30	(2.4)	243	(9.7)	64	(2.5)	245	(6.6)	6	(1.0)	218	(11.8)

—Not available.

†Not applicable.

‡Reporting standards not met.

¹Number includes whole numbers, fractions and decimals, number sentences, and patterns and relationships. *Geometric shapes and measures* includes lines and angles, two- and three-dimensional shapes, and location and movement. *Data display* includes reading and interpreting, and organizing and representing.

²Knowing addresses the facts, procedures, and concepts that students need to know to function mathematically. *Applying* focuses on students' ability to apply knowledge and conceptual understanding in order to solve problems or answer questions. *Reasoning* goes beyond the cognitive processes involved in solving routine problems to include unfamiliar situations, complex contexts, and multistep problems.

³High TMH indicates more than 30 minutes of mathematics homework assigned 3–4 times per week. *Medium TMH* includes all possible combinations of responses not included in the high or low categories. *Low TMH* indicates no more than 30 minutes of mathematics homework assigned no more than 2 times per week. TMH index data are provided by students.

⁴For the TMH index, data are available for at least 70 percent but less than 85 percent of the students.

⁵Met guidelines for sample participation rates only after substitute schools were included.

⁶National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁷Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁸Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁹Nearly satisfied guidelines for sample participation rates only after substitute schools were included.

¹⁰For the TMH index, data are available for at least 50 percent but less than 70 percent of the students.

¹¹National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 4 years of formal schooling, providing that the mean age at the time of testing was at least 9.5 years. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Mathematics Report*, by Ina V.S. Mullis et al. (This table was prepared May 2009.)

Table 413. Average eighth-grade mathematics scores overall and in content and cognitive domains, by country: 2007

Country or other jurisdiction	Mathematics overall	Content domain ¹				Cognitive domain ²		
		Number	Algebra	Geometry	Data and chance	Knowing	Applying	Reasoning
1	2	3	4	5	6	7	8	9
Algeria	387 (2.1)	403 (1.7)	349 (2.4)	432 (2.1)	371 (1.7)	371 (1.9)	412 (2.0)	— (†)
Armenia	499 (3.5)	492 (3.1)	532 (2.5)	493 (4.1)	427 (3.9)	507 (3.1)	493 (3.8)	489 (3.8)
Australia	496 (3.9)	503 (3.7)	471 (3.7)	487 (3.6)	525 (3.2)	487 (3.3)	500 (3.4)	502 (3.3)
Bahrain	398 (1.6)	388 (2.0)	403 (1.8)	412 (2.1)	418 (2.1)	395 (1.7)	403 (1.9)	413 (2.1)
Bosnia and Herzegovina	456 (2.7)	451 (3.0)	475 (3.2)	451 (3.5)	437 (2.3)	478 (2.9)	440 (2.6)	452 (2.9)
Botswana	364 (2.3)	366 (2.9)	394 (2.2)	325 (3.2)	384 (2.6)	376 (2.1)	351 (2.6)	— (†)
Bulgaria	464 (5.0)	458 (4.7)	476 (5.1)	468 (5.0)	440 (4.7)	477 (4.7)	458 (4.8)	455 (4.7)
Chinese Taipei	598 (4.5)	577 (4.2)	617 (5.4)	592 (4.6)	566 (3.6)	594 (4.5)	592 (4.2)	591 (4.1)
Colombia	380 (3.6)	369 (3.5)	390 (3.1)	371 (3.3)	405 (3.8)	364 (3.4)	384 (3.7)	416 (3.3)
Cyprus	465 (1.6)	464 (1.6)	468 (2.0)	458 (2.7)	464 (1.6)	468 (1.6)	465 (1.8)	461 (2.1)
Czech Republic	504 (2.4)	511 (2.5)	484 (2.4)	498 (2.7)	512 (2.8)	502 (2.5)	504 (2.7)	500 (2.6)
Egypt	391 (3.6)	393 (3.1)	409 (3.3)	406 (3.4)	384 (3.1)	392 (3.6)	393 (3.6)	396 (3.4)
El Salvador	340 (2.8)	355 (3.0)	331 (3.7)	318 (3.7)	362 (3.0)	336 (3.1)	347 (3.3)	— (†)
England ³	513 (4.8)	510 (5.0)	492 (4.6)	510 (4.4)	547 (5.0)	503 (4.0)	514 (4.9)	518 (4.3)
Georgia ⁴	410 (5.9)	421 (5.6)	421 (6.6)	409 (6.7)	373 (4.3)	427 (5.8)	401 (5.5)	389 (5.8)
Ghana	309 (4.4)	310 (3.9)	358 (3.6)	275 (4.9)	321 (3.6)	313 (4.6)	297 (4.2)	— (†)
Hong Kong SAR ^{5, 5}	572 (5.8)	567 (5.6)	565 (5.6)	570 (5.5)	549 (4.7)	574 (5.4)	569 (5.9)	557 (5.6)
Hungary	517 (3.5)	517 (3.6)	503 (3.6)	508 (3.6)	524 (3.3)	518 (3.3)	513 (3.1)	513 (3.2)
Indonesia	397 (3.8)	399 (3.7)	405 (3.5)	395 (4.5)	402 (3.6)	397 (4.0)	398 (3.7)	405 (3.3)
Iran, Islamic Republic of	403 (4.1)	395 (3.9)	408 (3.9)	423 (4.4)	415 (3.5)	403 (4.1)	402 (4.2)	427 (3.5)
Israel ⁶	463 (3.9)	469 (3.2)	470 (3.9)	436 (4.3)	465 (4.4)	473 (3.7)	456 (4.1)	462 (4.1)
Italy	480 (3.0)	478 (2.8)	460 (3.2)	490 (3.1)	491 (3.1)	476 (3.0)	483 (2.9)	483 (2.8)
Japan	570 (2.4)	551 (2.3)	559 (2.5)	573 (2.2)	573 (2.2)	560 (2.2)	565 (2.2)	568 (2.4)
Jordan	427 (4.1)	416 (4.3)	448 (4.1)	436 (3.9)	425 (3.8)	432 (4.2)	422 (4.1)	440 (3.6)
Korea, Republic of	597 (2.7)	583 (2.4)	596 (3.0)	587 (2.3)	580 (2.0)	596 (2.5)	595 (2.8)	579 (2.3)
Kuwait ⁷	354 (2.3)	347 (3.1)	354 (3.0)	385 (2.8)	366 (3.5)	347 (3.1)	361 (2.7)	— (†)
Lebanon	449 (4.0)	454 (3.4)	465 (3.2)	462 (4.0)	407 (4.4)	464 (3.9)	448 (4.6)	429 (4.0)
Lithuania ⁴	506 (2.3)	506 (2.7)	483 (2.7)	507 (2.6)	523 (2.3)	508 (2.5)	511 (2.4)	486 (2.5)
Malaysia	474 (5.0)	491 (5.1)	454 (4.3)	477 (5.6)	469 (4.1)	477 (4.8)	478 (4.9)	468 (3.8)
Malta	488 (1.2)	496 (1.3)	473 (1.4)	495 (1.1)	487 (1.4)	490 (1.6)	492 (1.0)	475 (1.3)
Norway	469 (2.0)	488 (2.0)	425 (2.8)	459 (2.3)	505 (2.5)	458 (1.8)	477 (2.2)	475 (2.3)
Oman	372 (3.4)	363 (2.7)	391 (3.2)	387 (3.0)	389 (3.0)	372 (3.5)	368 (3.0)	397 (3.3)
Palestinian National Authority	367 (3.5)	366 (3.2)	382 (3.4)	388 (3.8)	371 (2.9)	365 (3.8)	371 (3.4)	381 (3.5)
Qatar	307 (1.4)	334 (1.6)	312 (1.5)	301 (1.8)	305 (1.6)	307 (1.4)	305 (1.4)	— (†)
Romania	461 (4.1)	457 (3.5)	478 (4.6)	466 (4.0)	429 (3.7)	470 (4.2)	462 (4.0)	449 (4.6)
Russian Federation	512 (4.1)	507 (3.8)	518 (4.5)	510 (4.1)	487 (3.8)	521 (3.9)	510 (3.7)	497 (3.6)
Saudi Arabia	329 (2.9)	309 (3.3)	344 (2.8)	359 (2.6)	348 (2.2)	308 (2.6)	335 (2.3)	— (†)
Scotland ³	487 (3.7)	489 (3.7)	467 (3.7)	485 (3.9)	517 (3.5)	481 (3.3)	489 (3.7)	495 (3.3)
Serbia ^{4, 8}	486 (3.3)	478 (2.9)	500 (3.2)	486 (3.6)	458 (3.0)	500 (3.2)	478 (3.3)	474 (3.3)
Singapore	593 (3.8)	597 (3.5)	579 (3.7)	578 (3.4)	574 (3.9)	581 (3.4)	593 (3.6)	579 (4.1)
Slovenia	501 (2.1)	502 (2.3)	488 (2.4)	499 (2.4)	511 (2.3)	500 (2.2)	503 (2.0)	496 (2.5)
Sweden	491 (2.3)	507 (1.8)	456 (2.4)	472 (2.5)	526 (3.0)	478 (2.0)	497 (2.0)	490 (2.6)
Syrian Arab Republic	395 (3.8)	393 (3.4)	406 (3.7)	417 (3.4)	387 (2.7)	393 (4.2)	401 (3.4)	396 (3.4)
Thailand	441 (5.0)	444 (4.8)	433 (5.0)	442 (5.3)	453 (4.1)	436 (4.8)	446 (4.7)	456 (4.4)
Tunisia	420 (2.4)	425 (2.6)	423 (2.6)	437 (2.6)	411 (2.3)	421 (2.6)	423 (2.4)	425 (2.3)
Turkey	432 (4.8)	429 (4.0)	440 (5.1)	411 (5.1)	445 (4.4)	439 (4.8)	425 (4.5)	441 (4.2)
Ukraine	462 (3.6)	460 (3.7)	464 (3.9)	467 (3.6)	458 (3.5)	471 (3.5)	464 (3.5)	445 (3.8)
United States ^{3, 8}	508 (2.8)	510 (2.7)	501 (2.7)	480 (2.5)	531 (2.8)	514 (2.6)	503 (2.9)	505 (2.4)

—Not available.

†Not applicable.

¹Number includes whole numbers; fractions and decimals; integers; and ratio, proportion, and percent. *Algebra* includes patterns; algebraic expressions; and equations/formulas and functions. *Geometry* includes geometric shapes; geometric measurement; and location and movement. *Data and chance* includes data organization and representation; data interpretation; and chance.

²Knowing addresses the facts, procedures, and concepts that students need to know to function mathematically. *Applying* focuses on students' ability to apply knowledge and conceptual understanding in order to solve problems or answer questions. *Reasoning* goes beyond the cognitive processes involved in solving routine problems to include unfamiliar situations, complex contexts, and multistep problems.

³Met guidelines for sample participation rates only after substitute schools were included.

⁴National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁵Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁶National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁷Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁸National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Mathematics Report*, by Ina V.S. Mullis et al. (This table was prepared April 2009.)

Table 414. Percentage distribution of mathematics lesson time spent by eighth-grade students on various activities in a typical week, by country: 2007

Country or other jurisdiction	Reviewing homework	Listening to lecture-style presentations	Working problems with teacher's guidance	Working problems on their own without teacher's guidance	Listening to teacher re-teach and clarify content/procedures	Taking tests or quizzes	Participating in classroom management tasks not related to the lesson's content/purpose	Other student activities
1	2	3	4	5	6	7	8	9
International average	11 (0.1)	20 (0.1)	21 (0.1)	16 (0.1)	12 (0.1)	10 (0.1)	5 (0.1)	5 (0.1)
Algeria ¹	11 (0.6)	15 (1.2)	21 (1.2)	15 (1.0)	18 (1.0)	10 (0.8)	5 (0.4)	5 (0.6)
Armenia.....	10 (0.4)	23 (0.9)	19 (0.6)	16 (0.6)	11 (0.4)	10 (0.4)	5 (0.3)	5 (0.7)
Australia.....	7 (0.3)	17 (0.8)	23 (1.0)	24 (1.2)	10 (0.5)	7 (0.3)	8 (0.5)	4 (0.4)
Bahrain ²	11 (0.3)	23 (0.6)	18 (0.7)	12 (0.3)	15 (0.8)	11 (0.3)	6 (0.2)	6 (0.3)
Bosnia and Herzegovina ²	7 (0.4)	29 (1.5)	24 (1.0)	15 (0.7)	11 (0.6)	7 (0.5)	3 (0.3)	4 (0.5)
Botswana ²	13 (0.9)	13 (0.8)	20 (1.0)	21 (1.2)	10 (0.6)	10 (0.8)	6 (0.4)	6 (0.7)
Bulgaria.....	8 (0.4)	19 (1.1)	26 (1.0)	17 (0.7)	9 (0.4)	14 (0.6)	3 (0.3)	3 (0.3)
Chinese Taipei.....	13 (0.6)	41 (1.3)	13 (0.6)	7 (0.4)	10 (0.7)	8 (0.3)	5 (0.5)	3 (0.3)
Colombia.....	10 (0.3)	17 (0.9)	21 (0.8)	17 (0.7)	12 (0.7)	12 (0.5)	6 (0.4)	5 (0.5)
Cyprus ²	20 (0.6)	17 (0.6)	23 (0.6)	12 (0.4)	10 (0.3)	9 (0.2)	7 (0.2)	4 (0.3)
Czech Republic.....	6 (0.3)	20 (0.6)	25 (0.8)	21 (0.7)	9 (0.3)	11 (0.4)	4 (0.3)	4 (0.3)
Egypt ²	10 (0.4)	25 (1.2)	17 (0.7)	14 (0.8)	11 (0.5)	9 (0.4)	6 (0.4)	7 (0.4)
El Salvador.....	10 (0.5)	13 (0.8)	22 (0.8)	20 (0.8)	14 (0.6)	10 (0.5)	6 (0.4)	5 (0.3)
England ³	6 (0.3)	17 (0.6)	28 (1.2)	23 (1.2)	11 (0.7)	4 (0.3)	7 (0.5)	4 (0.5)
Georgia ⁴	11 (0.5)	21 (1.0)	19 (0.6)	15 (0.7)	11 (0.4)	12 (0.5)	5 (0.4)	6 (0.4)
Ghana ²	12 (0.6)	16 (1.0)	18 (0.7)	15 (0.7)	11 (0.6)	15 (0.7)	8 (0.5)	6 (0.4)
Hong Kong SAR ^{3,5}	11 (0.7)	35 (1.6)	16 (0.9)	13 (0.8)	10 (0.4)	8 (0.4)	4 (0.4)	3 (0.4)
Hungary.....	11 (0.4)	12 (0.7)	27 (0.9)	22 (0.8)	9 (0.5)	11 (0.3)	4 (0.3)	4 (0.4)
Indonesia ¹	11 (0.5)	20 (1.0)	19 (0.9)	15 (0.8)	11 (0.6)	14 (0.7)	6 (0.3)	6 (0.5)
Iran, Islamic Republic of.....	11 (0.5)	16 (0.8)	19 (0.8)	14 (0.7)	16 (0.8)	11 (0.5)	7 (0.5)	7 (0.4)
Israel ^{1,6}	14 (0.5)	16 (1.0)	22 (0.7)	19 (0.8)	11 (0.4)	10 (0.6)	5 (0.3)	3 (0.5)
Italy.....	16 (0.6)	22 (0.6)	18 (0.6)	12 (0.4)	14 (0.5)	11 (0.5)	5 (0.3)	3 (0.3)
Japan.....	7 (0.4)	30 (0.8)	26 (0.9)	12 (0.9)	14 (0.5)	7 (0.4)	2 (0.3)	2 (0.4)
Jordan.....	12 (0.4)	19 (0.7)	18 (0.6)	15 (0.4)	14 (0.5)	11 (0.4)	6 (0.3)	6 (0.3)
Korea, Republic of.....	6 (0.2)	33 (1.1)	18 (0.6)	17 (0.6)	11 (0.5)	7 (0.4)	5 (0.3)	4 (0.3)
Kuwait ^{1,7}	11 (0.6)	21 (1.6)	18 (0.9)	14 (0.8)	16 (1.1)	9 (0.6)	7 (0.6)	5 (0.5)
Lebanon ¹	22 (1.2)	16 (1.0)	20 (1.2)	10 (1.0)	12 (0.6)	11 (0.5)	5 (0.5)	4 (0.4)
Lithuania ⁴	9 (0.3)	9 (0.6)	26 (0.8)	25 (0.8)	11 (0.4)	14 (0.7)	3 (0.2)	3 (0.3)
Malaysia ²	13 (0.8)	22 (1.3)	18 (0.8)	13 (0.7)	12 (0.6)	9 (0.4)	7 (0.5)	5 (0.4)
Malta.....	18 (#)	19 (#)	20 (#)	15 (#)	12 (#)	5 (#)	8 (#)	3 (#)
Norway.....	8 (0.4)	22 (0.7)	22 (0.9)	25 (1.0)	11 (0.4)	6 (0.2)	4 (0.3)	3 (0.3)
Oman ²	11 (0.5)	18 (1.1)	20 (0.8)	14 (0.6)	15 (0.9)	11 (0.6)	6 (0.3)	6 (0.4)
Palestinian National Authority ²	13 (0.7)	20 (0.9)	18 (0.7)	14 (0.8)	13 (0.6)	9 (0.5)	6 (0.4)	6 (0.5)
Qatar ²	11 (#)	21 (#)	20 (#)	13 (#)	14 (#)	10 (#)	6 (#)	6 (#)
Romania.....	9 (0.4)	18 (0.8)	29 (0.8)	14 (0.5)	9 (0.3)	14 (0.7)	3 (0.2)	3 (0.3)
Russian Federation.....	10 (0.2)	18 (0.5)	22 (0.6)	20 (0.5)	9 (0.2)	16 (0.4)	1 (0.1)	4 (0.4)
Saudi Arabia ²	12 (0.5)	22 (1.2)	17 (0.9)	11 (0.5)	15 (0.9)	10 (0.5)	7 (0.4)	7 (0.4)
Scotland ³	8 (0.4)	21 (0.6)	25 (1.2)	24 (1.1)	8 (0.3)	3 (0.2)	6 (0.4)	4 (0.5)
Serbia ^{4,8}	6 (0.3)	24 (1.2)	26 (1.1)	20 (1.0)	10 (0.6)	8 (0.5)	3 (0.3)	3 (0.4)
Singapore.....	12 (0.4)	26 (0.8)	19 (0.5)	13 (0.4)	10 (0.3)	8 (0.3)	8 (0.4)	5 (0.4)
Slovenia.....	10 (0.3)	21 (0.5)	23 (0.6)	21 (0.6)	11 (0.4)	5 (0.3)	4 (0.2)	4 (0.4)
Sweden ²	4 (0.2)	15 (0.6)	33 (1.3)	28 (1.6)	9 (0.3)	6 (0.2)	3 (0.2)	4 (0.5)
Syrian Arab Republic ²	12 (0.6)	24 (1.3)	16 (0.8)	10 (0.5)	15 (0.8)	12 (0.6)	6 (0.4)	6 (0.6)
Thailand.....	12 (0.6)	21 (1.0)	15 (0.7)	12 (0.5)	15 (0.6)	10 (0.5)	8 (0.4)	7 (0.5)
Tunisia ¹	15 (1.0)	13 (1.2)	25 (1.4)	16 (1.3)	17 (1.0)	8 (0.7)	4 (0.4)	3 (0.3)
Turkey.....	8 (0.6)	20 (1.2)	19 (1.0)	13 (0.7)	14 (0.9)	8 (0.6)	10 (1.1)	8 (0.9)
Ukraine.....	11 (0.4)	14 (0.7)	19 (0.6)	18 (0.6)	17 (0.9)	14 (0.6)	2 (0.3)	4 (0.4)
United States ^{3,8}	13 (0.4)	21 (0.6)	19 (0.5)	17 (0.5)	10 (0.3)	11 (0.3)	5 (0.3)	5 (0.4)

#Rounds to zero.

¹Data are available for at least 50 percent but less than 70 percent of students.

²Data are available for at least 70 percent but less than 85 percent of students.

³Met guidelines for sample participation rates only after replacement schools were included.

⁴National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁵Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁶National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁷Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁸National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: Data provided by teachers. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Mathematics Report*, by Ina V.S. Mullis et al. (This table was prepared May 2009.)

Table 415. Mathematics class sizes and average scores of eighth-grade students, yearly mathematics instructional time, and mathematics instructional time as a percentage of total instructional time, by country: 2007

Country or other jurisdiction	Overall average class size	Percentage distribution and average scores of students, by class size						Students' average hours per year of mathematics instructional time	Mathematics instructional time as a percent of total instructional time
		1 to 24 students		25 to 40 students		41 or more students			
		Percent of students	Average score	Percent of students	Average score	Percent of students	Average score		
1	2	3	4	5	6	7	8	9	10
International average	29 (0.1)	30 (0.4)	439 (1.6)	59 (0.5)	456 (0.9)	11 (0.3)	449 (2.9)	120 (0.4)	12 (#)
Algeria.....	37 ¹ (0.7)	5 ¹ (2.1)	370 ¹ (10.8)	64 ¹ (4.2)	388 ¹ (2.8)	31 ¹ (3.9)	389 ¹ (3.2)	‡ (†)	13 ² (0.4)
Armenia.....	25 (0.4)	40 (4.0)	502 (6.2)	60 (3.9)	497 (4.2)	# (†)	‡ (†)	110 (3.9)	11 (0.4)
Australia.....	26 (0.3)	30 (2.8)	471 (6.3)	70 (2.9)	511 (5.3)	# (†)	‡ (†)	131 ¹ (2.0)	13 ¹ (0.2)
Bahrain.....	31 (0.1)	6 (0.7)	449 (6.3)	94 (0.7)	393 (1.8)	# (†)	‡ (†)	96 ² (2.8)	9 ¹ (0.3)
Bosnia and Herzegovina.....	24 (0.4)	48 (3.6)	454 (3.9)	52 (3.6)	458 (4.4)	# (†)	‡ (†)	102 ¹ (0.9)	11 ¹ (0.3)
Botswana.....	38 (0.4)	1 (0.6)	‡ (†)	73 (3.8)	367 (3.1)	26 (3.7)	355 (5.3)	138 ¹ (1.5)	13 ¹ (0.3)
Bulgaria.....	22 (0.3)	59 (3.5)	441 (7.2)	41 (3.5)	507 (7.1)	# (†)	‡ (†)	93 ¹ (2.0)	12 ¹ (0.3)
Chinese Taipei.....	35 (0.5)	4 (1.8)	549 (29.9)	85 (3.3)	593 (4.6)	11 (2.7)	660 (11.0)	158 (3.5)	14 (0.2)
Colombia.....	35 (0.6)	13 (2.5)	357 (16.1)	66 (4.6)	386 (5.1)	21 (3.9)	383 (5.9)	151 ¹ (4.7)	12 ¹ (0.7)
Cyprus.....	24 (0.2)	54 (2.7)	466 (2.4)	45 (2.7)	462 (2.6)	1 (#)	‡ (†)	72 ² (0.3)	8 ² (#)
Czech Republic.....	24 (0.3)	49 (4.3)	494 (3.8)	51 (4.3)	514 (3.8)	# (†)	‡ (†)	128 (2.1)	14 ¹ (0.2)
Egypt.....	39 (0.6)	4 (1.5)	410 (12.8)	53 (3.6)	395 (4.9)	43 (3.7)	386 (5.6)	93 ¹ (4.3)	8 (0.4)
El Salvador.....	29 (0.8)	35 (3.7)	323 (5.7)	51 (4.0)	348 (3.8)	14 (3.2)	348 (10.0)	142 (2.6)	17 (0.5)
England ³	26 (0.6)	30 (3.8)	469 (8.6)	69 (3.7)	533 (5.8)	1 (1.0)	‡ (†)	113 (1.7)	12 (0.2)
Georgia ⁴	23 (0.6)	52 (5.2)	412 (7.4)	47 (5.3)	408 (9.2)	1 (0.6)	‡ (†)	110 (0.8)	13 (0.2)
Ghana.....	46 (1.9)	13 (2.4)	299 (11.3)	40 (4.2)	299 (7.9)	47 (4.3)	321 (7.7)	146 ¹ (5.0)	13 (0.5)
Hong Kong SAR ^{3, 5}	37 (0.5)	10 (1.9)	513 (23.5)	44 (4.3)	555 (10.1)	46 (4.1)	604 (7.2)	148 ² (3.8)	14 ² (0.4)
Hungary.....	21 (0.5)	72 (3.4)	510 (4.7)	27 (3.3)	533 (8.3)	1 (0.9)	‡ (†)	99 ² (1.3)	13 ² (0.2)
Indonesia.....	38 (0.9)	6 (1.7)	374 (13.7)	61 (4.2)	400 (5.1)	33 (4.1)	396 (8.6)	136 ² (4.7)	11 ² (0.3)
Iran, Islamic Republic of.....	26 (0.5)	35 (3.2)	386 (5.5)	64 (3.3)	411 (5.7)	1 (1.1)	‡ (†)	99 ² (2.3)	11 ² (0.3)
Israel ⁶	33 ² (0.4)	5 ² (1.2)	473 ² (22.6)	92 ² (2.2)	467 ² (4.7)	3 ² (1.8)	496 ² (42.7)	‡ (†)	12 ² (0.3)
Italy.....	22 (0.2)	73 (2.9)	475 (3.4)	27 (2.9)	493 (5.7)	# (†)	‡ (†)	136 ¹ (1.5)	13 ¹ (0.2)
Japan.....	34 (0.5)	10 (2.1)	555 (5.9)	85 (2.7)	567 (2.9)	5 (1.6)	645 (24.7)	105 (1.6)	10 (0.1)
Jordan.....	35 (0.7)	13 (2.5)	431 (17.4)	58 (4.4)	427 (6.2)	29 (4.1)	425 (7.8)	141 (1.1)	14 (0.2)
Korea, Republic of.....	37 (0.4)	4 (1.4)	558 (15.6)	78 (2.6)	596 (3.1)	18 (2.3)	607 (7.2)	104 ² (0.7)	11 ² (0.2)
Kuwait ⁷	30 ² (0.5)	12 ² (3.3)	356 ² (9.9)	87 ² (3.2)	357 ² (2.8)	1 ² (#)	‡ (†)	‡ (†)	6 ² (0.6)
Lebanon.....	26 (0.6)	38 (4.3)	426 (6.3)	58 (4.5)	464 (7.1)	4 (1.2)	423 (14.4)	‡ (†)	‡ (†)
Lithuania ⁴	25 (0.3)	35 (3.2)	480 (4.1)	65 (3.2)	520 (3.6)	# (†)	‡ (†)	116 ¹ (0.9)	13 ¹ (0.2)
Malaysia.....	36 (0.4)	1 (0.8)	‡ (†)	80 (3.2)	470 (5.8)	19 (3.1)	486 (10.9)	123 (1.0)	11 (0.1)
Malta.....	22 (#)	71 (0.2)	472 (1.4)	29 (0.2)	523 (1.9)	# (†)	‡ (†)	128 (0.1)	13 (#)
Norway.....	25 (0.4)	47 (3.9)	468 (3.4)	51 (4.0)	471 (2.4)	1 (1.0)	‡ (†)	113 (1.6)	13 (0.2)
Oman.....	32 (0.4)	10 (2.2)	363 (8.8)	90 (2.2)	373 (3.6)	# (†)	‡ (†)	150 ² (4.5)	15 (0.5)
Palestinian National Authority.....	38 (0.5)	8 (1.6)	383 (11.7)	51 (4.0)	367 (5.2)	41 (3.6)	364 (6.0)	100 ² (4.0)	11 ² (0.4)
Qatar.....	27 (#)	20 (0.1)	300 (3.5)	77 (0.2)	309 (1.8)	2 (#)	‡ (†)	138 ² (0.1)	13 ² (#)
Romania.....	21 (0.3)	76 (2.9)	450 (4.5)	24 (2.9)	500 (8.8)	# (†)	‡ (†)	122 ¹ (1.9)	14 ¹ (0.3)
Russian Federation.....	21 (0.3)	63 (2.8)	499 (4.6)	37 (2.8)	533 (6.0)	# (†)	‡ (†)	131 ¹ (1.4)	15 ¹ (0.2)
Saudi Arabia.....	30 (0.8)	28 (3.6)	330 (5.1)	61 (4.0)	329 (4.2)	11 (2.6)	322 (11.4)	107 ² (3.2)	11 ¹ (0.3)
Scotland ³	25 (0.5)	43 (3.2)	449 (6.3)	56 (3.1)	517 (4.8)	1 (0.8)	‡ (†)	135 ² (2.2)	13 ² (0.2)
Serbia ^{4, 8}	24 (0.4)	53 (3.9)	480 (4.8)	47 (3.9)	490 (5.1)	# (†)	‡ (†)	103 ² (0.8)	13 ² (0.2)
Singapore.....	38 (0.2)	2 (0.6)	‡ (†)	76 (2.5)	593 (5.2)	22 (2.5)	592 (7.2)	124 (1.0)	13 (0.1)
Slovenia.....	16 (0.2)	94 (1.0)	500 (2.3)	6 (1.0)	513 (8.2)	# (†)	‡ (†)	113 (0.4)	13 (0.1)
Sweden.....	23 (0.5)	63 (3.6)	488 (2.9)	35 (3.4)	499 (3.7)	2 (1.1)	‡ (†)	93 ¹ (1.4)	10 ¹ (0.2)
Syrian Arab Republic.....	31 (0.6)	24 (3.6)	405 (8.7)	65 (4.2)	391 (4.7)	11 (2.6)	392 (11.3)	76 ¹ (3.4)	10 (0.4)
Thailand.....	38 (0.6)	11 (2.4)	406 (11.2)	47 (3.7)	416 (5.7)	42 (3.1)	479 (9.3)	124 (2.3)	10 (0.2)
Tunisia.....	32 (0.4)	3 (1.2)	398 (6.9)	96 (1.6)	421 (2.4)	1 (1.0)	‡ (†)	126 ² (2.1)	10 ¹ (0.2)
Turkey.....	33 (0.7)	18 (3.4)	423 (11.7)	61 (3.9)	434 (6.5)	20 (2.7)	436 (11.3)	95 (0.4)	11 (0.3)
Ukraine.....	25 (0.4)	36 (3.2)	447 (6.4)	63 (3.1)	471 (4.8)	1 (0.8)	‡ (†)	130 (2.0)	15 (0.2)
United States ^{3, 8}	24 (0.4)	57 (2.3)	511 (4.0)	41 (2.3)	506 (5.0)	2 (0.9)	‡ (†)	148 ² (2.3)	13 ² (0.2)

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Data are available for at least 70 percent but less than 85 percent of students.

²Data are available for at least 50 percent but less than 70 percent of students.

³Met guidelines for sample participation rates only after substitute schools were included.

⁴National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁵Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁶National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁷Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁸National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: Class size and implemented instructional time for mathematics provided by teachers; total instructional time provided by schools. TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Mathematics Report*, by Ina V.S. Mullis et al. (This table was prepared June 2009.)

Table 416. Average mathematics scores and percentage distribution of eighth-graders, by index of self-confidence in learning mathematics, index of time spent doing mathematics homework, and country: 2007

Country or other jurisdiction	Index of students' self-confidence in learning mathematics (SCM) ¹						Index of time spent doing mathematics homework (TMH) in a normal school week ²					
	High SCM		Medium SCM		Low SCM		High TMH		Medium TMH		Low TMH	
	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score	Percent of students	Average score
1	2	3	4	5	6	7	8	9	10	11	12	13
International average.....	43 (0.2)	492 (0.6)	37 (0.1)	433 (0.6)	20 (0.1)	412 (0.7)	27 (0.2)	458 (0.9)	53 (0.2)	457 (0.7)	20 (0.2)	441 (1.1)
Algeria.....	46 (1.0)	412 (2.2)	41 (0.9)	372 (2.7)	12 (0.6)	358 (2.7)	— (†)	— (†)	— (†)	— (†)	— (†)	— (†)
Armenia ³	37 (0.9)	521 (4.0)	38 (1.1)	496 (4.6)	26 (1.0)	485 (4.7)	32 (1.2)	501 (4.6)	64 (1.2)	502 (4.4)	4 (0.5)	499 (12.7)
Australia.....	45 (1.2)	539 (4.8)	35 (0.8)	472 (4.1)	19 (0.9)	445 (3.7)	15 (1.1)	523 (6.6)	44 (1.5)	511 (5.2)	42 (2.0)	481 (4.6)
Bahrain.....	53 (0.8)	435 (2.1)	33 (0.7)	366 (2.4)	15 (0.6)	350 (3.0)	15 (0.7)	391 (4.0)	67 (1.1)	404 (1.8)	18 (1.0)	405 (5.2)
Bosnia and Herzegovina.....	41 (1.2)	502 (2.6)	27 (0.8)	441 (3.2)	32 (1.1)	422 (3.5)	24 (1.2)	466 (4.0)	51 (1.2)	458 (3.2)	25 (1.4)	459 (3.8)
Botswana.....	42 (1.0)	385 (3.0)	41 (0.9)	355 (2.6)	17 (0.7)	354 (3.6)	29 (0.9)	383 (3.0)	50 (0.9)	365 (2.8)	20 (1.0)	356 (3.4)
Bulgaria.....	37 (1.3)	516 (5.5)	38 (1.1)	452 (5.3)	25 (1.1)	430 (7.6)	36 (1.4)	475 (6.4)	48 (1.2)	472 (5.4)	15 (1.5)	458 (8.1)
Chinese Taipei.....	27 (1.1)	674 (3.7)	27 (0.7)	610 (5.0)	46 (1.2)	547 (4.4)	31 (1.9)	628 (4.0)	46 (1.3)	613 (4.1)	23 (1.7)	563 (8.7)
Colombia.....	46 (1.3)	409 (3.6)	40 (1.2)	363 (3.8)	13 (0.7)	351 (4.5)	36 (1.3)	386 (4.5)	48 (0.9)	379 (3.8)	16 (1.0)	378 (6.0)
Cyprus.....	50 (1.0)	508 (1.7)	30 (0.8)	437 (2.5)	20 (0.7)	411 (3.3)	20 (0.9)	463 (4.1)	70 (0.9)	480 (1.8)	11 (0.7)	451 (4.8)
Czech Republic.....	43 (0.9)	542 (2.6)	31 (0.7)	490 (2.8)	25 (0.8)	456 (3.1)	5 (0.6)	473 (6.4)	46 (2.1)	504 (4.1)	49 (2.4)	511 (3.4)
Egypt.....	55 (1.5)	422 (3.7)	38 (1.4)	368 (3.8)	7 (0.4)	356 (8.0)	30 (1.1)	381 (4.6)	58 (1.1)	404 (3.6)	13 (1.0)	416 (6.8)
El Salvador.....	35 (1.1)	377 (3.2)	52 (1.1)	327 (2.7)	13 (0.8)	323 (4.5)	46 (1.4)	351 (3.2)	45 (1.0)	337 (3.3)	9 (0.7)	337 (5.2)
England ⁴	53 (1.4)	543 (4.9)	32 (1.0)	494 (4.7)	15 (0.8)	457 (5.5)	5 (0.6)	518 (11.0)	31 (1.3)	530 (6.8)	65 (1.7)	513 (4.9)
Georgia ⁵	44 (1.8)	455 (4.9)	37 (1.5)	401 (7.5)	19 (1.0)	379 (7.0)	3 ³ (1.5)	432 ³ (5.1)	62 ³ (1.6)	414 ³ (7.0)	4 ³ (0.5)	372 ³ (14.2)
Ghana.....	44 (1.3)	341 (4.8)	46 (0.9)	292 (4.8)	11 (0.8)	285 (7.4)	28 (1.2)	332 (5.2)	55 (1.0)	307 (4.8)	16 (1.0)	313 (5.4)
Hong Kong SAR ^{4,6}	30 (1.1)	622 (5.1)	40 (1.0)	562 (6.7)	30 (0.7)	539 (5.8)	34 (1.6)	589 (4.9)	48 (1.2)	576 (5.9)	18 (1.4)	555 (9.0)
Hungary.....	42 (1.0)	566 (3.5)	32 (0.9)	499 (4.2)	26 (1.0)	464 (3.7)	16 (0.9)	517 (5.6)	78 (1.2)	524 (3.4)	6 (1.0)	488 (8.0)
Indonesia.....	28 (1.0)	405 (5.4)	58 (1.0)	394 (3.8)	14 (0.8)	401 (5.0)	29 (1.1)	417 (5.0)	53 (0.9)	397 (4.0)	18 (0.8)	384 (5.1)
Iran, Islamic Republic of.....	45 (1.2)	443 (5.0)	40 (1.1)	380 (3.7)	14 (0.9)	368 (6.1)	19 (1.4)	440 (7.7)	55 (1.6)	404 (3.8)	26 (1.5)	378 (5.0)
Israel ⁷	59 (1.0)	495 (4.1)	29 (0.9)	432 (5.3)	12 (0.7)	417 (7.2)	34 (1.5)	485 (4.9)	53 (1.4)	472 (4.1)	13 (0.9)	448 (9.0)
Italy.....	48 (1.0)	514 (3.1)	28 (0.7)	462 (3.6)	24 (0.9)	434 (3.7)	45 (1.3)	475 (3.1)	47 (1.2)	488 (4.1)	7 (0.6)	483 (5.5)
Japan.....	17 (0.6)	638 (3.9)	35 (0.8)	586 (2.9)	48 (0.9)	535 (2.6)	8 (1.1)	566 (10.0)	36 (1.3)	569 (3.3)	57 (2.0)	574 (3.3)
Jordan.....	58 (1.5)	468 (3.7)	34 (1.2)	388 (4.2)	9 (0.6)	361 (6.6)	26 (1.2)	424 (5.0)	62 (1.1)	439 (4.4)	12 (0.9)	422 (7.1)
Korea, Republic of.....	29 (0.8)	668 (2.6)	34 (0.7)	606 (3.1)	38 (0.8)	536 (2.8)	6 (0.7)	591 (5.8)	31 (1.5)	595 (3.7)	62 (1.7)	605 (3.1)
Kuwait ⁸	54 (0.9)	381 (2.5)	35 (0.9)	331 (2.6)	11 (0.6)	319 (5.7)	14 (0.7)	334 (5.1)	58 (1.3)	358 (2.7)	27 (1.5)	373 (3.9)
Lebanon.....	49 (1.2)	483 (4.1)	39 (1.3)	425 (4.2)	12 (0.9)	416 (4.9)	25 ³ (1.3)	445 ³ (6.0)	67 ³ (1.4)	460 ³ (3.9)	8 ³ (0.9)	434 ³ (9.0)
Lithuania ⁵	41 (1.0)	556 (2.7)	34 (0.9)	481 (2.9)	25 (0.9)	461 (3.1)	27 (1.1)	498 (2.8)	69 (1.1)	515 (2.7)	4 (0.8)	481 (8.8)
Malaysia.....	27 (1.4)	521 (5.3)	50 (1.2)	458 (5.1)	23 (0.8)	453 (4.5)	41 (1.1)	486 (5.1)	47 (1.0)	473 (5.1)	12 (0.9)	446 (9.1)
Malta.....	38 (0.7)	536 (2.1)	35 (0.7)	467 (2.0)	27 (0.6)	449 (2.2)	24 (0.7)	508 (2.8)	71 (0.7)	498 (1.7)	5 (0.3)	402 (7.4)
Norway.....	50 (0.8)	505 (2.1)	31 (0.7)	450 (2.1)	19 (0.7)	415 (2.2)	25 (1.5)	466 (2.6)	53 (1.3)	474 (2.0)	22 (1.6)	473 (3.5)
Oman.....	45 (1.1)	415 (3.4)	47 (1.1)	346 (3.7)	8 (0.5)	327 (5.6)	12 (0.7)	374 (5.2)	73 (1.3)	383 (3.1)	15 (1.4)	367 (7.9)
Palestinian National Authority.....	44 (1.1)	414 (3.6)	44 (1.0)	341 (4.3)	13 (0.7)	333 (5.0)	24 (1.1)	374 (4.4)	68 (1.2)	378 (3.8)	7 (0.8)	345 (9.1)
Qatar.....	55 (0.6)	339 (2.3)	34 (0.6)	279 (2.3)	11 (0.3)	267 (3.4)	16 (0.4)	300 (3.2)	67 (0.5)	319 (1.5)	17 (0.4)	308 (4.0)
Romania.....	33 (1.2)	517 (5.3)	41 (1.1)	449 (4.6)	27 (1.2)	426 (4.4)	66 (1.3)	488 (4.0)	29 (1.3)	433 (5.1)	5 (0.5)	432 (11.4)
Russian Federation.....	41 (1.1)	560 (4.3)	31 (0.8)	496 (4.9)	28 (0.8)	466 (4.1)	50 (1.3)	510 (4.4)	49 (1.2)	520 (4.2)	2 (0.3)	† (†)
Saudi Arabia.....	47 (1.2)	361 (3.2)	42 (1.0)	310 (3.5)	11 (0.7)	294 (4.9)	13 (0.8)	316 (4.8)	61 (1.8)	339 (3.3)	26 (1.8)	334 (4.4)
Scotland ⁴	53 (1.3)	515 (4.0)	33 (1.0)	465 (3.6)	14 (0.7)	442 (4.6)	8 (0.7)	519 (7.2)	41 (1.8)	505 (4.4)	51 (2.1)	478 (4.3)
Serbia ^{5,9}	48 (1.3)	539 (3.4)	25 (0.8)	464 (3.6)	27 (1.1)	426 (3.9)	31 (1.4)	490 (5.0)	40 (1.3)	496 (4.3)	28 (1.4)	481 (4.3)
Singapore.....	41 (1.0)	638 (3.3)	34 (0.9)	572 (4.6)	25 (0.8)	547 (4.7)	42 (1.0)	616 (3.2)	43 (0.9)	595 (4.3)	16 (0.9)	547 (6.9)
Slovenia.....	40 (1.1)	541 (2.9)	41 (0.9)	485 (2.2)	19 (0.8)	458 (3.2)	20 (1.1)	503 (2.6)	64 (1.3)	505 (2.4)	16 (1.0)	498 (4.1)
Sweden.....	49 (1.0)	528 (2.6)	35 (0.7)	468 (2.4)	16 (0.6)	438 (3.6)	3 ³ (0.4)	461 ³ (7.7)	35 ³ (1.2)	490 ³ (3.1)	62 ³ (1.3)	498 ³ (2.4)
Syrian Arab Republic.....	47 (1.1)	429 (3.5)	40 (0.9)	378 (4.2)	13 (0.7)	361 (4.7)	44 ³ (1.1)	408 ³ (3.9)	48 ³ (0.9)	399 ³ (3.8)	8 ³ (0.6)	409 ³ (6.8)
Thailand.....	22 (1.1)	489 (6.9)	60 (0.9)	428 (4.6)	18 (0.7)	430 (5.6)	39 (1.4)	461 (5.6)	45 (1.1)	435 (5.4)	15 (1.0)	419 (6.7)
Tunisia.....	45 (1.3)	452 (2.8)	34 (0.8)	400 (2.6)	21 (1.0)	391 (2.7)	45 (1.3)	425 (2.8)	44 (1.0)	419 (2.9)	11 (0.9)	417 (4.1)
Turkey.....	39 (1.1)	494 (6.1)	36 (0.8)	403 (4.7)	24 (1.0)	384 (4.3)	22 (1.1)	428 (5.8)	49 (1.0)	433 (5.0)	29 (1.2)	443 (5.9)
Ukraine.....	36 (1.2)	523 (3.8)	36 (0.9)	448 (3.5)	28 (1.1)	423 (3.2)	40 (1.2)	468 (4.5)	53 (1.1)	467 (3.5)	7 (0.7)	466 (6.8)
United States ^{4,9}	53 (1.0)	537 (2.5)	28 (0.7)	487 (3.2)	19 (0.7)	462 (3.0)	26 (1.1)	522 (3.8)	62 (1.2)	510 (3.0)	12 (1.2)	484 (4.3)

—Not available.

†Not applicable.

‡Reporting standards not met.

¹Index based on students' responses to four statements: 1) I usually do well in mathematics; 2) Mathematics is more difficult for me than for many of my classmates (reverse scored); 3) Mathematics is not one of my strengths (reverse scored); 4) I learn things quickly in mathematics. Average is computed across the four items based on a 4-point scale: 1. Agree a lot; 2. Agree a little; 3. Disagree a little; 4. Disagree a lot. *High SCM* indicates agreeing a little or a lot on average across the four statements. *Low SCM* indicates disagreeing a little or a lot on average across the four statements. *Medium SCM* indicates mixed attitudes across the four statements.

²Index based on students' reports on frequency of and amount of time spent on homework. *High TMH* indicates more than 30 minutes of mathematics homework assigned 3–4 times per week. *Medium TMH* includes all possible combinations of responses not included in the high or low categories. *Low TMH* indicates no more than 30 minutes of mathematics homework assigned no more than 2 times per week.

³Data are available for at least 70 percent but less than 85 percent of students.

⁴Met guidelines for sample participation rates only after substitute schools were included.

⁵National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁶Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁷National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁸Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁹National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Mathematics Report*, by Ina V. S. Mullis et al. (This table was prepared July 2009.)

Table 417. Average fourth-grade science scores overall and in content and cognitive domains, yearly science instructional time, and science instructional time as a percentage of total instructional time, by country: 2007

Country or other jurisdiction	Average score							Students' average hours per year of science instructional time	Science instructional time as a percent of total instructional time
	Science overall	Content domain ¹			Cognitive domain ²				
		Life science	Physical science	Earth science	Knowing	Applying	Reasoning		
1	2	3	4	5	6	7	8	9	10
International average.....	— (†)	— (†)	— (†)	— (†)	— (†)	— (†)	— (†)	67 (0.4)	8 (#)
Algeria.....	354 (6.0)	351 (6.2)	377 (5.3)	365 (5.7)	350 (5.8)	379 (5.7)	357 (5.8)	67 ³ (4.7)	6 ⁴ (0.4)
Armenia.....	484 (5.7)	489 (5.9)	492 (5.1)	479 (5.5)	486 (5.2)	487 (5.6)	484 (5.3)	81 (4.0)	9 (0.4)
Australia.....	527 (3.3)	528 (3.4)	522 (3.1)	534 (3.2)	529 (3.1)	523 (3.3)	530 (3.4)	46 ³ (2.2)	5 ³ (0.2)
Austria.....	526 (2.5)	526 (2.0)	514 (2.4)	532 (1.9)	529 (2.0)	526 (2.2)	513 (2.3)	92 (1.0)	12 (0.1)
Chinese Taipei.....	557 (2.0)	541 (2.1)	559 (2.5)	553 (1.9)	536 (2.5)	556 (2.1)	571 (2.4)	79 ³ (1.5)	9 ⁴ (0.2)
Colombia.....	400 (5.4)	408 (5.2)	411 (4.9)	401 (5.6)	409 (5.5)	404 (5.4)	409 (5.1)	139 ⁴ (3.9)	13 ⁴ (0.4)
Czech Republic.....	515 (3.1)	520 (2.9)	511 (2.8)	518 (2.6)	520 (2.7)	516 (3.1)	510 (2.9)	41 ⁴ (1.3)	5 (0.2)
Denmark ⁵	517 (2.9)	527 (2.4)	502 (2.5)	522 (2.7)	516 (2.9)	515 (2.6)	525 (3.8)	59 ⁴ (0.9)	7 ³ (0.1)
El Salvador.....	390 (3.4)	410 (3.6)	392 (3.8)	393 (3.3)	410 (3.9)	393 (3.6)	376 (4.0)	135 (3.5)	15 (0.5)
England.....	542 (2.9)	532 (2.7)	543 (2.7)	538 (2.9)	543 (2.9)	536 (2.7)	537 (2.7)	70 ⁴ (1.7)	7 (0.2)
Georgia ⁶	418 (4.6)	427 (3.5)	414 (4.0)	432 (5.0)	434 (3.8)	424 (4.1)	388 (4.9)	35 ⁴ (2.8)	5 ³ (0.5)
Germany.....	528 (2.4)	529 (2.0)	524 (2.5)	524 (2.4)	527 (2.2)	526 (2.2)	525 (2.3)	106 ⁴ (2.1)	13 ⁴ (0.2)
Hong Kong SAR ⁷	554 (3.5)	532 (3.5)	558 (3.5)	560 (3.2)	546 (3.2)	549 (3.0)	561 (4.4)	72 ³ (5.2)	7 ³ (0.5)
Hungary.....	536 (3.3)	548 (2.8)	529 (3.3)	517 (3.5)	540 (3.0)	531 (3.2)	529 (3.7)	54 ³ (1.5)	8 ³ (0.2)
Iran, Islamic Republic of.....	436 (4.3)	442 (4.4)	454 (4.2)	433 (4.1)	437 (4.3)	451 (4.3)	436 (4.3)	83 (2.4)	12 (0.4)
Italy.....	535 (3.2)	549 (3.0)	521 (3.1)	526 (3.0)	530 (3.9)	539 (3.1)	526 (3.8)	68 ⁴ (1.4)	6 ⁴ (0.1)
Japan.....	548 (2.1)	530 (2.0)	564 (2.3)	529 (2.7)	528 (2.2)	542 (2.7)	567 (2.1)	82 (1.2)	9 (0.1)
Kazakhstan ⁶	533 (5.6)	528 (5.0)	528 (5.8)	534 (5.2)	534 (5.8)	536 (4.9)	519 (5.3)	52 (1.3)	7 (0.2)
Kuwait ⁸	348 (4.4)	353 (4.9)	345 (5.2)	363 (3.8)	360 (3.9)	338 (4.3)	331 (5.4)	‡ (†)	‡ (†)
Latvia ⁶	542 (2.3)	535 (2.1)	544 (2.4)	536 (2.2)	540 (2.2)	535 (2.4)	551 (2.7)	48 ⁴ (1.2)	7 ⁴ (0.2)
Lithuania ⁶	514 (2.4)	516 (1.8)	514 (1.4)	511 (2.5)	511 (1.7)	515 (2.8)	524 (2.4)	51 ⁴ (0.6)	8 (0.1)
Morocco.....	297 (5.9)	292 (6.8)	324 (5.5)	293 (6.2)	291 (5.8)	311 (6.3)	318 (5.4)	54 ³ (4.2)	5 ³ (0.3)
Netherlands ⁹	523 (2.6)	536 (2.2)	503 (2.3)	524 (2.5)	518 (2.5)	525 (2.2)	525 (2.3)	33 ³ (1.5)	3 ³ (0.1)
New Zealand.....	504 (2.6)	506 (2.5)	498 (2.5)	515 (2.6)	511 (2.5)	500 (2.4)	505 (2.9)	45 ³ (2.5)	5 ³ (0.3)
Norway.....	477 (3.5)	487 (2.5)	469 (2.7)	497 (2.9)	485 (2.4)	478 (2.8)	480 (3.2)	44 ⁴ (1.9)	5 ⁴ (0.2)
Qatar.....	294 (2.6)	291 (1.4)	303 (2.1)	305 (2.2)	304 (2.3)	283 (2.7)	293 (2.9)	‡ (†)	‡ (†)
Russian Federation.....	546 (4.8)	539 (4.1)	547 (4.6)	536 (4.3)	542 (4.8)	546 (4.7)	542 (4.6)	40 ³ (1.1)	6 ³ (0.2)
Scotland ⁹	500 (2.3)	504 (2.2)	499 (1.9)	508 (2.5)	511 (2.0)	494 (2.4)	501 (2.2)	51 ³ (3.1)	5 ⁴ (0.3)
Singapore.....	587 (4.1)	582 (4.1)	585 (3.9)	554 (3.3)	587 (4.1)	579 (3.7)	568 (3.7)	82 (0.9)	9 (0.1)
Slovak Republic.....	526 (4.8)	532 (4.0)	513 (4.6)	530 (4.8)	527 (4.4)	527 (4.4)	513 (4.9)	59 ⁴ (0.7)	7 (0.1)
Slovenia.....	518 (1.9)	511 (2.2)	530 (1.6)	517 (2.5)	511 (1.6)	525 (2.1)	527 (1.8)	84 ⁴ (0.8)	12 ⁴ (0.1)
Sweden.....	525 (2.9)	531 (2.5)	508 (2.7)	535 (2.7)	526 (2.5)	521 (2.9)	527 (3.5)	56 ⁴ (2.5)	6 ⁴ (0.3)
Tunisia.....	318 (5.9)	323 (5.6)	340 (6.4)	325 (5.8)	316 (5.9)	329 (6.3)	349 (5.3)	71 ³ (2.7)	8 ³ (0.3)
Ukraine.....	474 (3.1)	482 (2.5)	475 (2.7)	474 (3.1)	476 (2.4)	477 (3.2)	478 (3.0)	33 (1.1)	5 (0.2)
United States ^{5,10}	539 (2.7)	540 (2.5)	534 (2.3)	533 (2.6)	541 (2.3)	533 (2.8)	535 (2.6)	89 ⁴ (2.5)	8 ⁴ (0.2)
Yemen.....	197 (7.2)	— (†)	— (†)	— (†)	— (†)	— (†)	— (†)	83 ³ (5.7)	10 ⁴ (0.5)

—Not available.

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Life science includes characteristics and life processes of living things; life cycles, reproduction, and heredity; interaction with the environment; ecosystems; and human health. Physical science includes classification and properties of matter; physical states and changes in matter; energy sources, heat, and temperature; light and sound; electricity and magnetism; and forces and motion. Earth science includes Earth's structure, physical characteristics, and resources; Earth's processes, cycles, and history; and Earth in the solar system.

²Knowing addresses the facts, information, concepts, tools, and procedures that students need to know to function scientifically. Applying focuses on students' ability to apply knowledge and conceptual understanding to solve problems or answer questions. Reasoning goes beyond the cognitive processes involved in solving routine problems to include more complex tasks.

³Data are available for at least 50 percent but less than 70 percent of the students.

⁴Data are available for at least 70 percent but less than 85 percent of the students.

⁵Met guidelines for sample participation rates only after replacement schools were included.

⁶National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁷Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁸Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁹Nearly satisfied guidelines for sample participation rates only after replacement schools were included.

¹⁰National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: Implemented instructional time for science provided by teachers; total instructional time provided by schools. TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 4 years of formal schooling, providing that the mean age at the time of testing was at least 9.5 years. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Science Report*, by Michael O. Martin et al. (This table was prepared June 2009.)

Table 418. Average eighth-grade science scores overall and in content and cognitive domains, by country: 2007

Country or other jurisdiction	Science overall		Content domain ¹				Cognitive domain ²		
			Biology	Chemistry	Physics	Earth science	Knowing	Applying	Reasoning
1	2	3	4	5	6	7	8	9	
Algeria	408 (1.7)	411 (1.9)	414 (1.7)	397 (2.2)	413 (1.6)	409 (1.9)	410 (2.4)	414 (1.9)	
Armenia	488 (5.8)	490 (5.9)	478 (6.3)	503 (5.6)	475 (5.8)	493 (6.4)	502 (5.4)	459 (6.5)	
Australia	515 (3.6)	518 (3.4)	505 (3.6)	508 (4.2)	519 (3.8)	501 (3.1)	510 (3.2)	530 (3.6)	
Bahrain	467 (1.7)	473 (2.0)	468 (2.4)	466 (1.5)	465 (2.4)	469 (2.1)	468 (2.1)	469 (2.0)	
Bosnia and Herzegovina	466 (2.8)	464 (3.0)	468 (2.9)	463 (3.1)	469 (3.4)	486 (3.7)	463 (2.8)	452 (3.1)	
Botswana	355 (3.1)	359 (2.9)	371 (2.4)	351 (3.2)	361 (4.0)	361 (2.9)	358 (3.2)	362 (2.7)	
Bulgaria ³	470 (5.9)	467 (6.0)	472 (6.1)	466 (5.6)	480 (5.5)	489 (5.8)	471 (6.1)	448 (6.1)	
Chinese Taipei	561 (3.7)	549 (3.4)	573 (4.2)	554 (3.7)	545 (2.9)	565 (3.5)	560 (3.4)	541 (3.5)	
Colombia	417 (3.5)	434 (3.7)	420 (3.1)	407 (3.5)	407 (3.9)	418 (4.0)	417 (3.1)	428 (2.7)	
Cyprus	452 (2.0)	447 (1.9)	452 (2.5)	458 (2.8)	457 (2.3)	438 (2.6)	456 (2.0)	460 (2.3)	
Czech Republic	539 (1.9)	531 (2.1)	535 (2.7)	537 (2.1)	534 (2.0)	533 (2.1)	539 (1.9)	534 (2.3)	
Egypt	408 (3.6)	406 (3.4)	413 (4.0)	413 (3.3)	426 (3.8)	434 (3.9)	404 (3.6)	395 (3.4)	
El Salvador	387 (2.9)	398 (3.0)	377 (3.2)	380 (3.5)	400 (2.9)	394 (3.2)	388 (3.2)	384 (3.4)	
England ⁴	542 (4.5)	541 (4.4)	534 (4.0)	545 (4.0)	529 (4.3)	530 (4.9)	538 (4.0)	547 (4.0)	
Georgia ⁵	421 (4.8)	423 (3.9)	418 (4.6)	416 (5.8)	425 (4.1)	440 (5.1)	422 (4.5)	394 (4.6)	
Ghana	303 (5.4)	304 (4.9)	342 (4.9)	276 (5.8)	294 (5.8)	316 (5.7)	291 (5.5)	— (†)	
Hong Kong SAR ^{4,6}	530 (4.9)	527 (4.6)	517 (4.6)	528 (4.8)	532 (4.5)	532 (4.5)	522 (4.9)	533 (5.0)	
Hungary	539 (2.9)	534 (2.7)	536 (3.5)	541 (3.2)	531 (2.9)	524 (3.0)	549 (3.0)	530 (3.0)	
Indonesia	427 (3.4)	428 (3.1)	421 (3.4)	432 (3.1)	442 (3.3)	426 (3.6)	425 (3.1)	438 (3.2)	
Iran, Islamic Republic of	459 (3.6)	449 (3.6)	463 (3.5)	470 (3.6)	476 (3.7)	468 (3.9)	454 (3.8)	462 (3.8)	
Israel ³	468 (4.3)	472 (4.2)	467 (4.6)	472 (4.6)	462 (4.1)	456 (5.0)	472 (4.2)	481 (4.2)	
Italy	495 (2.8)	502 (3.0)	481 (2.9)	489 (3.1)	503 (3.1)	494 (3.3)	498 (2.9)	493 (2.6)	
Japan	554 (1.9)	553 (1.9)	551 (1.9)	558 (1.9)	533 (2.5)	534 (2.2)	555 (2.0)	560 (2.0)	
Jordan	482 (4.0)	478 (3.8)	491 (4.1)	479 (4.2)	484 (3.6)	491 (4.5)	485 (4.1)	471 (4.1)	
Korea, Republic of	553 (2.0)	548 (1.9)	536 (2.4)	571 (2.4)	538 (2.2)	543 (2.0)	547 (2.0)	558 (2.0)	
Kuwait ⁷	418 (2.8)	419 (2.6)	418 (3.8)	438 (2.8)	410 (3.0)	430 (2.5)	417 (2.9)	411 (2.9)	
Lebanon	414 (5.9)	405 (6.2)	447 (5.5)	431 (5.1)	389 (6.4)	403 (5.9)	422 (5.8)	420 (5.6)	
Lithuania ⁵	519 (2.5)	527 (2.3)	507 (2.3)	505 (2.9)	515 (2.5)	513 (2.4)	512 (2.2)	527 (2.5)	
Malaysia	471 (6.0)	469 (5.8)	479 (5.0)	484 (5.7)	463 (5.4)	458 (6.5)	473 (5.9)	487 (4.9)	
Malta	457 (1.4)	453 (1.7)	461 (2.1)	470 (1.7)	456 (1.5)	436 (1.5)	462 (1.6)	473 (1.4)	
Norway	487 (2.2)	487 (2.3)	483 (2.2)	475 (3.0)	502 (2.5)	486 (2.0)	486 (2.3)	491 (2.8)	
Oman	423 (3.0)	414 (3.1)	416 (3.6)	443 (2.9)	439 (2.5)	428 (3.5)	423 (3.2)	428 (3.5)	
Palestinian National Authority	404 (3.5)	402 (4.1)	413 (4.2)	414 (3.7)	408 (3.7)	407 (3.5)	412 (4.0)	396 (3.8)	
Qatar	319 (1.7)	318 (1.7)	322 (1.8)	347 (2.1)	312 (1.9)	325 (1.7)	322 (1.5)	— (†)	
Romania	462 (3.9)	459 (3.2)	463 (4.0)	458 (3.4)	471 (3.3)	451 (4.2)	470 (3.5)	460 (3.5)	
Russian Federation	530 (3.9)	525 (3.6)	535 (3.7)	519 (4.0)	525 (3.4)	534 (4.3)	527 (3.8)	520 (3.7)	
Saudi Arabia	403 (2.4)	407 (2.4)	390 (2.5)	408 (2.3)	423 (2.3)	417 (2.1)	403 (2.7)	395 (2.5)	
Scotland ⁴	496 (3.4)	495 (3.2)	497 (3.2)	494 (3.7)	498 (3.2)	480 (3.9)	495 (3.1)	511 (3.6)	
Serbia ^{5,8}	470 (3.2)	474 (3.2)	467 (3.7)	467 (3.0)	466 (3.8)	485 (2.8)	469 (3.6)	455 (3.5)	
Singapore	567 (4.4)	564 (4.2)	560 (4.1)	575 (3.9)	541 (4.1)	554 (4.5)	567 (4.2)	564 (4.1)	
Slovenia	538 (2.2)	530 (2.3)	539 (2.5)	524 (2.0)	542 (2.2)	533 (2.0)	533 (2.2)	538 (2.2)	
Sweden	511 (2.6)	515 (2.4)	499 (2.4)	506 (2.7)	510 (3.0)	505 (2.3)	509 (2.7)	517 (2.6)	
Syrian Arab Republic	452 (2.9)	459 (2.7)	450 (2.9)	447 (2.7)	448 (3.2)	474 (2.9)	445 (3.0)	440 (2.7)	
Thailand	471 (4.3)	478 (4.5)	462 (4.1)	458 (4.2)	488 (3.8)	473 (4.4)	472 (4.1)	473 (4.0)	
Tunisia	445 (2.1)	452 (2.2)	458 (2.5)	432 (2.5)	447 (1.8)	441 (2.0)	445 (2.3)	458 (2.9)	
Turkey	454 (3.7)	462 (3.4)	435 (5.2)	445 (4.3)	466 (3.3)	462 (3.6)	450 (3.6)	462 (3.4)	
Ukraine	485 (3.5)	477 (3.4)	490 (3.3)	492 (3.9)	482 (4.0)	477 (3.8)	488 (3.7)	488 (3.9)	
United States ^{4,8}	520 (2.9)	530 (2.8)	510 (2.7)	503 (2.7)	525 (3.1)	512 (2.9)	516 (2.7)	529 (2.9)	

—Not available.

†Not applicable.

¹*Biology* includes characteristics, classification, and life processes of organisms; cells and their functions; life cycles, reproduction, and heredity; diversity, adaptation, and natural selection; ecosystems; and human health. *Chemistry* includes classification and composition of matter; properties of matter; and chemical change. *Physics* includes physical states and changes in matter; energy transformations, heat, and temperature; light; sound; electricity and magnetism; and forces and motion. *Earth science* includes Earth's structure and physical features; Earth's processes, cycles, and history; Earth's resources and their use and conservation; and Earth in the solar system and the universe.

²*Knowing* addresses the facts, information, concepts, tools, and procedures that students need to know to function scientifically. *Applying* focuses on students' ability to apply knowledge and conceptual understanding to solve problems or answer questions. *Reasoning* goes beyond the cognitive processes involved in solving routine problems to include more complex tasks.

³National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁴Met guidelines for sample participation rates only after substitute schools were included.

⁵National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁶Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁷Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁸National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: TIMSS scores are reported on a scale from 0 to 1,000, with the scale average fixed at 500 and the standard deviation fixed at 100. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Science Report*, by Michael O. Martin et al. (This table was prepared June 2009.)

Table 419. Percentage distribution of science lesson time spent by eighth-grade students on various activities in a typical week, by country: 2007

Country or other jurisdiction	Reviewing homework	Listening to lecture-style presentations	Working problems with teacher's guidance	Working problems on their own without teacher's guidance	Listening to teacher re-teach and clarify content/procedures	Taking tests or quizzes	Participating in classroom management tasks not related to the lesson's content/purpose	Other student activities
1	2	3	4	5	6	7	8	9
International average	9 (0.1)	25 (0.2)	17 (0.1)	13 (0.1)	13 (0.1)	10 (0.1)	6 (0.1)	7 (0.1)
Algeria ¹	10 (0.4)	22 (1.5)	14 (0.7)	12 (0.7)	20 (1.3)	10 (0.7)	5 (0.3)	7 (0.6)
Armenia.....	12 (0.5)	24 (0.6)	15 (0.4)	13 (0.4)	13 (0.4)	11 (0.3)	6 (0.2)	5 (0.3)
Australia.....	7 (0.3)	19 (0.8)	20 (0.8)	15 (0.7)	11 (0.5)	7 (0.3)	10 (0.7)	12 (1.1)
Bahrain ²	10 (0.3)	24 (0.9)	16 (0.4)	10 (0.3)	13 (0.4)	12 (0.5)	8 (0.2)	7 (0.3)
Bosnia and Herzegovina ¹	6 (0.2)	34 (1.1)	20 (0.6)	13 (0.5)	11 (0.4)	8 (0.3)	4 (0.2)	5 (0.4)
Botswana ²	11 (0.5)	20 (1.3)	17 (1.0)	15 (0.9)	13 (0.8)	11 (0.7)	6 (0.4)	7 (0.7)
Bulgaria ^{2, 3}	6 (0.3)	30 (1.0)	17 (0.6)	13 (0.5)	8 (0.3)	17 (0.6)	4 (0.4)	4 (0.4)
Chinese Taipei.....	10 (0.5)	48 (1.5)	11 (0.6)	5 (0.4)	9 (0.8)	8 (0.6)	4 (0.3)	3 (0.4)
Colombia.....	11 (0.6)	17 (1.0)	18 (1.3)	18 (1.1)	11 (0.6)	11 (0.6)	7 (0.5)	6 (0.5)
Cyprus ¹	12 (0.2)	23 (0.4)	18 (0.2)	10 (0.2)	14 (0.2)	10 (0.1)	7 (0.2)	6 (0.2)
Czech Republic.....	5 (0.2)	31 (0.6)	18 (0.3)	15 (0.4)	10 (0.3)	10 (0.2)	5 (0.3)	6 (0.3)
Egypt ¹	11 (0.7)	28 (1.4)	13 (0.8)	11 (0.6)	14 (0.8)	10 (0.5)	6 (0.4)	7 (0.5)
El Salvador.....	12 (0.5)	16 (0.7)	16 (0.7)	14 (0.7)	16 (0.7)	11 (0.5)	8 (0.4)	7 (0.5)
England ^{2, 4}	7 (0.3)	16 (0.9)	28 (1.0)	20 (0.8)	10 (0.4)	5 (0.2)	7 (0.4)	8 (0.6)
Georgia ^{2, 5}	12 (0.4)	23 (1.4)	12 (0.4)	9 (0.4)	9 (0.4)	18 (0.6)	6 (0.4)	10 (1.2)
Ghana ²	11 (0.7)	16 (0.9)	17 (0.8)	14 (0.6)	12 (0.7)	15 (0.6)	8 (0.5)	7 (0.4)
Hong Kong SAR ^{4, 6}	9 (0.6)	39 (1.6)	15 (1.0)	8 (0.9)	8 (0.4)	8 (0.9)	5 (0.4)	8 (1.0)
Hungary ²	8 (0.2)	20 (0.7)	19 (0.5)	16 (0.4)	13 (0.4)	14 (0.3)	4 (0.2)	7 (0.4)
Indonesia ¹	12 (0.5)	24 (1.1)	15 (0.8)	11 (0.5)	12 (0.5)	13 (0.7)	7 (0.3)	7 (0.3)
Iran, Islamic Republic of.....	9 (0.3)	17 (0.7)	15 (0.6)	12 (0.5)	15 (0.6)	14 (0.6)	8 (0.5)	9 (0.4)
Israel ³	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)
Italy.....	12 (0.4)	29 (0.7)	13 (0.4)	10 (0.4)	16 (0.6)	10 (0.4)	5 (0.3)	5 (0.4)
Japan ²	3 (0.3)	47 (1.5)	15 (1.0)	5 (0.8)	14 (0.7)	5 (0.5)	2 (0.3)	8 (1.3)
Jordan.....	13 (0.5)	20 (1.1)	17 (0.5)	12 (0.5)	14 (0.5)	12 (0.5)	6 (0.3)	6 (0.4)
Korea, Republic of ²	5 (0.3)	49 (1.6)	9 (0.4)	8 (0.4)	13 (0.8)	6 (0.4)	6 (0.5)	5 (0.5)
Kuwait ⁷	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)
Lebanon ¹	16 (0.8)	18 (1.2)	19 (0.8)	8 (0.7)	14 (0.9)	14 (0.6)	6 (0.4)	6 (0.4)
Lithuania ⁵	8 (0.2)	12 (0.5)	22 (0.5)	23 (0.5)	14 (0.4)	14 (0.5)	3 (0.2)	3 (0.3)
Malaysia ²	13 (0.6)	24 (1.4)	15 (0.7)	11 (0.6)	13 (0.8)	10 (0.5)	9 (0.7)	6 (0.5)
Malta.....	10 (#)	31 (0.1)	15 (#)	10 (0.1)	13 (0.1)	5 (#)	9 (0.1)	7 (#)
Norway.....	8 (0.4)	27 (0.8)	18 (0.9)	16 (0.7)	12 (0.4)	6 (0.3)	4 (0.3)	9 (0.8)
Oman ²	10 (0.7)	21 (1.5)	16 (0.8)	13 (0.6)	14 (0.8)	11 (0.7)	5 (0.3)	9 (0.9)
Palestinian National Authority ¹	11 (0.5)	25 (1.3)	16 (0.7)	11 (0.5)	14 (0.8)	10 (0.4)	6 (0.4)	7 (0.4)
Qatar ¹	11 (#)	25 (0.1)	13 (#)	12 (#)	12 (#)	10 (#)	7 (#)	11 (#)
Romania.....	9 (0.3)	24 (0.8)	19 (0.5)	13 (0.4)	11 (0.5)	14 (0.5)	5 (0.2)	5 (0.2)
Russian Federation.....	12 (0.3)	23 (0.5)	19 (0.4)	16 (0.4)	9 (0.2)	15 (0.4)	1 (0.1)	4 (0.2)
Saudi Arabia.....	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)	‡ (†)
Scotland ^{2, 4}	6 (0.2)	23 (0.6)	28 (0.7)	18 (0.8)	9 (0.3)	4 (0.2)	7 (0.3)	5 (0.3)
Serbia ^{2, 5, 8}	5 (0.2)	39 (0.8)	19 (0.6)	11 (0.4)	11 (0.3)	8 (0.3)	3 (0.2)	5 (0.4)
Singapore.....	12 (0.3)	34 (0.8)	14 (0.5)	10 (0.3)	9 (0.3)	8 (0.3)	7 (0.4)	5 (0.4)
Slovenia.....	6 (0.2)	28 (0.7)	22 (0.6)	16 (0.4)	13 (0.4)	5 (0.3)	4 (0.2)	7 (0.5)
Sweden ²	5 (0.3)	25 (0.7)	29 (0.8)	15 (0.9)	11 (0.3)	7 (0.2)	4 (0.2)	5 (0.6)
Syrian Arab Republic ¹	12 (0.6)	28 (1.4)	14 (0.6)	10 (0.5)	14 (0.8)	11 (0.5)	6 (0.3)	6 (0.3)
Thailand.....	11 (0.6)	21 (1.2)	14 (0.7)	11 (0.6)	18 (0.8)	11 (0.5)	8 (0.4)	7 (0.4)
Tunisia ²	9 (0.7)	14 (1.2)	26 (1.5)	14 (1.0)	18 (1.0)	11 (0.9)	5 (0.4)	5 (0.5)
Turkey.....	8 (0.3)	18 (0.8)	19 (0.9)	12 (0.6)	15 (0.8)	9 (0.6)	9 (0.6)	8 (0.4)
Ukraine.....	12 (0.3)	16 (0.8)	15 (0.4)	15 (0.4)	20 (0.8)	14 (0.4)	3 (0.1)	6 (0.4)
United States ^{4, 8}	9 (0.4)	20 (0.8)	18 (0.6)	15 (0.6)	11 (0.4)	9 (0.3)	7 (0.3)	12 (0.9)

†Not applicable.

#Rounds to zero.

‡Reporting standards not met.

¹Data are available for at least 50 percent but less than 70 percent of students.

²Data are available for at least 70 percent but less than 85 percent of students.

³National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

⁴Met guidelines for sample participation rates only after substitute schools were included.

⁵National Target Population does not include all of the International Target Population defined by the Trends in International Mathematics and Science Study (TIMSS).

⁶Hong Kong is a Special Administrative Region (SAR) of the People's Republic of China.

⁷Kuwait tested the same cohort of students as other countries, but later in 2007, at the beginning of the next school year.

⁸National Defined Population covers 90 to 95 percent of National Target Population.

NOTE: Data provided by teachers. Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Detail may not sum to totals because of rounding. Standard errors appear in parentheses.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007, *TIMSS 2007 International Science Report*, by Michael O. Martin et al. (This table was prepared July 2009.)

Table 420. Percentage of the population 25 to 64 years old who completed high school, by age group and country: 2001, 2005, and 2008

Country	2001					2005		2008				
	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	Total, 25 to 64 years old	25 to 34 years old	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old
1	2	3	4	5	6	7	8	9	10	11	12	13
OECD average¹	64.2	74.0	68.4	60.2	48.6	64.8	74.1	71.1	80.0	74.8	67.8	58.2
Australia.....	58.9	70.7	60.2	54.6	43.8	65.0	78.6	69.9	82.5	72.6	66.0	55.5
Austria ²	75.7	83.3	80.4	71.9	62.5	80.6	87.5	81.0	87.7	84.8	79.0	70.5
Belgium ²	58.5	75.3	62.6	51.3	38.4	66.1	80.9	69.6	83.1	77.2	64.4	52.1
Canada.....	81.9	89.3	84.9	81.0	66.6	85.2	90.8	87.1	91.9	90.2	85.6	79.6
Chile.....	—	—	—	—	—	50.0	64.3	68.0	84.5	74.2	65.5	39.3
Czech Republic.....	86.2	92.5	89.8	84.0	76.3	89.9	93.9	90.9	94.2	93.9	89.7	85.1
Denmark.....	80.2	86.3	80.4	80.4	71.9	81.0	87.4	77.6	86.1	81.9	73.6	69.1
Finland.....	73.8	86.8	84.3	70.0	50.9	78.8	89.4	81.1	90.1	87.8	82.3	65.9
France.....	63.9	78.4	67.4	58.3	46.2	66.3	81.1	70.0	82.9	76.7	64.3	55.0
Germany.....	82.6	85.5	85.5	82.9	75.8	83.1	84.1	85.3	85.8	86.9	85.8	82.2
Greece.....	51.4	72.6	60.3	43.1	27.6	57.1	73.6	61.1	74.8	68.8	56.4	39.2
Hungary.....	70.2	80.9	78.5	71.8	44.1	76.4	85.0	79.7	85.6	82.8	78.4	70.5
Iceland.....	56.9	61.2	60.2	55.5	45.6	62.9	69.0	64.1	69.0	68.3	60.9	55.8
Ireland.....	57.6	73.4	62.4	48.2	35.3	64.5	81.1	69.5	84.7	74.5	61.9	44.7
Italy.....	43.3	57.5	49.3	38.5	21.8	50.1	65.9	53.3	68.9	57.1	49.4	35.2
Japan.....	83.1	93.6	94.0	81.1	62.8	—	—	—	—	—	—	—
Korea, Republic of.....	68.0	94.6	76.8	49.1	29.9	75.5	97.3	79.1	97.6	93.3	68.1	40.4
Luxembourg.....	52.7	59.4	56.7	47.1	42.1	65.9	76.5	67.9	79.4	69.5	62.7	57.2
Mexico.....	21.6	25.4	24.7	17.5	11.1	21.3	24.0	33.6	39.8	36.3	30.2	19.1
Netherlands ²	65.0	74.0	69.0	60.0	51.0	71.8	81.3	73.3	82.4	77.3	71.3	62.2
New Zealand.....	75.7	81.8	79.5	75.1	60.1	78.7	85.2	72.1	79.5	74.3	70.5	62.1
Norway ²	85.2	93.4	90.3	81.9	69.9	77.2	83.5	80.7	84.0	81.9	78.4	78.3
Poland.....	45.9	51.7	47.5	44.5	36.4	51.4	62.5	87.1	92.8	90.9	87.0	76.0
Portugal.....	19.9	32.5	19.9	13.6	8.5	26.5	42.8	28.2	46.7	28.7	20.0	13.5
Slovak Republic.....	85.1	93.7	89.9	82.9	66.0	85.7	93.0	89.9	94.5	93.3	88.4	80.9
Spain.....	40.0	57.1	44.7	29.0	17.1	48.8	63.9	51.2	65.0	56.7	45.0	29.1
Sweden.....	80.6	90.7	86.3	78.4	65.1	83.6	90.6	85.0	91.2	90.4	83.6	75.0
Switzerland.....	87.4	91.8	90.0	85.1	80.6	83.0	87.9	86.8	90.3	88.2	85.5	82.7
Turkey.....	24.3	30.2	23.5	19.2	13.3	27.2	35.7	30.3	40.3	27.0	24.4	18.7
United Kingdom.....	63.0	68.0	65.0	61.2	55.1	66.7	72.9	69.6	76.6	69.7	67.0	63.4
United States.....	87.7	88.1	88.7	89.2	82.6	87.8	86.7	88.7	88.1	88.6	89.2	88.8
Reporting partner countries												
Brazil ³	—	—	—	—	—	29.5	38.0	38.8	49.8	40.0	32.7	23.2
Estonia ³	—	—	—	—	—	89.1	87.4	88.5	85.1	93.2	91.9	82.8
Israel.....	—	—	—	—	—	79.2	85.7	81.2	87.5	83.6	77.0	72.3
Russian Federation ⁴	88.0	91.0	93.7	89.4	71.2	88.9	92.0	—	—	—	—	—
Slovenia.....	—	—	—	—	—	80.3	91.2	82.0	92.4	84.8	77.9	71.5

—Not available.

¹Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally.

²Data from 2000 reported for 2001.

³Data from 2004 reported for 2005.

⁴Data from 2002 shown for 2001. Data from 2003 reported for 2005.

NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 3. ISCED level 3 corresponds to high school completion in the United States. ISCED 3C short programs do not correspond to high school completion; these short programs are excluded from this table.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2002, 2007, and 2010. (This table was prepared July 2010.)

Table 421. Percentage of the population 25 to 64 years old who attained selected levels of postsecondary education, by age group and country: 2001 and 2008

Country	2001										2008									
	Vocational degree ¹					Bachelor's or higher degree ²					Vocational degree ¹					Bachelor's or higher degree ²				
	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old	Total, 25 to 64 years old	25 to 34 years old	35 to 44 years old	45 to 54 years old	55 to 64 years old
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
OECD average³	8.2	9.8	9.0	7.4	5.6	14.7	17.9	15.5	13.7	10.0	9.4	10.1	10.0	9.1	7.1	20.8	26.9	21.9	18.0	15.1
Australia.....	9.7	9.7	10.1	10.1	8.7	19.2	23.9	19.3	18.7	12.4	10.3	9.8	10.7	10.7	9.7	25.9	32.2	27.4	23.4	18.9
Austria ⁴	7.3	7.9	8.2	7.1	5.5	6.6	7.1	7.8	6.3	4.4	7.4	5.9	7.6	8.5	7.3	10.7	13.5	11.7	9.2	7.9
Belgium ⁴	15.0	19.3	16.4	13.1	9.2	12.1	16.7	13.0	9.7	7.6	15.9	19.5	17.1	14.9	11.8	16.4	22.8	18.2	13.8	10.5
Canada.....	21.2	25.4	22.8	19.5	14.8	20.4	25.1	19.8	19.7	15.3	23.6	26.1	25.7	23.3	18.8	25.2	29.8	28.5	21.1	21.1
Chile.....	—	—	—	—	—	—	—	—	—	—	8.5	11.5	10.9	6.7	3.2	15.7	22.3	13.6	13.1	13.9
Czech Republic.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	11.1	11.3	13.0	10.7	9.3	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	14.5	17.7	14.4	14.8	10.6
Denmark.....	18.9	18.4	20.1	20.7	15.8	7.5	10.7	7.9	6.4	4.4	7.0	8.2	7.8	6.8	5.3	27.5	34.9	29.3	24.9	21.0
Finland.....	17.5	20.2	20.8	16.0	12.1	14.8	18.0	16.2	13.4	11.2	15.0	5.4	19.9	19.3	14.9	21.5	32.9	24.0	17.3	13.6
France.....	11.2	16.7	11.7	8.8	5.9	11.9	17.5	10.8	10.0	8.2	11.1	16.9	12.9	8.6	5.6	16.4	23.7	18.2	11.6	11.8
Germany.....	9.7	8.2	10.7	10.0	9.7	13.5	13.5	14.9	14.6	10.5	9.0	6.5	9.4	10.0	9.4	16.4	17.5	17.3	15.9	15.0
Greece.....	5.4	7.4	7.2	3.8	2.9	12.4	16.6	14.5	11.8	6.2	6.6	9.6	7.9	5.3	2.7	16.8	18.6	18.6	16.3	12.7
Hungary.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	14.1	14.7	15.1	14.4	11.7	#	1.0	#	#	#	18.7	22.9	18.6	16.6	16.0
Iceland.....	6.0	5.5	7.6	5.7	4.1	18.8	21.1	21.2	18.6	11.0	3.4	2.2	4.2	4.3	2.6	27.9	30.6	32.1	26.0	21.0
Ireland.....	21.6	28.1	23.2	17.8	13.1	14.0	19.8	13.7	11.2	8.0	11.7	14.5	13.5	9.9	6.6	22.2	30.6	23.4	17.2	12.1
Italy.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	10.0	11.8	10.9	10.4	6.2	#	#	0.5	#	#	14.0	19.6	14.6	11.5	9.5
Japan.....	14.6	23.4	18.6	11.0	5.1	19.2	24.3	24.9	17.3	10.1	18.5	24.1	22.6	17.8	10.1	24.3	30.9	25.8	25.3	16.0
Korea, Republic of.....	6.7	14.5	5.9	2.2	0.8	17.5	25.0	20.0	11.0	8.1	10.9	23.3	10.8	4.4	1.4	25.6	34.5	31.7	18.9	10.5
Luxembourg.....	6.7	8.3	6.5	5.8	5.5	11.4	15.1	11.3	9.6	8.0	7.7	10.8	6.9	6.5	6.5	20.0	27.9	21.5	15.5	12.9
Mexico.....	1.7	2.7	1.8	0.8	0.4	13.3	15.3	15.5	10.8	6.8	1.1	1.2	1.1	1.2	0.7	14.9	18.5	14.6	14.0	8.9
Netherlands ⁴	3.0	2.0	3.0	3.0	2.0	21.0	24.0	22.0	20.0	15.0	2.4	2.2	2.8	2.4	2.1	29.8	37.5	29.7	28.1	24.4
New Zealand.....	15.3	11.6	15.8	17.6	17.0	13.9	16.9	14.7	14.4	7.2	14.9	13.9	14.0	16.0	15.8	25.1	33.6	25.9	21.9	18.2
Norway ⁴	2.8	2.8	3.4	3.0	1.9	25.6	32.0	25.6	23.4	18.5	2.4	1.8	2.1	3.0	2.7	33.6	43.8	36.3	28.7	25.3
Poland.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	11.9	15.2	10.9	10.8	10.2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	19.6	32.1	18.8	13.0	12.0
Portugal.....	2.4	3.1	2.5	2.1	1.5	6.6	10.6	6.6	4.6	3.2	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	14.3	23.2	14.5	9.9	7.7
Slovak Republic.....	0.6	0.6	0.8	0.5	0.5	10.3	11.2	10.6	10.5	8.1	0.8	0.6	0.8	0.9	1.0	14.0	17.8	13.1	13.4	9.9
Spain.....	6.7	11.6	7.1	3.4	2.1	16.9	23.9	18.0	12.8	8.3	9.2	13.0	10.8	6.6	4.1	20.0	25.7	21.9	17.2	11.9
Sweden.....	14.7	17.1	16.9	14.4	9.6	16.9	19.7	15.8	17.2	14.7	8.6	8.4	8.4	9.1	8.6	23.4	32.4	24.3	19.3	17.8
Switzerland.....	9.6	9.7	11.3	8.6	7.7	15.8	15.9	18.2	15.4	12.5	10.4	9.7	11.4	10.7	9.3	23.3	28.8	25.0	20.8	18.0
Turkey.....	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	8.9	10.2	8.0	9.1	6.3	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	12.0	15.5	10.6	9.6	9.5
United Kingdom.....	8.0	9.0	9.0	8.0	7.0	18.0	21.0	18.0	18.0	12.0	9.0	7.7	9.7	9.6	8.7	23.6	30.7	23.3	20.3	18.5
United States.....	9.0	9.2	9.6	9.5	6.5	28.3	29.9	27.9	30.0	24.1	9.6	9.3	9.9	10.2	8.9	31.5	32.3	33.1	29.6	31.1
Reporting partner countries																				
Brazil.....	—	—	—	—	—	—	—	—	—	—	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	10.8	11.0	11.6	10.6	9.1
Estonia.....	—	—	—	—	—	—	—	—	—	—	12.0	12.3	12.1	12.3	11.0	22.3	23.5	22.5	22.3	20.6
Israel.....	—	—	—	—	—	—	—	—	—	—	15.1	13.4	15.8	15.8	16.5	28.8	28.9	30.1	28.2	27.6
Russian Federation ⁶	33.5	34.2	37.1	34.4	26.0	20.8	21.3	21.3	20.4	18.9	—	—	—	—	—	—	—	—	—	—
Slovenia.....	—	—	—	—	—	—	—	—	—	—	10.8	11.7	11.4	10.8	9.2	11.8	18.4	12.3	9.0	6.9

—Not available.

#Rounds to zero.

¹International Standard Classification of Education (ISCED) level 5B corresponds to the associate's degree in the United States in this table.²ISCED 5A, first award, corresponds to the bachelor's degree in the United States; ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States; and ISCED 6 corresponds to doctor's degrees.³Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally.⁴Data from 2000 reported for 2001.⁵Included in bachelor's or higher degree.⁶Data from 2002 shown for 2001.

NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as ISCED level 5B; level 5A, first and second award; and level 6.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2002 and 2010. (This table was prepared July 2010.)

Table 422. Number of bachelor's degree recipients per 100 persons of the typical age of graduation, by sex and country: 2002 through 2007

Country	Typical age of graduation, 2007	Total						Male						Female					
		2002	2003	2004	2005	2006	2007	2002	2003	2004	2005	2006	2007	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
OECD average¹	—	—	—	34.0	35.4	37.1	38.5	—	—	27.7	28.3	29.7	31.0	—	—	40.5	42.9	44.8	46.2
Australia.....	20-23	50.7	54.8	46.9	59.9	59.6	60.7	43.0	46.7	37.4	47.9	47.4	48.6	58.8	63.4	57.0	72.5	72.5	73.4
Austria.....	22-26	18.0	19.0	19.6	20.4	21.7	22.4	17.9	18.7	19.0	19.0	20.4	20.8	18.1	19.4	20.3	21.8	22.9	24.0
Belgium (Flemish).....	22-24	19.2	—	18.3	18.4	19.0	35.4	18.7	—	17.5	17.0	17.9	32.6	19.7	—	19.0	19.8	20.2	38.2
Canada.....	22-24	—	—	31.5	33.6	39.3	35.2	—	—	24.3	25.2	29.5	26.5	—	—	39.1	42.2	49.7	44.3
Chile.....	23-26	—	—	25.1	11.5	15.0	14.5	—	—	22.9	9.7	13.0	11.9	—	—	27.5	13.4	17.0	17.3
Czech Republic.....	23-25	15.4	17.3	21.0	26.0	30.7	36.4	14.3	15.9	18.8	22.6	26.5	31.0	16.6	18.8	23.4	29.5	35.2	42.1
Denmark.....	24-26	34.4	38.6	49.9	52.9	50.3	50.9	23.4	25.1	35.6	37.2	37.0	38.3	45.7	52.3	64.4	69.2	63.7	63.9
Finland.....	24-26	51.8	55.8	54.7	53.8	57.3	58.8	37.7	40.4	39.5	38.8	40.6	41.3	66.4	72.2	70.5	69.7	74.5	77.4
France.....	20-25	39.0	41.5	40.0	—	34.2	33.8	32.9	34.9	33.4	—	30.6	30.2	45.3	48.4	46.9	—	37.9	37.5
Germany.....	24-27	19.2	19.5	20.6	20.5	21.0	23.2	19.3	19.3	20.3	20.0	20.0	22.0	19.1	19.7	20.9	21.1	22.0	24.4
Greece.....	22-27	—	—	19.1	23.9	23.5	21.7	—	—	13.3	16.3	16.1	14.7	—	—	25.4	32.2	31.7	29.4
Hungary.....	23-24	31.1	33.6	37.3	41.5	38.2	38.8	23.2	24.6	26.6	29.0	26.1	26.2	39.3	43.2	48.4	54.5	51.0	51.8
Iceland.....	23-25	40.0	44.2	50.5	56.3	62.8	62.8	27.2	29.4	31.4	33.6	37.7	38.0	53.1	59.1	70.3	80.5	89.6	88.0
Ireland.....	21-23	30.9	36.8	38.6	40.7	42.8	44.8	25.6	29.7	31.9	33.3	33.4	36.4	36.2	44.0	45.3	48.0	52.5	53.4
Italy.....	23-25	22.4	27.8	40.1	44.8	42.7	38.7	19.2	24.0	33.3	37.3	35.1	31.6	25.6	31.6	47.2	52.7	50.6	46.1
Japan.....	22-24	34.1	34.4	36.3	36.9	38.7	38.8	40.2	40.1	41.4	41.3	42.8	42.9	27.6	28.5	31.0	32.2	34.3	34.4
Korea, Republic of.....	21-23	31.5	31.7	32.3	35.5	41.0	42.9	31.6	32.1	31.5	34.8	40.2	42.7	31.3	31.2	33.2	36.2	41.7	43.2
Mexico.....	23-26	16.5	14.3	13.8	15.2	18.1	18.2	15.6	13.3	13.1	14.5	16.7	16.8	17.4	15.3	14.4	15.9	19.5	19.7
Netherlands.....	21-25	38.6	42.5	42.9	47.2	49.2	47.8	34.4	36.4	37.2	40.2	42.9	41.7	42.9	48.7	48.6	54.3	55.7	54.1
New Zealand.....	21-23	41.6	39.0	47.6	49.0	53.5	53.8	31.8	29.1	34.9	36.6	40.6	41.6	51.3	49.1	61.0	62.0	67.0	66.0
Norway.....	22-25	41.1	42.0	43.3	42.1	45.1	45.0	29.7	30.0	31.5	28.8	31.9	31.8	52.8	54.2	55.3	55.8	58.8	58.7
Poland.....	23-25	—	—	44.4	45.0	44.8	46.6	—	—	32.6	32.8	32.9	34.4	—	—	56.6	57.6	57.1	59.2
Portugal.....	22-24	—	—	32.9	33.7	34.9	46.0	—	—	20.4	21.7	22.7	35.0	—	—	45.6	46.0	47.4	57.4
Slovak Republic.....	23-24	—	—	28.3	30.1	33.7	37.9	—	—	24.4	25.6	26.0	26.8	—	—	32.4	34.8	41.8	49.6
Spain.....	20-22	33.1	32.0	35.2	35.0	35.3	34.7	26.4	25.5	27.5	27.1	27.1	26.6	40.0	38.9	43.2	43.3	43.8	43.3
Sweden.....	25	35.2	38.4	39.9	44.0	43.3	42.2	26.5	28.6	29.7	30.8	29.8	29.1	44.1	48.5	50.5	57.6	57.2	55.8
Switzerland.....	24-27	20.8	20.9	22.4	25.0	27.0	28.9	23.3	23.5	24.0	26.1	26.8	28.7	18.3	18.4	20.9	23.9	27.1	29.2
Turkey.....	22-26	—	—	14.0	11.3	15.4	17.0	—	—	15.2	11.8	16.3	17.9	—	—	12.7	10.7	14.5	15.9
United Kingdom.....	20-24	—	—	39.2	39.8	39.0	39.0	—	—	34.2	34.1	33.0	32.9	—	—	44.3	45.7	45.2	45.4
United States.....	22-24	36.1	33.4	33.2	34.2	35.5	36.5	29.7	27.6	27.5	28.1	29.1	30.1	42.9	39.4	39.2	40.7	42.4	43.4
Reporting partner countries																			
Brazil.....	22-23	—	—	15.6	17.5	21.3	22.7	—	—	11.8	13.3	16.2	18.4	—	—	19.4	21.6	26.4	27.0
Estonia.....	22-24	—	—	—	28.5	26.4	27.3	—	—	—	17.6	15.4	17.6	—	—	—	39.5	37.8	37.3
Israel.....	26	—	—	32.3	32.9	33.4	36.1	—	—	25.3	25.7	26.8	29.1	—	—	39.6	40.2	40.3	43.1
Russian Federation.....	21-22	—	—	—	45.9	43.7	48.6	—	—	—	—	—	—	—	—	—	—	—	—
Slovenia.....	25-26	—	—	—	21.6	21.6	21.1	—	—	—	14.3	14.2	13.9	—	—	—	29.4	29.3	29.0

—Not available.

¹Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.

²NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 5A, first award. This level corresponds to the bachelor's degree in the United States. The recipients per 100 persons ratio relates the number of people of all ages earning bachelor's degrees in a particular year to the number of people in the population at the typical age of graduation. The typical age is based on full-time attendance and normal progression through the education system (without repeating a year, taking

a year off, etc.); this age varies across countries because of differences in their education systems and differences in program duration. This age is presented for the most recent year of data and may differ from previous years; please see previously published volumes of the *Digest of Education Statistics* for the typical age of graduation in previous years. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2004 through 2010; and Online Education Database, retrieved June 10, 2010, from <http://stats.oecd.org/Index.aspx>. (This table was prepared June 2010.)

Table 423. Percentage of bachelor's degrees awarded in mathematics and science, by field and country: Selected years, 1990 through 2007

Country	All mathematics and science degrees ¹						Natural sciences ²						Mathematics and computer science ³						Engineering					
	1990	1995	2000	2005	2006	2007	1990	1995	2000	2005	2006	2007	1990	1995	2000	2005	2006	2007	1990	1995	2000	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
OECD average⁴	—	—	22.8	22.7	22.3	22.4	—	—	5.8	4.7	4.5	4.6	—	—	4.0	5.3	5.3	5.1	—	—	13.8	12.9	12.6	12.7
Australia	—	19.3	21.1	21.1	21.3	20.3	—	9.9	7.6	5.9	6.4	6.5	—	3.8	5.1	8.2	7.7	6.6	—	5.6	8.5	7.0	7.2	7.2
Austria	19.6	21.1	25.7	26.8	29.2	28.6	5.3	6.0	5.0	5.4	6.1	4.7	5.2	5.3	3.4	7.2	8.8	8.7	9.0	9.9	17.3	14.2	14.3	15.2
Belgium (Flemish)	—	—	23.6	24.7	24.9	24.2	—	—	6.4	5.7	5.5	5.4	—	—	2.3	5.2	5.1	3.7	—	—	14.9	13.8	14.3	15.1
Canada	16.4	16.7	20.0	20.7	17.0	21.1	6.0	6.5	8.1	6.5	5.5	8.9	4.2	3.8	4.3	5.9	4.5	4.6	6.2	6.4	7.6	8.2	7.0	7.7
Chile	—	—	—	22.9	24.0	19.9	—	—	—	3.2	2.5	1.8	—	—	—	—	2.6	3.8	2.1	—	—	17.2	17.7	16.0
Czech Republic	(⁵)	—	29.5	26.7	27.0	27.5	(⁵)	—	4.2	3.9	3.5	3.4	(⁵)	—	8.4	3.8	4.7	4.9	(⁵)	—	16.9	19.0	18.8	19.2
Denmark	—	—	10.5	16.3	16.2	19.0	4.4	2.5	6.8	2.4	2.3	2.7	—	—	3.1	3.1	2.6	2.3	21.7	17.0	—	10.8	11.2	13.9
Finland	33.5	37.2	32.2	30.0	29.1	28.4	4.1	4.0	3.9	2.7	2.8	2.9	5.9	6.9	3.3	5.6	5.3	5.2	23.4	26.3	24.9	21.7	20.9	20.2
France	—	—	30.1	26.0	26.2	26.3	—	—	12.2	6.5	6.7	6.6	—	—	5.5	5.5	5.7	5.6	—	—	12.5	14.0	13.8	14.1
Germany	31.3	31.6	31.7	31.3	27.2	27.4	7.2	6.7	6.4	6.3	6.3	6.7	3.5	5.2	4.9	8.1	8.1	8.3	20.5	19.7	20.3	16.9	12.8	12.4
Greece	—	—	—	25.9	—	22.1	—	—	—	8.3	—	4.8	—	—	—	8.4	—	6.7	—	—	—	9.2	—	10.6
Hungary	—	—	12.6	11.0	13.9	15.3	—	—	1.1	1.2	1.3	1.3	—	—	1.2	2.4	5.4	5.9	—	—	10.4	7.4	7.1	8.1
Iceland	—	—	16.5	14.1	14.6	13.5	—	—	6.0	5.0	4.7	3.9	—	—	4.0	3.5	3.0	2.9	—	—	6.5	5.5	6.9	6.7
Ireland	34.1	32.3	29.3	17.7	23.3	22.7	14.1	16.9	11.5	3.5	—	—	6.3	4.7	7.2	4.4	—	—	13.7	10.7	10.6	9.9	8.9	6.9
Italy	19.7	19.5	27.5	23.9	23.2	22.3	7.6	6.8	5.9	4.8	4.8	4.6	3.9	3.8	3.2	2.2	2.2	2.1	8.3	8.9	18.4	16.9	16.2	15.6
Japan	—	—	22.3	20.8	20.3	20.1	2.4	3.4	—	—	—	—	—	—	—	—	—	—	21.0	19.3	18.9	17.4	16.9	16.7
Korea, Republic of	—	—	36.9	37.0	36.3	35.6	—	—	6.3	5.2	5.3	5.2	—	—	4.3	5.4	5.7	5.9	—	—	26.3	26.3	25.4	24.5
Mexico	—	—	23.0	27.3	26.9	26.5	—	—	2.2	2.6	2.6	2.7	—	—	6.7	9.3	8.9	8.5	—	—	14.1	15.3	15.4	15.4
Netherlands	21.1	—	16.2	14.9	14.6	14.0	7.1	—	3.2	2.5	1.4	1.3	1.6	1.6	1.9	4.6	5.1	4.9	12.4	—	11.1	7.7	8.1	7.7
New Zealand	19.5	—	17.8	19.9	19.4	17.6	8.2	—	11.2	6.7	6.6	6.2	5.5	—	1.9	7.6	6.7	5.5	5.8	3.2	4.7	5.6	6.1	5.9
Norway	12.9	16.8	11.6	13.7	13.2	12.8	2.1	3.1	0.7	0.8	1.4	1.6	0.6	0.5	3.4	4.7	3.8	3.0	10.2	13.2	7.5	8.2	7.9	8.2
Poland	—	—	16.7	17.7	21.6	21.4	—	—	2.7	2.3	4.0	3.9	—	—	2.0	5.3	6.0	5.6	—	—	12.0	10.1	11.6	12.0
Portugal	—	15.0	17.5	25.6	25.5	32.7	6.7	2.2	1.7	6.0	4.9	4.9	—	2.8	3.6	6.2	6.5	7.6	10.5	9.9	12.2	13.4	14.1	20.3
Slovak Republic	(⁵)	—	21.9	24.6	21.1	21.1	(⁵)	—	2.0	3.7	3.5	3.4	(⁵)	—	4.6	4.4	4.0	5.1	(⁵)	—	15.3	16.5	13.7	12.7
Spain	15.0	18.2	22.7	24.1	24.4	24.8	5.7	4.3	5.3	4.2	4.0	3.8	2.6	4.5	4.3	5.2	5.5	5.6	6.7	9.4	13.1	14.7	14.8	15.3
Sweden	24.0	26.4	27.7	26.9	26.2	24.4	4.1	3.9	3.7	3.6	3.6	3.5	4.7	5.5	3.7	4.0	3.9	3.3	15.2	17.0	20.3	19.2	18.7	17.6
Switzerland	23.0	22.3	25.1	24.2	22.7	23.0	11.2	10.4	6.0	6.9	6.2	6.3	3.7	3.7	1.8	4.7	4.3	4.2	8.1	8.3	17.3	12.7	12.1	12.5
Turkey	20.6	20.9	24.1	22.3	17.1	17.4	4.6	5.1	7.4	6.1	4.9	5.2	2.1	2.7	3.6	4.1	3.2	3.3	13.8	13.1	13.1	12.0	9.0	8.9
United Kingdom	—	—	28.5	26.0	25.2	24.6	—	—	12.5	9.2	9.0	9.1	—	—	5.8	8.3	7.7	6.9	—	—	10.2	8.4	8.5	8.5
United States	16.9	—	17.1	16.7	16.4	16.1	5.1	—	6.6	5.8	6.0	6.3	4.0	3.3	3.9	4.8	4.2	3.7	7.8	6.7	6.6	6.2	6.1	6.0
Reporting partner countries																								
Brazil	—	—	—	11.4	11.3	11.6	—	—	—	3.2	3.2	3.2	—	—	—	3.5	3.3	3.1	—	—	—	4.8	4.7	5.3
Estonia	(⁵)	—	—	23.8	21.1	21.9	(⁵)	—	—	6.3	4.7	5.4	(⁵)	—	—	6.2	5.9	6.2	(⁵)	—	—	11.3	10.5	10.3
Israel	—	—	19.0	26.7	24.1	21.7	—	—	—	3.1	5.1	5.4	5.5	—	6.8	7.5	5.4	4.1	—	—	9.1	14.1	13.3	12.1
Russian Federation	(⁵)	—	—	—	24.5	—	(⁵)	—	—	—	—	—	(⁵)	—	—	—	—	—	(⁵)	—	—	—	18.3	—
Slovenia	(⁵)	—	—	17.7	15.0	17.4	(⁵)	—	—	4.1	2.8	3.8	(⁵)	—	—	2.0	2.1	2.2	(⁵)	—	—	11.7	10.1	11.4

—Not available.

¹Includes life sciences, physical sciences, mathematics/statistics, computer science, and engineering.²Includes life sciences and physical sciences.³Includes mathematics/statistics and computer science.⁴Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.⁵Country did not exist in its current form in the given year.NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 5A, first award. This level corresponds to the bachelor's degree in the United States. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database. Retrieved June 21, 2010, from <http://stats.oecd.org/Index.aspx>. (This table was prepared June 2010.)

Table 424. Percentage of graduate degrees awarded in mathematics and science, by field and country: Selected years, 1990 through 2007

Country	All mathematics and science degrees ¹						Natural sciences ²						Mathematics and computer science ³						Engineering					
	1990	1996	2000	2005	2006	2007	1990	1996	2000	2005	2006	2007	1990	1996	2000	2005	2006	2007	1990	1996	2000	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
OECD average⁴	—	—	28.9	25.0	23.8	23.5	—	—	11.2	8.9	8.1	7.8	—	—	5.6	5.0	4.9	5.1	—	—	13.0	11.6	11.2	11.1
Australia.....	—	14.0	15.2	20.0	21.4	21.0	—	5.4	4.0	3.1	2.7	2.9	—	3.8	4.9	8.7	10.6	10.8	—	4.7	6.3	8.1	8.0	7.3
Austria.....	37.7	38.8	39.2	38.6	43.0	47.2	12.3	17.5	16.7	15.0	14.4	12.3	4.6	4.7	4.7	6.6	12.0	15.4	20.8	16.6	17.7	16.9	16.6	19.5
Belgium (Flemish).....	—	—	19.7	18.7	19.7	18.9	—	—	—	9.3	9.6	8.9	—	—	—	3.3	3.7	4.0	—	—	7.0	6.2	6.4	6.0
Canada.....	20.0	22.3	22.4	18.8	25.3	27.4	7.8	7.7	7.4	5.0	6.5	10.1	3.4	3.5	4.1	4.0	4.9	4.6	8.8	11.2	10.9	9.8	13.9	12.7
Chile.....	—	—	—	8.5	8.7	11.2	—	—	—	2.2	3.2	3.4	—	—	—	1.6	1.2	2.6	—	—	—	4.6	4.2	5.2
Czech Republic.....	(⁵)	—	21.0	26.1	16.4	17.9	(⁵)	—	5.3	8.3	4.3	4.0	(⁵)	—	7.9	5.6	3.3	3.0	(⁵)	—	7.7	12.3	8.7	10.9
Denmark.....	22.2	12.3	27.8	23.4	22.2	21.8	5.8	3.1	9.8	7.5	6.9	7.0	4.8	1.5	2.5	9.2	8.0	7.8	11.6	7.8	15.4	6.7	7.2	7.0
Finland.....	30.6	28.3	28.7	30.5	33.8	34.7	14.7	11.6	11.3	11.6	12.4	14.1	5.4	4.0	2.4	4.1	4.5	4.7	10.5	12.7	14.9	14.8	16.9	15.9
France.....	—	—	26.4	28.4	26.6	29.6	—	—	13.5	12.5	10.1	11.0	—	—	5.6	7.0	6.5	7.0	—	—	7.3	8.9	10.1	11.6
Germany.....	33.2	38.6	38.1	30.9	31.3	32.4	23.5	25.5	24.9	14.8	14.0	14.3	2.3	3.5	3.7	4.8	5.7	6.0	7.4	9.5	9.5	11.3	11.7	12.1
Greece.....	—	—	—	42.8	—	26.9	—	—	—	22.3	—	8.2	—	—	—	5.3	—	8.3	—	—	—	15.2	—	10.4
Hungary.....	—	—	9.9	6.4	6.1	7.7	—	—	1.7	1.8	1.7	2.5	—	—	0.7	1.7	1.2	2.0	—	—	7.5	2.9	3.2	3.3
Iceland.....	—	—	35.9	23.0	14.8	10.6	—	—	19.4	9.5	7.0	5.3	—	—	#	3.0	1.9	1.4	—	—	16.5	10.5	5.9	3.9
Ireland.....	34.5	23.1	28.1	16.8	19.5	17.9	19.5	10.9	6.9	4.1	—	—	5.8	3.0	15.2	6.3	—	—	9.3	9.2	6.0	6.4	6.1	5.1
Italy.....	—	—	11.7	15.9	18.2	18.6	—	—	0.3	3.5	4.8	4.7	—	—	5.8	3.5	2.0	2.7	—	—	5.7	8.9	11.3	11.3
Japan.....	—	—	54.4	50.9	49.6	47.6	9.5	10.2	—	—	—	—	—	—	—	—	—	—	45.1	44.4	41.9	38.0	36.9	35.3
Korea, Republic of.....	—	—	48.4	43.9	41.6	38.7	—	—	8.5	9.5	9.2	8.1	—	—	5.7	2.0	1.8	1.6	—	—	34.3	32.4	30.6	29.0
Mexico.....	—	—	31.4 ⁶	14.7	14.0	12.9	—	—	18.9 ⁶	3.3	3.2	3.2	—	—	4.1 ⁶	3.2	3.6	2.5	—	—	8.4 ⁶	8.2	7.2	7.1
Netherlands.....	28.9	18.6	—	21.3	16.8	14.8	17.7	4.4	—	—	—	—	1.5	3.7	—	—	—	—	9.7	10.6	—	11.9	8.9	7.5
New Zealand.....	22.6	16.7	20.5	16.6	15.0	16.3	13.8	12.7	11.6	7.2	7.7	8.4	4.7	1.1	1.4	5.2	4.0	4.0	4.0	3.0	7.5	4.2	3.3	3.9
Norway.....	33.4	38.3	22.0	25.8	26.1	22.1	8.0	8.7	14.9	7.8	8.2	6.7	2.1	1.9	4.6	11.9	11.7	10.3	23.3	27.7	2.5	6.1	6.2	5.1
Poland.....	—	—	—	9.1	10.8	10.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.5	4.1	4.3
Portugal.....	—	—	39.3 ⁶	33.8	35.8	39.4	—	—	11.7 ⁶	12.0	12.9	13.6	—	—	9.4 ⁶	10.0	10.4	9.4	—	—	18.2 ⁶	11.9	12.5	16.4
Slovak Republic.....	(⁵)	—	38.1	36.8	34.3	31.7	(⁵)	—	12.6	10.8	9.2	7.5	(⁵)	—	4.7	4.2	4.2	2.6	(⁵)	—	20.9	21.8	21.0	21.6
Spain.....	26.9	36.0	—	37.5 ⁶	26.1 ⁶	19.3 ⁶	19.7	24.8	23.9 ⁶	23.8 ⁶	17.8 ⁶	12.6 ⁶	1.4	4.1	5.4 ⁶	4.6 ⁶	3.2 ⁶	2.3 ⁶	5.7	7.1	6.8 ⁶	9.1 ⁶	5.1 ⁶	4.5 ⁶
Sweden.....	48.5	32.3	40.5	23.7	30.3	26.3	19.4	9.2	14.3	8.0	8.5	8.1	9.2	5.9	4.0	2.8	4.1	4.0	19.9	17.1	22.2	12.9	17.7	14.2
Switzerland.....	30.2	40.1	42.7	32.0	31.0	30.8	22.0	25.8	11.7	11.7	12.9	12.4	1.7	4.1	19.5	3.4	3.2	3.3	6.5	10.1	11.6	16.9	14.9	15.1
Turkey.....	24.0	—	25.7	21.4	20.1	18.7	7.6	—	7.6	6.7	5.9	5.2	3.3	—	3.0	3.4	3.2	3.2	13.2	—	15.2	11.2	11.0	10.3
United Kingdom.....	—	—	21.7	20.3	20.1	19.9	—	—	7.4	5.5	5.5	5.6	—	—	5.0	5.7	5.3	5.1	—	—	9.2	9.0	9.3	9.3
United States.....	14.5	13.8	13.0	13.5	13.1	12.7	4.2	4.0	3.4	3.3	3.4	3.4	3.4	3.2	3.4	3.5	3.3	3.2	6.9	6.7	6.2	6.7	6.4	6.1
Reporting partner countries																								
Brazil.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Estonia.....	(⁵)	—	—	23.9	22.3	27.4	(⁵)	—	—	10.0	10.3	10.8	(⁵)	—	—	5.0	5.0	6.0	(⁵)	—	—	8.9	7.0	10.6
Israel.....	—	—	18.1	17.9	19.5	18.6	—	—	9.2	8.9	9.6	9.3	—	—	2.8	3.2	3.5	3.6	—	—	6.1	5.9	6.5	5.7
Russian Federation.....	(⁵)	—	—	—	—	—	(⁵)	—	—	—	—	—	—	—	—	—	—	—	(⁵)	—	—	—	—	—
Slovenia.....	(⁵)	—	—	24.2	20.4	21.2	(⁵)	—	—	6.4	5.6	7.1	(⁵)	—	—	4.2	4.4	4.3	(⁵)	—	—	13.6	10.5	9.9

—Not available.

#Rounds to zero.

¹Includes life sciences, physical sciences, mathematics/statistics, computer science, and engineering.²Includes life sciences and physical sciences.³Includes mathematics/statistics and computer science.⁴Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average is omitted for years in which less than 75 percent of the countries reported data.⁵Country did not exist in its current form in the given year.⁶Only includes doctor's (Ph.D.) degrees.

NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 5A, second award, and as ISCED 6. ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States, and ISCED 6 corresponds to doctor's degrees. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database. Retrieved June 15, 2010, from <http://stats.oecd.org/Index.aspx>. (This table was prepared June 2010.)

Table 425. Public and private education expenditures per student, by level of education and country: Selected years, 2000 through 2007

Country	Elementary education				Secondary education				Higher education			
	2000	2005	2006	2007	2000	2005	2006	2007	2000	2005	2006	2007
1	2	3	4	5	6	7	8	9	10	11	12	13
Current dollars												
OECD average¹	\$4,302	\$6,109	\$6,282	\$6,735	\$5,788	\$7,611	\$7,813	\$8,271	\$9,439	\$11,760	\$12,416	\$12,622
Australia	4,967	5,992	6,311	6,498	6,894	8,408	8,700	8,840	12,854	14,579	15,016	14,726
Austria	6,560	8,259	8,516	8,664	8,578	9,751	10,577 ²	10,641	10,851	14,775	15,148	15,039
Belgium	4,310	6,648	7,072	7,363	6,889 ²	7,731 ²	8,601 ²	8,992 ²	10,771	11,960	13,244	13,482
Canada	—	—	—	—	5,947 ³	7,774 ^{3,4}	8,045 ^{3,4}	—	14,983 ²	23,329 ^{5,6}	20,278 ^{2,5}	—
Chile	1,940	2,120	1,936	2,088	2,016	2,077	1,924	2,090	7,483	6,873	6,620	6,292
Czech Republic	1,827	2,812	3,217	3,359	3,239	4,847	5,307	5,527	5,431	6,649	7,989	8,209
Denmark	7,074	8,513	8,798	9,176	7,726 ⁷	9,407 ⁷	9,662 ⁷	9,675 ⁷	11,981 ⁷	14,959 ⁷	15,391 ⁷	16,466 ⁷
Finland	4,317	5,557	5,899	6,234	6,094 ²	7,324 ²	7,533 ²	7,829 ²	8,244	12,285	12,845	13,566
France	4,486	5,365	5,482	6,044	7,636	8,927	9,303	9,532	8,373	10,995	11,568	12,773
Germany	4,198	5,014	5,362	5,548	6,826	7,636	7,548	7,841	10,898	12,446	13,016	13,823
Greece	3,318 ^{4,5}	5,146 ⁴	—	—	3,859 ⁵	8,423	—	—	3,402 ⁵	6,130	—	—
Hungary ⁵	2,245	4,438	4,599	4,656	2,446	3,806	3,978	4,225	7,024	6,244	6,367	6,721
Iceland	5,854 ⁵	9,254	9,299	9,629	6,518 ⁵	8,411 ⁷	8,493 ²	8,349 ²	7,994 ⁵	9,474 ⁷	8,579	9,309
Ireland	3,385	5,732	6,337	6,901	4,638	7,500	8,991	9,375	11,083	10,468	11,832	12,631
Italy	5,973 ⁵	6,835 ⁵	7,716 ⁵	7,383 ⁵	7,218 ⁵	7,648 ⁵	8,495 ⁵	8,004 ⁵	8,065 ⁵	8,026 ⁵	8,725	8,673
Japan	5,507	6,744	6,989	7,247	6,266 ⁷	7,908 ⁷	8,305 ⁷	8,760 ⁷	10,914 ⁷	12,326 ⁷	13,418 ⁷	14,201 ⁷
Korea, Republic of	3,155	4,691	4,935	5,437	4,069	6,645	7,261	7,860	6,118	7,606	8,564	8,920
Luxembourg ⁵	—	14,079 ⁴	13,676 ⁴	13,985 ⁴	—	18,845	18,144	17,928	—	—	—	—
Mexico	1,291	1,913	2,003	2,111	1,615	2,180	2,165	2,236	4,688	6,402	6,462	6,971
Netherlands	4,325	6,266	6,425	6,552	5,912	7,741	9,516	10,248	11,934	13,883	15,196	15,969
New Zealand	—	4,780	4,952	4,675	—	6,278	6,043	5,933	—	10,262	9,288	9,905
Norway	6,550 ⁵	9,001	9,486	9,922	8,476 ^{2,5}	10,995 ²	11,435 ²	11,997 ²	13,353 ⁵	15,552	16,235	17,140
Poland ⁵	2,105	3,312	3,770	4,063	—	3,055	3,411	3,590	3,222	5,593	5,224	5,576
Portugal	3,672	4,871 ⁵	5,138 ⁵	5,011	5,349	6,473 ⁵	6,846 ⁵	6,833 ⁵	4,766	8,787 ⁵	9,724 ⁵	10,398 ⁵
Slovak Republic	1,308	2,806	3,221	3,499	1,927 ^{2,8}	2,716 ^{2,8}	2,963 ^{2,8}	3,219 ^{2,8}	4,949 ⁶	5,783 ⁶	6,056 ⁶	5,736 ⁶
Spain	3,941	5,502	5,970	6,533	5,185 ²	7,211	7,955	8,730	6,666	10,089	11,087	12,548
Sweden	6,336	7,533	7,699	8,338	6,339	8,198	8,496	9,143	15,097	15,946	16,991	18,361
Switzerland ⁵	6,631	8,469	8,793	9,211	9,780	12,861	13,268	13,982	18,450	21,734	22,230	20,883
Turkey ⁵	—	—	1,130	—	—	—	1,834	—	4,121	—	—	—
United Kingdom	3,877	6,361	7,732	8,222	5,991 ²	7,167 ²	8,763 ²	8,892 ²	9,657	13,506	15,447	15,463
United States	6,995	9,156	9,709	10,229	8,855	10,390	10,821	11,301	20,358 ²	24,370	25,109	27,010
Constant 2009 dollars												
OECD average¹	\$5,408	\$6,772	\$6,745	\$7,031	\$7,276	\$8,436	\$8,389	\$8,634	\$11,865	\$13,035	\$13,332	\$13,177
Australia	6,244	6,642	6,776	6,784	8,666	9,320	9,342	9,229	16,158	16,160	16,124	15,375
Austria	8,246	9,154	9,145	9,045	10,783	10,809	11,358 ²	11,110	13,640	16,377	16,265	15,701
Belgium	5,418	7,369	7,594	7,687	8,660 ²	8,569 ²	9,235 ²	9,387 ²	13,540	13,257	14,221	14,076
Canada	—	—	—	—	7,476 ³	8,617 ^{3,4}	8,639 ^{3,4}	—	18,835 ²	25,859 ^{5,6}	21,774 ^{2,5}	—
Chile	2,439	2,350	2,079	2,180	2,534	2,303	2,066	2,182	9,407	7,618	7,109	6,569
Czech Republic	2,297	3,116	3,455	3,506	4,072	5,373	5,698	5,770	6,827	7,369	8,578	8,571
Denmark	8,892	9,436	9,447	9,580	9,712 ⁷	10,427 ⁷	10,375 ⁷	10,101 ⁷	15,061 ⁷	16,581 ⁷	16,527 ⁷	17,190 ⁷
Finland	5,427	6,160	6,334	6,508	7,661 ²	8,118 ²	8,089 ²	8,173 ²	10,363	13,617	13,793	14,163
France	5,639	5,946	5,887	6,310	9,599	9,894	9,990	9,951	10,525	12,188	12,422	13,365
Germany	5,277	5,558	5,758	5,792	8,581	8,464	8,105	8,187	13,699	13,795	13,976	14,431
Greece	4,171 ^{4,5}	5,704 ⁴	—	—	4,851 ⁵	9,336	—	—	4,277 ⁵	6,795	—	—
Hungary ⁵	2,822	4,919	4,939	4,861	3,075	4,219	4,271	4,411	8,830	6,921	6,837	7,017
Iceland	7,359 ⁵	10,257	9,985	10,053	8,194 ⁵	9,323 ⁷	9,119 ²	8,717 ²	10,049 ⁵	10,502 ⁷	9,812	9,719
Ireland	4,255	6,354	6,805	7,204	5,830	8,313	9,654	9,788	13,932	11,603	12,705	13,187
Italy	7,508 ⁵	7,576 ⁵	8,285 ⁵	7,708 ⁵	9,073 ⁵	8,477 ⁵	9,122 ⁵	8,356 ⁵	10,138 ⁵	8,896 ⁵	9,369	9,055
Japan	6,923	7,475	7,505	7,566	7,877 ⁷	8,765 ⁷	8,918 ⁷	9,145 ⁷	13,720 ⁷	13,663 ⁷	14,408 ⁷	14,826 ⁷
Korea, Republic of	3,966	5,199	5,299	5,676	5,115	7,366	7,797	8,206	7,691	9,396	9,166	9,313
Luxembourg ⁵	—	15,606 ⁴	14,685 ⁴	14,601 ⁴	—	20,888	19,482	18,717	—	—	—	—
Mexico	1,623	2,120	2,151	2,203	2,030	2,416	2,324	2,334	5,893	7,096	6,939	7,278
Netherlands	5,437	6,946	6,899	6,840	7,432	8,580	10,218	10,699	15,002	15,388	16,317	16,671
New Zealand	—	5,299	5,318	4,881	—	6,959	6,489	6,194	—	11,374	9,973	10,341
Norway	8,234 ⁵	9,977	10,185	10,359	10,655 ^{2,5}	12,187 ²	12,279 ²	12,525 ²	16,786 ⁵	17,239	17,433	17,894
Poland ⁵	2,646	3,671	4,048	4,242	—	3,386	3,748	4,050	6,199	5,609	5,821	5,821
Portugal	4,616	5,399 ⁵	5,517 ⁵	5,232	6,724	7,175 ⁵	7,351 ⁵	7,134 ⁵	5,991	9,740 ⁵	10,441 ⁵	10,856 ⁵
Slovak Republic	1,644	3,110	3,459	3,653	2,422 ^{2,8}	3,010 ^{2,8}	3,181 ^{2,8}	3,361 ^{2,8}	6,221 ⁶	6,410 ⁶	6,503 ⁶	5,988 ⁶
Spain	4,954	6,099	6,411	6,821	6,518 ²	7,993	8,542	9,114	8,380	11,183	11,905	13,100
Sweden	7,965	8,350	8,267	8,705	7,969	9,087	9,123	9,546	18,978	17,675	18,245	19,169
Switzerland ⁵	8,336	9,387	9,442	9,617	12,294	14,255	14,247	14,597	23,193	24,091	23,870	21,802
Turkey ⁵	—	—	1,213	—	—	—	1,969	—	5,180	—	—	—
United Kingdom	4,874	7,051	8,303	8,584	7,531 ²	7,944 ²	9,410 ²	9,283 ²	12,139	14,971	16,587	16,144
United States	8,793	10,149	10,425	10,680	11,131	11,516	11,620	11,799	25,591 ²	27,012	26,961	28,198

—Not available.

¹Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally.

²Includes postsecondary non-higher-education.

³Includes elementary education.

⁴Includes preprimary education.

⁵Public institutions only.

⁶Excludes occupation-specific education corresponding to that offered at the associate's degree level in the United States.

⁷Postsecondary non-higher-education included in both secondary and higher education.

⁸Occupation-specific education corresponding to that offered at the associate's degree level in the United States is included in primary and secondary education.

NOTE: Data adjusted to U.S. dollars using the purchasing-power-parity (PPP) index. Constant dollars based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2002 through 2010. (This table was prepared June 2010.)

Table 426. Public and private direct expenditures on education as a percentage of the gross domestic product, by level of education and country: Selected years, 1995 through 2007

Country	All institutions								Primary and secondary institutions							Higher education institutions								
	Public direct expenditures					Direct expenditures, 2007			Public direct expenditures					Direct expenditures, 2007		Public direct expenditures					Direct expenditures, 2007			
	1995	2000 ¹	2004 ¹	2005 ¹	2006 ¹	Public ¹	Private	Total	1995	2000 ¹	2004 ¹	2005 ¹	2006 ¹	Public ¹	Private	Total	1995	2000 ¹	2004 ¹	2005 ¹	2006 ¹	Public ¹	Private	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
OECD average²	4.9	4.8	5.0	4.9	4.8	4.8	0.9	5.6	3.5	3.4	3.5	3.5	3.4	3.3	0.3	3.6	0.9	1.0	1.0	1.0	1.0	1.0	0.5	1.5
Australia.....	4.5	4.6	4.3	4.3	4.1	3.7	1.3	5.0	3.2	3.7	3.5	3.4	3.3	2.9	0.4	3.4	1.2	0.8	0.8	0.8	0.8	0.7	0.8	1.5
Austria.....	5.3	5.4 ³	5.0	5.2	5.2	5.1	0.2	5.4	3.8	3.7 ³	3.6	3.5	3.5	3.5	0.1	3.6	0.9	1.2 ³	1.1	1.2	1.2	1.3	0.1	1.3
Belgium (Flemish).....	5.0	5.1	5.8	5.8	5.9	5.9	0.2	6.1	3.4	3.4 ⁴	4.0	3.9	3.9	3.9	0.1	4.1	0.9	1.2 ⁴	1.2	1.2	1.2	0.1	1.3	
Canada.....	5.8	5.2	4.7	4.8	4.8	—	—	—	4.0	3.3 ⁵	3.2 ^{5,6}	3.3 ^{5,6}	3.2 ^{5,6}	—	—	—	1.5	1.6 ⁵	1.4 ⁵	1.5 ⁵	1.6 ⁵	—	—	
Chile.....	—	4.2	3.5	3.3	3.0	3.1	2.5	5.7	—	3.2	2.8	2.7	2.4	2.5	0.9	3.4	—	0.6	0.3	0.3	0.3	0.3	1.4	1.7
Czech Republic.....	4.8	4.2	4.2	4.1	4.2	4.1	0.5	4.6	3.4	2.8 ⁴	2.8	2.7	2.7	2.5	0.3	2.8	0.7	0.8 ⁴	0.9	0.8	1.0	1.0	0.2	1.2
Denmark.....	6.5	6.4 ³	6.9	6.8	6.7	6.6	0.5	7.1	4.2	4.1 ^{3,7}	4.2 ⁷	4.4 ⁷	4.3 ⁷	4.2 ⁷	0.1 ⁷	4.3 ⁷	1.3	1.5 ^{3,7}	1.8 ⁷	1.6 ⁷	1.6 ⁷	1.6 ⁷	0.1 ⁷	1.7 ⁷
Finland.....	6.6	5.5	6.0	5.9	5.7	5.5	0.1	5.6	4.2	3.5	3.9	3.8	3.7	3.6	—	3.6	1.7	1.7	1.7	1.6	1.6	0.1	1.6	
France.....	5.8	5.7	5.7	5.6	5.5	5.5	0.4	6.0	4.1	4.0	3.9	3.8	3.7	3.7	0.2	3.9	1.0	1.0	1.2	1.1	1.1	1.2	0.2	1.4
Germany.....	4.5	4.3	4.3	4.2	4.1	4.0	0.7	4.7	2.9	2.9	2.8	2.8	2.7	2.6	0.4	3.0	1.0	1.0	1.0	0.9	0.9	0.9	0.2	1.1
Greece.....	3.7	3.7 ³	3.3	4.0	—	—	—	—	2.8	2.7 ^{3,6}	2.1 ⁶	2.5 ⁶	—	—	—	—	0.8	0.9 ³	1.1	1.4	—	—	—	—
Hungary.....	4.9	4.4	5.1	5.1	5.1	4.9	—	—	3.3	2.8	3.3	3.3	3.2	3.2	—	—	0.8	0.9	0.9	0.9	0.9	0.9	—	—
Iceland.....	4.5	5.7 ³	7.2	7.2	7.2	7.0	0.8	7.8	3.4	4.6 ³	5.2 ⁷	5.2 ⁷	5.1	4.9	0.2	5.1	0.7	0.8 ³	1.1 ⁷	1.1 ⁷	1.0	1.1	0.1	1.2
Ireland.....	4.7	4.1	4.3	4.3	4.4	4.4	0.2	4.7	3.3	2.9 ⁴	3.3	3.3	3.4	3.4	0.1	3.5	0.9	1.2 ⁴	1.0	1.0	1.0	1.0	0.2	1.2
Italy.....	4.5	4.5	4.4	4.3	4.6	4.1	0.4	4.5	3.2	3.2	3.3	3.2	3.4	3.0	0.1	3.1	0.7	0.7	0.7	0.6	0.7	0.6	0.3	0.9
Japan.....	3.6	3.5	3.5	3.4	3.3	3.3	1.6	4.9	2.8	2.7 ⁷	2.7 ⁷	2.6 ⁷	2.6 ⁷	2.5 ⁷	0.3 ⁷	2.8 ⁷	0.4	0.5 ⁷	0.5 ⁷	0.5 ⁷	0.5 ⁷	0.5 ⁷	1.0 ⁷	1.5 ⁷
Korea, Republic of.....	3.6	4.3	4.4	4.3	4.5	4.2	2.8	7.0	3.0	3.3	3.5	3.4	3.4	3.1	0.8	4.0	0.3	0.6	0.5	0.6	0.6	0.6	1.9	2.4
Luxembourg.....	4.3	—	—	—	—	—	—	—	4.2	—	3.8 ⁶	3.7 ⁶	3.3 ⁶	3.1 ⁶	—	—	0.1	—	—	—	—	—	—	—
Mexico.....	4.6	4.7	5.2	5.3	4.6	4.7	1.1	5.7	3.4	3.3	3.6	3.7	3.2	3.1	0.6	3.8	0.8	0.8	0.9	0.9	0.8	0.9	0.3	1.2
Netherlands.....	4.6	4.3	4.6	4.6	4.8	4.7	0.8	5.6	3.0	3.0	3.3	3.3	3.3	3.3	0.4	3.7	1.1	1.0	1.0	1.1	1.1	1.1	0.4	1.5
New Zealand.....	5.3	5.8	5.6	5.2	5.0	4.8	1.2	5.9	3.8	4.6	4.4	4.0	3.8	3.5	0.6	4.0	1.1	0.9	0.9	0.9	0.9	1.0	0.5	1.5
Norway.....	6.8	5.8	6.2	5.7	5.4	5.4	—	—	4.1	3.6	4.2	3.8	3.7	3.7	—	—	1.5	1.2	1.4	1.3	1.2	1.2	—	—
Poland.....	5.2	5.2 ³	5.4	5.4	5.2	4.8	0.5	5.3	3.3	3.7 ³	3.7	3.7	3.7	3.4	—	3.4	0.8	0.8 ³	1.1	1.2	0.9	0.9	0.4	1.3
Portugal.....	5.4	5.6 ³	5.3	5.3	5.1	5.1	0.5	5.6	4.1	4.1 ³	3.8	3.8	3.6	3.5	—	3.5	1.0	1.0 ³	0.9	0.9	0.9	1.1	0.5	1.6
Slovak Republic.....	4.6	4.0 ³	4.0	3.7	3.6	3.4	0.5	4.0	—	2.7 ^{3,4,8}	2.6 ⁸	2.5 ⁸	2.4 ⁸	2.3 ⁸	0.3 ⁸	2.5 ⁸	—	0.7 ^{3,4,8}	0.9 ⁸	0.7 ⁸	0.8 ⁸	0.7 ⁸	0.2 ⁸	0.9 ⁸
Spain.....	4.8	4.3	4.2	4.1	4.2	4.2	0.6	4.8	3.5	3.1	2.8	2.7	2.7	2.7	0.2	2.9	0.8	0.9	0.9	0.9	0.9	0.9	0.2	1.1
Sweden.....	6.6	6.3	6.5	6.2	6.2	6.1	0.2	6.3	4.4	4.4 ⁴	4.5	4.2	4.1	4.1	—	4.1	1.6	1.5 ⁴	1.6	1.5	1.4	1.4	0.2	1.6
Switzerland.....	5.5	5.3	5.9	5.6	5.4	5.1	—	—	4.1	3.8	3.9	3.9	3.7	3.5	0.5	4.0	1.1	1.2	1.6	1.4	1.4	1.3	—	—
Turkey.....	2.2	3.4 ³	3.8	—	2.7	—	—	—	1.4	2.4 ³	2.9	—	1.9	—	—	—	0.8	1.0 ³	0.9	—	0.8	—	—	—
United Kingdom.....	4.6	4.5	5.0	5.0	5.2	5.2	0.6	5.8	3.8	3.4	3.8	3.8	3.9	4.1	0.1	4.2	0.7	0.7	0.8	0.9	0.9	0.7	0.6	1.3
United States.....	5.0	4.8	5.1	4.8	5.0	5.0	2.6	7.6	3.5	3.5 ⁵	3.7	3.5	3.7	3.7	0.3	4.0	1.1	0.9 ⁵	1.0	1.0	1.0	1.0	2.1	3.1
Reporting partner countries																								
Brazil.....	—	—	3.9	4.4	4.9	5.2	—	—	—	—	2.9 ⁸	3.3	3.8	4.0	—	—	—	—	0.7 ⁸	0.8	0.8	0.8	—	—
Estonia.....	—	—	4.9	4.7	4.6	4.7	0.3	5.0	—	—	3.7	3.5	3.4	3.3	—	3.3	—	—	0.9	0.9	0.9	1.1	0.2	1.3
Israel.....	—	6.6	6.6	6.2	6.2	5.9	1.6	7.4	—	4.5	4.4	4.2	4.1	3.9	0.3	4.1	—	1.1	1.1	1.0	1.0	1.0	0.8	1.8
Russian Federation.....	3.4	3.0 ³	3.6	3.8	3.9	6.1	1.3	7.4	1.9	1.7	2.0	1.9	2.0	3.4	0.1	3.5	0.7	0.5	0.7	0.8	0.8	1.0	0.7	1.7
Slovenia.....	—	—	5.4	5.3	5.3	4.8	0.7	5.6	—	—	3.9	3.9	3.8	3.3	0.4	3.6	—	—	1.1	1.0	1.0	1.0	0.3	1.3

—Not available.

¹Includes public subsidies to households attributable for educational institutions and direct expenditure on educational institutions from international sources, except where noted.

²Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally.

³Public subsidies to households not included in public expenditure.

⁴Direct expenditure on education institutions from international sources exceeds 1.5 percent of all public expenditure.

⁵Postsecondary non-higher-education included in higher education.

⁶Preprimary education (for children ages 3 and older) is included in primary and secondary education.

⁷Postsecondary non-higher-education included in both secondary and higher education.

⁸Occupation-specific education corresponding to that offered at the associate's degree level in the United States is included in primary and secondary education.

NOTE: Public direct expenditure on education includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions, or households. Private direct expenditure includes the net of public subsidies to households for educational institutions. Postsecondary non-higher-education is included in primary and secondary education unless otherwise noted. All institutions total includes expenditures that could not be reported by level of education. Some data have been revised from previously published figures.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database; *Annual National Accounts, Vol. 1, 1997*; and *Education at a Glance, 2007* through 2010. (This table was prepared June 2010.)

