

**Table 124.—Percent of students at or above selected mathematics proficiency levels, <sup>1</sup> by sex, race/ethnicity, control of school, and age: 1978 to 1996**

Sex, race/ethnicity, control, and year	9-year-olds <sup>2</sup>				13-year-olds <sup>3</sup>				17-year-olds <sup>3</sup>			
	Simple arithmetic facts <sup>4</sup>	Beginning skills and understanding <sup>5</sup>	Numerical operations and beginning problem solving <sup>6</sup>	Moderately complex procedures and reasoning <sup>7</sup>	Beginning skills and understanding <sup>5</sup>	Numerical operations and beginning problem solving <sup>6</sup>	Moderately complex procedures and reasoning <sup>7</sup>	Multi-step problem solving and algebra <sup>8</sup>	Beginning skills and understanding <sup>5</sup>	Numerical operations and beginning problem solving <sup>6</sup>	Moderately complex procedures and reasoning <sup>7</sup>	Multi-step problem solving and algebra <sup>8</sup>
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Total</b>												
1978 .....	96.7 (0.3)	70.4 (0.9)	19.6 (0.7)	0.8 (0.1)	94.6 (0.5)	64.9 (1.2)	18.0 (0.7)	1.0 (0.2)	99.8 (0.1)	92.0 (0.5)	51.5 (1.1)	7.3 (0.4)
1982 .....	97.1 (0.3)	71.4 (1.2)	18.8 (1.0)	0.6 (0.1)	97.7 (0.4)	71.4 (1.2)	17.4 (0.9)	0.5 (0.1)	99.9 (0.0)	93.0 (0.5)	48.5 (1.3)	5.5 (0.4)
1986 .....	97.9 (0.3)	74.1 (1.2)	20.7 (0.9)	0.6 (0.2)	98.6 (0.2)	73.3 (1.6)	15.8 (1.0)	0.4 (0.1)	99.9 —	95.6 (0.5)	51.7 (1.4)	6.5 (0.5)
1990 .....	99.1 (0.2)	81.5 (1.0)	27.7 (0.9)	1.2 (0.3)	98.5 (0.2)	74.7 (1.0)	17.3 (1.0)	0.4 (0.1)	100.0 —	96.0 (0.5)	56.1 (1.4)	7.2 (0.6)
1992 .....	99.0 (0.2)	81.4 (0.8)	27.8 (0.9)	1.2 (0.3)	98.7 (0.3)	77.9 (1.1)	18.9 (1.0)	0.4 (0.2)	100.0 —	96.6 (0.5)	59.1 (1.3)	7.2 (0.6)
1994 .....	99.0 (0.2)	82.0 (0.7)	29.9 (1.1)	1.3 (0.4)	98.5 (0.3)	78.1 (1.1)	21.3 (1.4)	0.6 (0.2)	100.0 —	96.5 (0.5)	58.6 (1.4)	7.4 (0.8)
1996 .....	99.1 (0.2)	81.5 (0.8)	29.7 (1.0)	1.6 (0.3)	98.8 (0.2)	78.6 (0.9)	20.6 (1.2)	0.6 (0.1)	100.0 —	96.8 (0.4)	60.1 (1.7)	7.4 (0.8)
<b>Male</b>												
1978 .....	96.2 (0.5)	68.9 (1.0)	19.2 (0.6)	0.7 (0.2)	93.9 (0.5)	63.9 (1.3)	18.4 (0.9)	1.1 (0.2)	99.9 (0.1)	93.0 (0.5)	55.1 (1.2)	9.5 (0.6)
1982 .....	96.5 (0.5)	68.8 (1.3)	18.1 (1.1)	0.6 (0.1)	97.5 (0.6)	71.3 (1.4)	18.9 (1.2)	0.7 (0.2)	100.0 —	93.9 (0.6)	51.9 (1.5)	6.9 (0.7)
1986 .....	98.0 (0.5)	74.0 (1.4)	20.9 (1.1)	0.7 (0.3)	98.5 (0.3)	73.8 (1.8)	17.6 (1.1)	0.5 (0.2)	99.9 —	96.1 (0.6)	54.6 (1.8)	8.4 (0.9)
1990 .....	99.0 (0.3)	80.6 (1.0)	27.5 (1.0)	1.3 (0.4)	98.2 (0.3)	75.1 (1.8)	19.0 (1.2)	0.5 (0.2)	99.9 —	95.8 (0.8)	57.6 (1.4)	8.8 (0.8)
1992 .....	99.0 (0.3)	81.9 (1.0)	29.4 (1.2)	1.4 (0.3)	98.8 (0.4)	78.1 (1.6)	20.7 (1.1)	0.5 (0.2)	100.0 —	96.9 (0.6)	60.5 (1.8)	9.1 (0.7)
1994 .....	99.1 (0.3)	82.3 (0.9)	31.5 (1.6)	1.4 (0.4)	98.3 (0.4)	78.9 (1.5)	23.9 (1.6)	0.8 (0.3)	100.0 —	97.3 (0.6)	60.2 (2.1)	9.3 (1.0)
1996 .....	99.1 (0.2)	82.5 (1.1)	32.7 (1.7)	2.0 (0.5)	98.7 (0.3)	79.8 (1.4)	23.0 (1.6)	0.8 (0.2)	100.0 —	97.0 (0.7)	62.7 (1.8)	9.5 (1.3)
<b>Female</b>												
1978 .....	97.2 (0.3)	72.0 (1.1)	19.9 (1.0)	0.8 (0.2)	95.2 (0.5)	65.9 (1.2)	17.5 (0.7)	0.9 (0.2)	99.7 (0.1)	91.0 (0.6)	48.2 (1.3)	5.2 (0.7)
1982 .....	97.6 (0.3)	74.0 (1.3)	19.6 (1.1)	0.5 (0.1)	98.0 (0.3)	71.4 (1.3)	15.9 (1.0)	0.4 (0.2)	99.9 (0.0)	92.1 (0.6)	45.3 (1.4)	4.1 (0.4)
1986 .....	97.8 (0.4)	74.3 (1.3)	20.6 (1.3)	0.6 (0.3)	98.6 (0.3)	72.7 (1.9)	14.1 (1.3)	0.3 (0.1)	100.0 —	95.1 (0.7)	48.9 (1.7)	4.7 (0.6)
1990 .....	99.1 (0.3)	82.3 (1.3)	27.9 (1.3)	1.0 (0.3)	98.9 (0.2)	74.4 (1.3)	15.7 (1.0)	0.2 (0.1)	100.0 —	96.2 (0.8)	54.7 (1.8)	5.6 (0.8)
1992 .....	99.0 (0.3)	80.9 (1.1)	26.3 (1.5)	1.0 (0.4)	98.6 (0.2)	77.7 (1.1)	17.2 (1.4)	0.3 —	100.0 —	96.3 (0.8)	57.7 (1.6)	5.2 (0.8)
1994 .....	98.9 (0.3)	81.7 (0.9)	28.3 (1.3)	1.1 (0.4)	98.7 (0.3)	77.3 (1.0)	18.7 (1.4)	0.5 (0.3)	100.0 —	96.0 (0.6)	57.2 (1.4)	5.5 (0.9)
1996 .....	99.1 (0.4)	80.7 (0.9)	26.7 (1.1)	1.2 (0.4)	98.8 (0.3)	77.4 (1.1)	18.4 (1.5)	0.5 (0.2)	100.0 —	96.7 (0.6)	57.6 (2.2)	5.3 (0.8)
<b>White, non-Hispanic</b>												
1978 .....	98.3 (0.2)	76.3 (1.0)	22.9 (0.9)	0.9 (0.2)	97.6 (0.3)	72.9 (0.9)	21.4 (0.7)	1.2 (0.2)	100.0 —	95.6 (0.3)	57.6 (1.1)	8.5 (0.5)
1982 .....	98.5 (0.3)	76.8 (1.2)	21.8 (1.1)	0.6 (0.1)	99.1 (0.1)	78.3 (0.9)	20.5 (1.0)	0.6 (0.1)	100.0 —	96.2 (0.3)	54.7 (1.4)	6.4 (0.5)
1986 .....	98.8 (0.2)	79.6 (1.3)	24.6 (1.0)	0.8 (0.3)	99.3 (0.3)	78.9 (1.7)	18.6 (1.2)	0.4 (0.1)	100.0 —	98.0 (0.4)	59.1 (1.7)	7.9 (0.7)
1990 .....	99.6 (0.2)	86.9 (0.9)	32.7 (1.0)	1.5 (0.4)	99.4 (0.1)	82.0 (1.0)	21.0 (1.2)	0.4 (0.2)	100.0 —	97.6 (0.3)	63.2 (1.6)	8.3 (0.7)
1992 .....	99.6 (0.1)	86.9 (0.7)	32.4 (1.0)	1.4 (0.3)	99.6 (0.2)	84.9 (1.1)	22.8 (1.3)	0.4 (0.2)	100.0 —	98.3 (0.4)	66.4 (1.4)	8.7 (0.9)
1994 .....	99.6 (0.2)	87.0 (0.8)	35.3 (1.3)	1.5 (0.4)	99.3 (0.2)	85.5 (0.9)	25.6 (1.6)	0.7 (0.3)	100.0 —	98.4 (0.4)	67.0 (1.4)	9.4 (1.1)
1996 .....	99.6 (0.1)	86.6 (0.8)	35.7 (1.4)	2.0 (0.4)	99.6 (0.2)	86.4 (1.0)	25.4 (1.5)	0.8 (0.2)	100.0 —	98.7 (0.4)	68.7 (2.2)	9.2 (1.0)
<b>Black, non-Hispanic</b>												
1978 .....	88.4 (1.0)	42.0 (1.4)	4.1 (0.6)	0.0 —	79.7 (1.5)	28.7 (2.1)	2.3 (0.5)	0.0 —	98.8 (0.3)	70.7 (1.7)	16.8 (1.6)	0.5 (0.2)
1982 .....	90.2 (1.0)	46.1 (2.4)	4.4 (0.8)	0.0 —	90.2 (1.6)	37.9 (2.5)	2.9 (1.0)	0.0 —	99.7 (0.2)	76.4 (1.5)	17.1 (1.5)	0.5 (0.3)
1986 .....	93.9 (1.4)	53.4 (2.5)	5.6 (0.9)	0.1 —	95.4 (0.9)	49.0 (3.7)	4.0 (1.4)	0.1 —	100.0 —	85.6 (2.5)	20.8 (2.8)	0.2 —
1990 .....	96.9 (0.9)	60.0 (2.8)	9.4 (1.7)	0.1 —	95.4 (1.1)	48.7 (3.6)	3.9 (1.6)	0.1 —	99.9 —	92.4 (2.2)	32.8 (4.5)	2.0 (1.0)
1992 .....	96.6 (1.1)	59.8 (2.8)	9.6 (1.4)	0.1 —	95.0 (1.4)	51.0 (2.7)	4.0 (0.7)	0.1 —	100.0 —	89.6 (2.5)	29.8 (3.9)	0.9 —
1994 .....	97.4 (1.0)	65.9 (2.6)	11.1 (1.7)	0.0 —	95.6 (1.6)	51.0 (3.9)	6.4 (2.4)	0.3 —	100.0 —	90.6 (1.8)	29.8 (3.4)	0.4 —
1996 .....	97.3 (0.8)	65.3 (2.4)	10.0 (1.2)	0.1 —	96.2 (1.3)	53.7 (2.6)	4.8 (1.1)	0.1 —	100.0 —	90.6 (1.3)	31.2 (2.5)	0.9 —
<b>Hispanic</b>												
1978 .....	93.0 (1.2)	54.2 (2.8)	9.2 (2.5)	0.2 —	86.4 (0.9)	36.0 (2.9)	4.0 (1.0)	0.1 —	99.3 (0.4)	78.3 (2.3)	23.4 (2.7)	1.4 (0.6)
1982 .....	94.3 (1.2)	55.7 (2.3)	7.8 (1.7)	0.0 —	95.9 (0.9)	52.2 (2.5)	6.3 (1.0)	0.0 —	99.8 —	81.4 (1.9)	21.6 (2.2)	0.7 (0.4)
1986 .....	96.4 (1.3)	57.6 (2.9)	7.3 (2.8)	0.1 —	96.9 (1.4)	56.0 (5.0)	5.5 (1.1)	0.2 —	99.4 —	89.3 (2.5)	26.5 (4.5)	1.1 —
1990 .....	98.0 (0.8)	68.4 (3.0)	11.3 (3.5)	0.2 —	96.8 (1.1)	56.7 (3.3)	6.4 (1.7)	0.1 —	99.6 —	85.8 (4.2)	30.1 (3.1)	1.9 (0.8)
1992 .....	97.2 (1.3)	65.0 (2.9)	11.7 (2.5)	0.1 —	98.1 (0.7)	63.3 (2.7)	7.0 (1.2)	0.0 —	100.0 —	94.1 (2.2)	39.2 (4.9)	1.2 —
1994 .....	97.2 (1.2)	63.5 (3.1)	9.7 (1.8)	0.0 —	97.1 (1.3)	59.2 (2.2)	6.4 (1.8)	0.0 —	100.0 —	91.8 (3.6)	38.3 (5.5)	1.4 —
1996 .....	98.1 (0.7)	67.1 (2.1)	13.8 (2.3)	0.2 —	96.2 (0.8)	58.3 (2.3)	6.7 (1.2)	0.0 —	99.9 —	92.2 (2.2)	40.1 (3.5)	1.8 —
<b>Public</b>												
1978 .....	96.4 (0.3)	68.8 (0.9)	18.5 (0.7)	0.7 (0.2)	94.1 (0.5)	63.3 (1.2)	17.0 (0.8)	0.9 (0.2)	99.8 (0.1)	91.7 (0.5)	50.6 (1.2)	7.0 (0.4)
1982 .....	96.8 (0.4)	69.4 (1.2)	17.3 (0.9)	0.5 (0.1)	97.5 (0.4)	69.7 (1.3)	16.4 (1.0)	0.5 (0.1)	99.9 (0.0)	92.5 (0.6)	46.9 (1.3)	5.2 (0.4)
1986 .....	97.7 (0.3)	72.7 (1.4)	19.1 (1.1)	0.6 (0.2)	98.5 (0.3)	72.9 (1.7)	15.6 (1.0)	0.4 (0.1)	99.9 —	95.5 (0.5)	50.7 (1.6)	6.1 (0.5)
1990 .....	99.0 (0.2)	80.5 (1.1)	26.8 (1.0)	1.1 (0.3)	98.4 (0.2)	73.3 (1.2)	16.7 (1.1)	0.3 (0.1)	100.0 —	95.8 (0.6)	55.0 (1.3)	6.5 (0.5)
1992 .....	98.8 (0.3)	79.7 (0.9)	26.1 (0.9)	1.1 (0.3)	98.5 (0.3)	76.3 (1.2)	18.0 (1.0)	0.3 (0.2)	100.0 —	96.3 (0.6)	56.9 (1.2)	6.7 (0.7)
1994 .....	98.9 (0.3)	80.6 (0.8)	27.9 (1.2)	1.1 (0.4)	98.5 (0.3)	76.7 (1.2)	20.0 (1.4)	0.6 (0.2)	100.0 —	96.2 (0.5)	56.2 (1.3)	6.4 (0.7)
1996 .....	99.0 (0.2)	80.7 (0.8)	28.3 (1.1)	1.5 (0.3)	98.6 (0.2)	77.2 (0.9)	19.2 (1.3)	0.6 (0.1)	100.0 —	96.7 (0.5)	59.0 (1.8)	7.1 (0.7)
<b>Private</b>												
1978 .....	99.0 —	83.3 (1.9)	28.4 (2.0)	1.2 (0.4)	99.0 (0.4)	80.8 (1.7)	26.9 (1.8)	1.4 (0.4)	100.0 —	97.1 (0.6)	67.7 (3.3)	12.9 (2.7)
1982 .....	99.0 (0.4)	84.3 (2.1)	28.6 (2.6)	1.0 (0.6)	99.5 (0.3)	85.1 (1.6)	26.3 (3.1)	1.0 (0.3)	100.0 —	98.1 (0.5)	66.3 (2.4)	8.2 (1.4)
1986 .....	98.7 (0.8)	81.8 (2.3)	28.9 (2.7)	1.1 (0.6)	98.9 (0.6)	81.9 (3.3)	22.0 (6.8)	0.1 —	100.0 —	99.4 —	75.1 (10.6)	16.3 (9.1)
1990 .....	99.7 —	89.3 (1.8)	35.2 (3.3)	1.8 (1.2)	99.7 —	87.0 (2.0)	23.2 (2.5)	0.7 (0.4)	100.0 —	98.2 (1.2)	71.0 (7.9)	15.7 (5.3)
1992 .....	99.8 (0.1)	92.2 (1.2)	38.6 (2.7)	1.9 (0.7)	99.9 —	89.7 (2.1)	25.9 (3.7)	0.7 (0.4)	100.0 —	99.5 —	79.5 (3.7)	12.2 (2.7)
1994 .....	99.8 —	92.3 (1.3)	44.4 (4.0)	2.2 (0.8)	98.7 —	88.5 (2.6)	30.7 (3.7)	1.0 —	100.0 —	98.8 (0.6)	75.7 (4.3)	14.5 (3.5)
1996 .....	99.6 —	87.1 (1.5)	38.7 (3.0)	2.1 (1.1)	99.6 —	89.3 (3.5)	31.6 (4.8)	1.0 (0.6)	100.0 —	98.5 (0.8)	71.5 (6.4)	10.4 (1.0)

<sup>1</sup> As measured by the National Assessment of Educational Progress (NAEP).  
<sup>2</sup> Virtually no students were able to perform multi-step problems and algebra.  
<sup>3</sup> Virtually all students knew simple arithmetic facts. Data are only for students enrolled in school.  
<sup>4</sup> Scale score of 150 or above.  
<sup>5</sup> Scale score of 200 or above.  
<sup>6</sup> Scale score of 250 or above.  
<sup>7</sup> Scale score of 300 or above.

<sup>8</sup> Scale score of 350 or above.  
 —Data not available or not applicable.

NOTE.—Standard errors appear in parentheses.

SOURCE: U.S. Department of Education, National Assessment of Educational Progress, *NAEP 1996 Trends in Academic Progress*, prepared by Educational Testing Service. (This table was prepared September 1997.)