# Mathematics Grade 4

## 1. Improvement Over Time

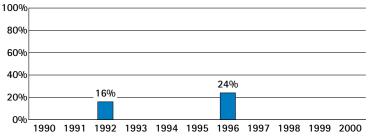


Have Indiana's 4th graders improved in mathematics achievement?

Yes. The percentage of Indiana's public school 4th graders who met the Goals Panel's performance standard in mathematics increased from 16% in 1992, to 24% in 1996.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.

Percentage of public school 4th graders at or above Proficient on the NAEP mathematics assessment



Mathematics performance will be tested again in 2000.

## 2. State Comparisons<sup>+</sup>

How did Indiana compare with other states in 4th grade mathematics achievement in public schools in 1996?

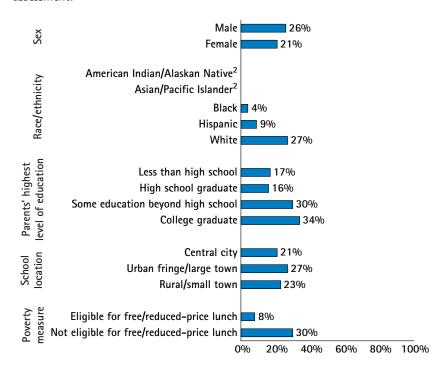
23 states had similar' percentages of students who were at or above Proficient on NAEP:			
Connecticut	31%	Michigan, Utah, Vermont	23%
Minnesota	29%	Colorado, Iowa, Maryland, Montana	22%
Maine, Wisconsin	27%	U.S.,* Alaska, North Carolina, Oregon,	21%
New Jersey, Texas	25%	Washington	
Indiana, Massachusetts, Nebraska,	24%	Missouri, New York, Pennsylvania	20%
North Dakota			

21 states had	significantly lower <sup>1</sup>	percentages of students wh	o were	
at or above Proficient on NAEP:				

Virginia, West Virginia, Wyoming	19%	South Carolina	12%
Rhode Island, Tennessee	17%	Alabama, California	11%
Delaware, Hawaii, Kentucky	16%	Louisiana, Mississippi	8%
Arizona, Florida	15%	District of Columbia	5%
Nevada	14%	Guam	3%
Arkansas Georgia New Mexico	130/0		

### 3. Subgroup Performance

What percentages of public school 4th graders in different subgroups in Indiana were at or above Proficient on the 1996 NAEP mathematics assessment?



<sup>&</sup>lt;sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

<sup>&</sup>lt;sup>1</sup> See explanation on pp. 3-4.

<sup>\*</sup> Figure shown for the U.S. includes both public and nonpublic school data.

<sup>&</sup>lt;sup>1</sup> Interpret differences between subgroups with caution. See pp. 3-4 and Appendix D.

<sup>&</sup>lt;sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

## Indiana

## 1. Improvement Over Time

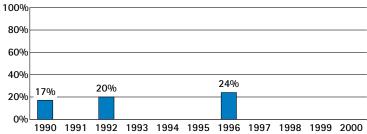


Have Indiana's 8th graders improved in mathematics achievement?

Yes. The percentage of Indiana's public school 8th graders who met the Goals Panel's performance standard in mathematics increased from 17% in 1990, to 24% in 1996.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.

Percentage of public school 8th graders at or above Proficient on the NAEP mathematics assessment



Mathematics performance will be tested again in 2000.

## 2. State Comparisons<sup>+</sup>

How did Indiana compare with other states in 8th grade mathematics achievement in public schools in 1996?

# 9 states had significantly higher' percentages of students who were at or above Proficient on NAEP:

Minnesota	34%	Connecticut, Iowa, Maine, Nebraska	31%
North Dakota	33%	Alaska	30%
Montana, Wisconsin	32%		

# 15 states had similar percentages of students who were at or above Proficient on NAEP:

Massachusetts, Michigan	28%	U.S.,* Indiana, Maryland, Utah	24%
Vermont	27%	Missouri, New York, Wyoming	22%
Oregon, Washington	26%	Texas, Virginia	21%
Colorado	25%	North Carolina, Rhode Island	20%

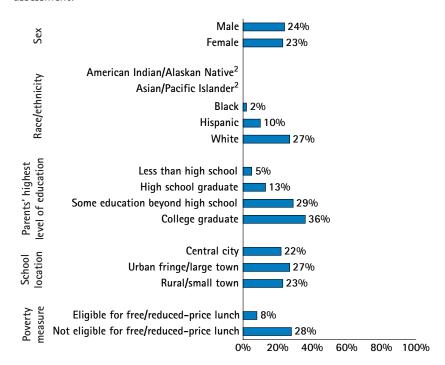
# 17 states had significantly lower percentages of students who were at or above Proficient on NAEP:

Delaware	19%	Arkansas	13%
Arizona	18%	Alabama	12%
California, Florida	17%	Louisiana, Mississippi	7%
Georgia, Hawaii, Kentucky	16%	Guam	6%
Tennessee New Mexico, South Carolina, West Virginia	15% 14%	District of Columbia	5%

#### <sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

### 3. Subgroup Performance

What percentages of public school 8th graders in different subgroups in Indiana were at or above Proficient on the 1996 NAEP mathematics assessment?



<sup>1</sup> Interpret differences between subgroups with caution. See pp. 3-4 and Appendix D.

<sup>&</sup>lt;sup>1</sup> See explanation on pp. 3-4.

<sup>\*</sup> Figure shown for the U.S. includes both public and nonpublic school data.

<sup>&</sup>lt;sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

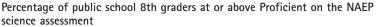
# Science Grade 8

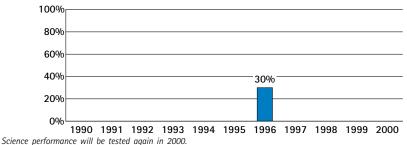
### 1. Improvement Over Time

Have Indiana's 8th graders improved in science achievement?

In 1996, 30% of Indiana's public school 8th graders met the Goals Panel's performance standard in science. The Goals Panel will report whether science performance has improved over time when science is assessed again in 2000.

The Goals Panel has set its performance standard at the two highest levels of achievement — Proficient or Advanced — on the National Assessment of Educational Progress, or NAEP.





## 2. State Comparisons<sup>+</sup>

How did Indiana compare with other states in 8th grade science achievement in public schools in 1996?

## 5 states had significantly higher' percentages of students who were at or above Proficient on NAEP:

Maine, Montana, North Dakota	41%	Minnesota <sup>2</sup>	37%
Wisconsin	39%		

# 17 states had similar percentages of students who were at or above Proficient on NAEP:

Massachusetts <sup>2</sup>	37%	Indiana	30%
Connecticut, Iowa	36%	U.S.*	29%
Nebraska	35%	Missouri	28%
Vermont, Wyoming	34%	New York, Virginia, Washington	27%
Colorado, Michigan, Oregon, Utah	32%	Rhode Island	26%
Alaska	31%	Maryland	25%

# 19 states had significantly lower percentages of students who were at or above Proficient on NAEP:

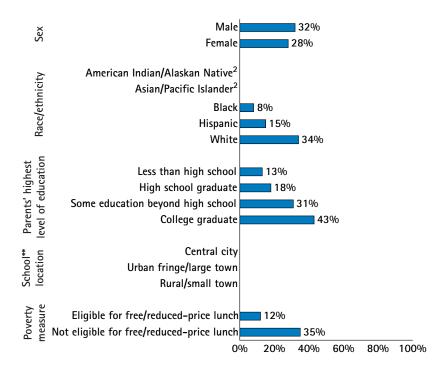
North Carolina	24%	Alabama	18%
Arizona, Kentucky, Texas	23%	South Carolina	17%
Arkansas, Tennessee	22%	Hawaii	15%
Delaware, Florida, Georgia,	21%	Louisiana	13%
West Virginia		Mississippi	12%
California	20%	Guam	7%
New Mexico	19%	District of Columbia	5%

<sup>&</sup>lt;sup>†</sup> The term "state" is used to refer to the 50 states, the District of Columbia, and the territories.

\* Figure shown for the U.S. includes both public and nonpublic school data.

### 3. Subgroup Performance

What percentages of public school 8th graders in different subgroups' in Indiana were at or above Proficient on the 1996 NAEP science assessment?



<sup>1</sup> Interpret differences between subgroups with caution. See pp. 3-4 and Appendix D.

<sup>1</sup> See explanation on pp. 3-4.

<sup>&</sup>lt;sup>2</sup> State may appear to be out of place; however, statistically, its placement is correct. See pp. 3-4.

<sup>&</sup>lt;sup>2</sup> Characteristics of the sample do not permit a reliable estimate.

<sup>\*\*</sup> No school location data for science in 1996.

# International Comparisons

## Indiana

### **Mathematics Grade 8**

Forty-one nations<sup>†</sup> participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade mathematics in 1995. If public school 8th graders in Indiana participated in the TIMSS mathematics assessment, how would their average performance compare to that of students who took TIMSS in these nations?

### 12 nations would be expected to perform significantly higher:

(Austria)JapanBelgium - Flemish²KoreaCzech RepublicSingaporeFranceSlovak RepublicHong Kong(Slovenia)Hungary(Switzerland)

### 19 nations\* would be expected to perform similarly:

(Australia)(Israel)(Belgium – French)²(Latvia – LSS)³(Bulgaria)(Netherlands)CanadaNew Zealand(Denmark)Norway

(England) Russian Federation (Germany) (Scotland)

Iceland Sweden
Indiana (Thailand)
Ireland United States

### 10 nations\* would be expected to perform significantly lower:

(Colombia)(Lithuania)CyprusPortugal(Greece)(Romania)Iran, Islamic Republic(South Africa)(Kuwait)Spain

### Science Grade 8

Forty-one nations<sup>†</sup> participated in the Third International Mathematics and Science Study (TIMSS) in 8th grade science in 1995. If public school 8th graders in Indiana participated in the TIMSS science assessment, how would their average performance compare to that of students who took TIMSS in these nations?

#### 3 nations would be expected to perform significantly higher:

Czech Republic Singapore Japan

#### 22 nations would be expected to perform similarly:1

(Australia)Korea(Austria)(Netherlands)Belgium - Flemish²New Zealand(Bulgaria)NorwayCanadaRussian Federation

(England) Slovak Republic (Germany) (Slovenia)
Hong Kong Sweden
Hungary (Switzerland)
Indiana (Thailand)
Ireland United States

(Israel)

### 16 nations would be expected to perform significantly lower:

(Belaium - French)2 (Kuwait) (Colombia) (Latvia - LSS)3 Cyprus (Lithuania) (Denmark) Portugal France (Romania) (Scotland) (Greece) Iceland (South Africa) Iran, Islamic Republic Spain

<sup>&</sup>lt;sup>†</sup> The term "nation" is used to refer to nations, states, or jurisdictions. Performance for nations is based on public school data only. Nations not meeting international guidelines are shown in parentheses.

<sup>&</sup>lt;sup>1</sup> See explanation on pp. 3-4.

<sup>&</sup>lt;sup>2</sup> The Flemish and French educational systems in Belgium participated separately.

<sup>3</sup> Latvia is designated LSS because only Latvian-speaking schools were tested, which represent less than 65% of the population.

<sup>&</sup>lt;sup>†</sup> The term "nation" is used to refer to nations, states, or jurisdictions. Performance for nations is based on public school data only. Nations not meeting international guidelines are shown in parentheses.

<sup>&</sup>lt;sup>1</sup> See explanation on pp. 3-4.

<sup>&</sup>lt;sup>2</sup> The Flemish and French educational systems in Belgium participated separately.

<sup>&</sup>lt;sup>3</sup> Latvia is designated LSS because only Latvian-speaking schools were tested, which represent less than 65% of the population.