



# Grade 12 Reading and Mathematics 2009 National and Pilot State Results



NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS



**Stuart Kerachsky**

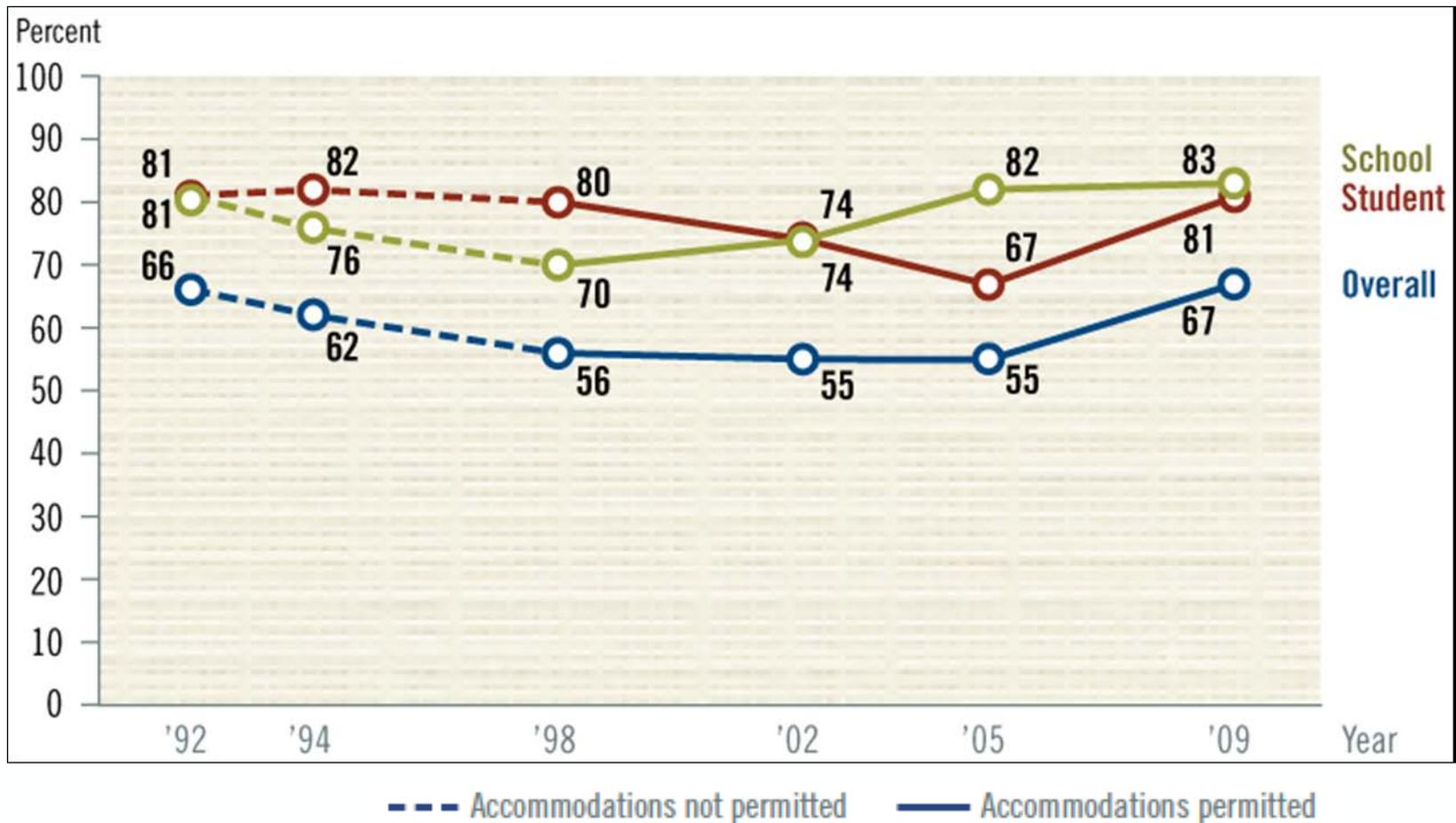
Acting Commissioner  
National Center for Education Statistics

November 18, 2010

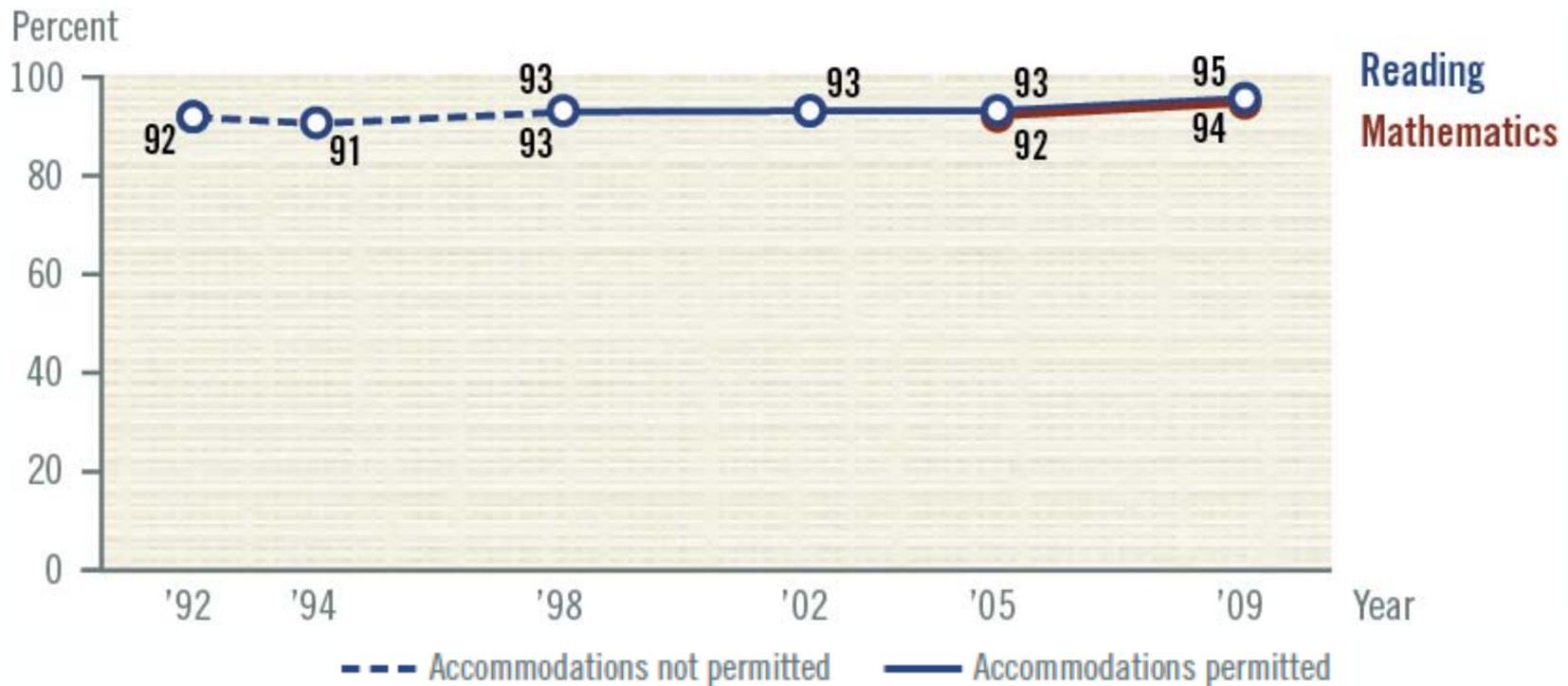
# Overview of the 2009 Grade 12 Assessments in Reading and Mathematics

- Administered January – March 2009
- Approximately 100,000 twelfth-graders assessed
- Results available for
  - Nation
  - 11 states
- Results reported as
  - Average scale scores
  - Achievement levels (*Basic, Proficient, Advanced*)

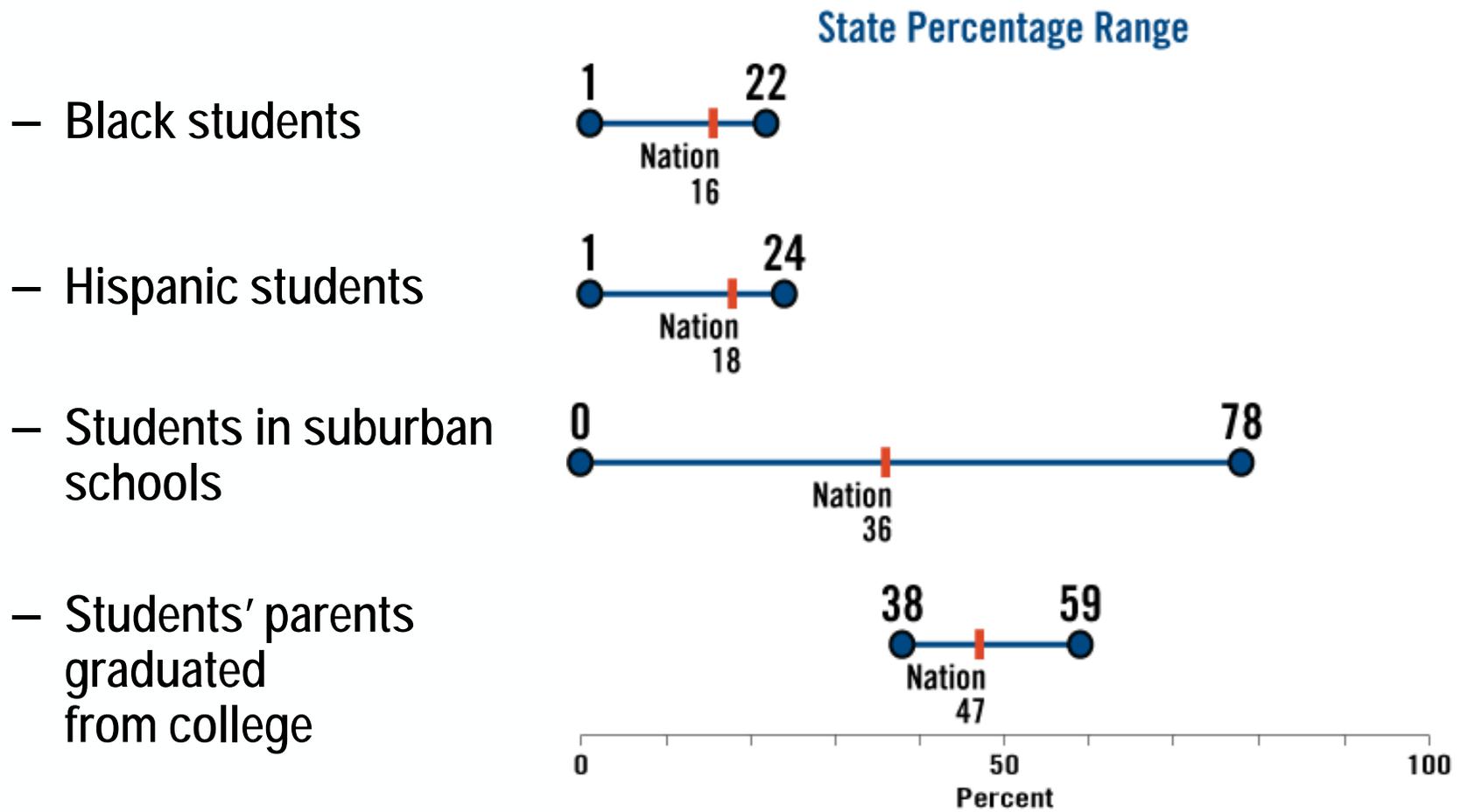
## Grade 12 participation rates vary over time



# Students respond to over 90 percent of the assessment questions



## Pilot states vary in demographic makeup





# READING

## Overview of the 2009 Reading Assessment

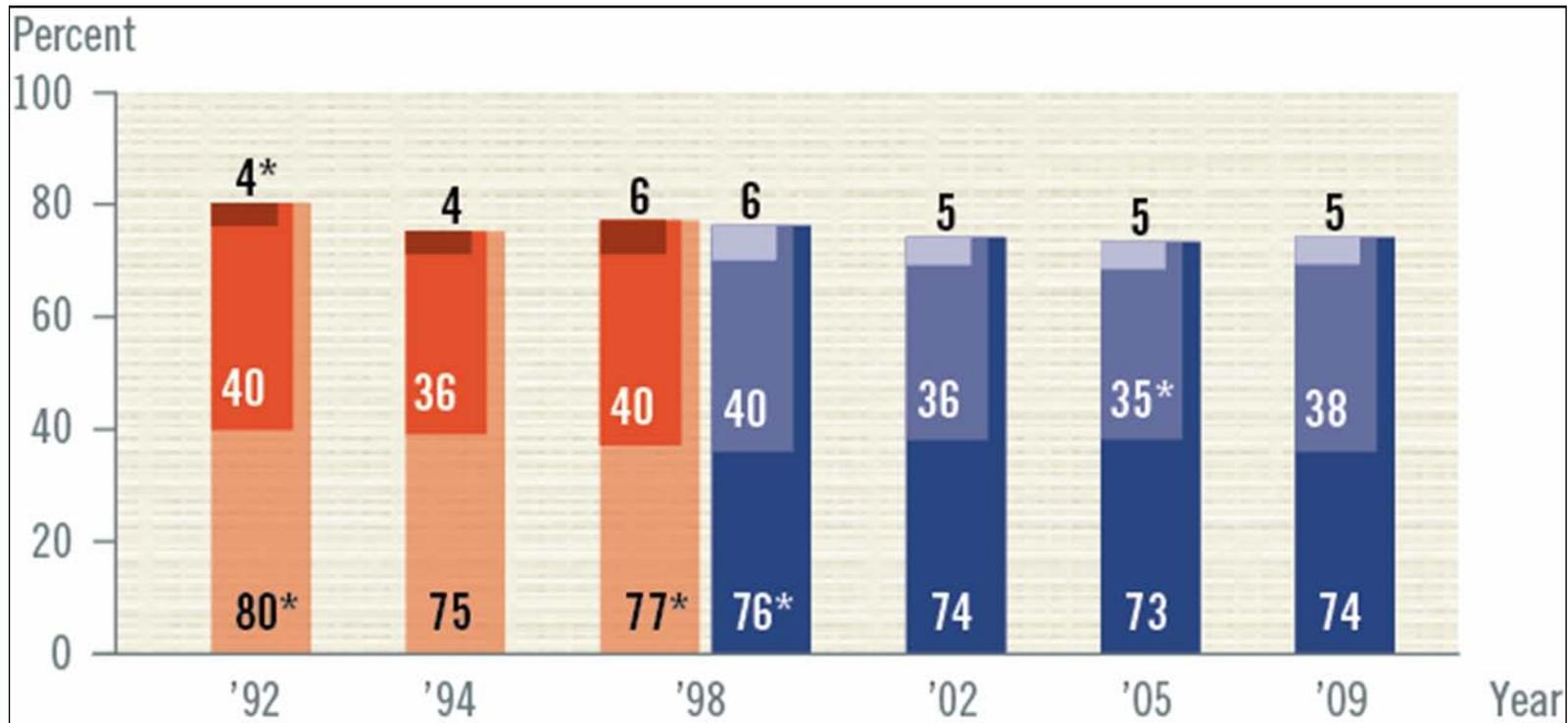
- New framework
  - Trend maintained from 1992
- Students read literary and informational texts
- Questions aligned to three reading processes
  - Locate and recall
  - Integrate and interpret
  - Critique and evaluate
- Average scores reported on 0–500 scale

## Average score up 2 points since 2005 but lower than in 1992



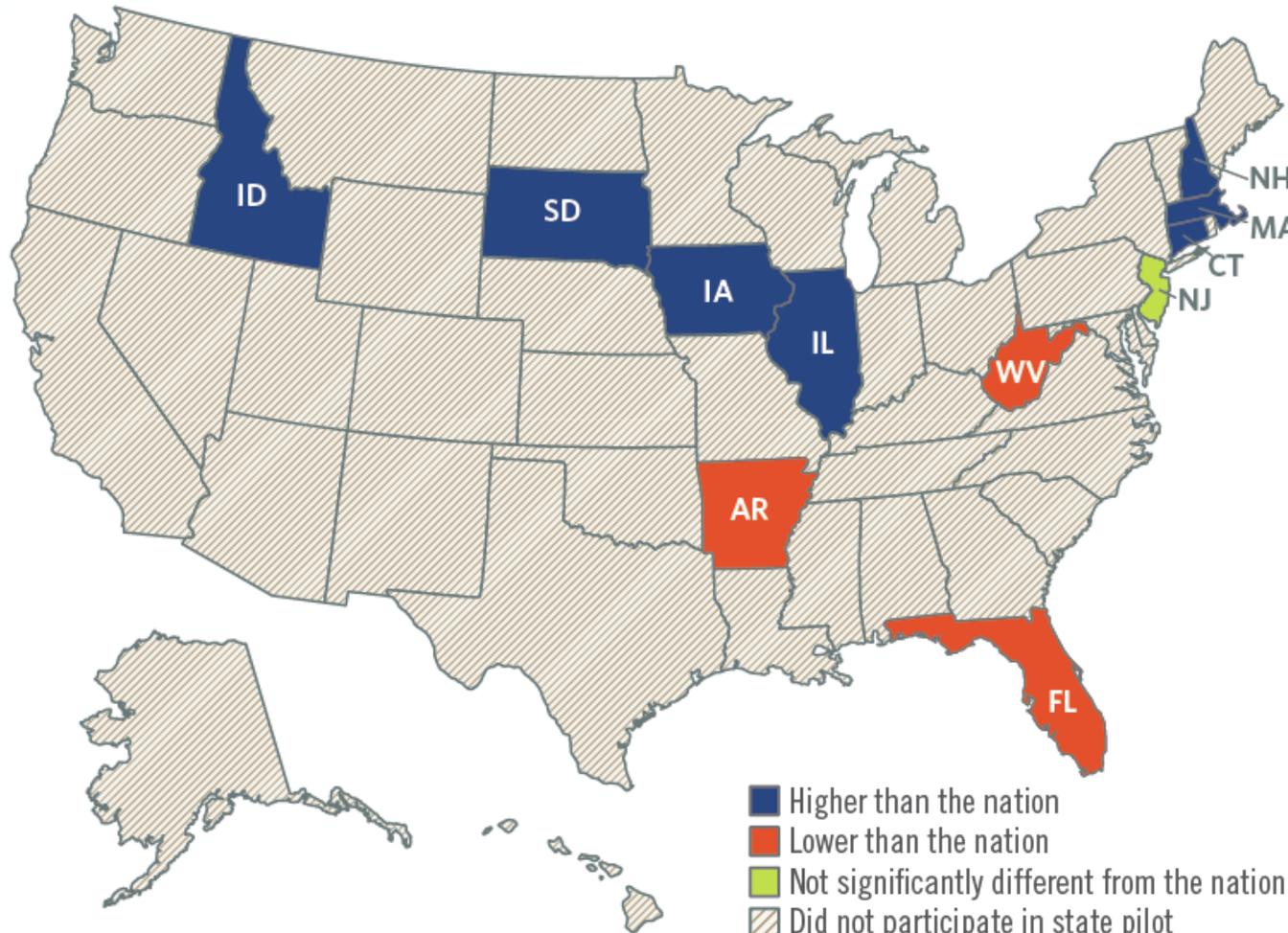
\* Significantly different ( $p < .05$ ) from 2009.

## Percentage at or above *Proficient* level increases since 2005



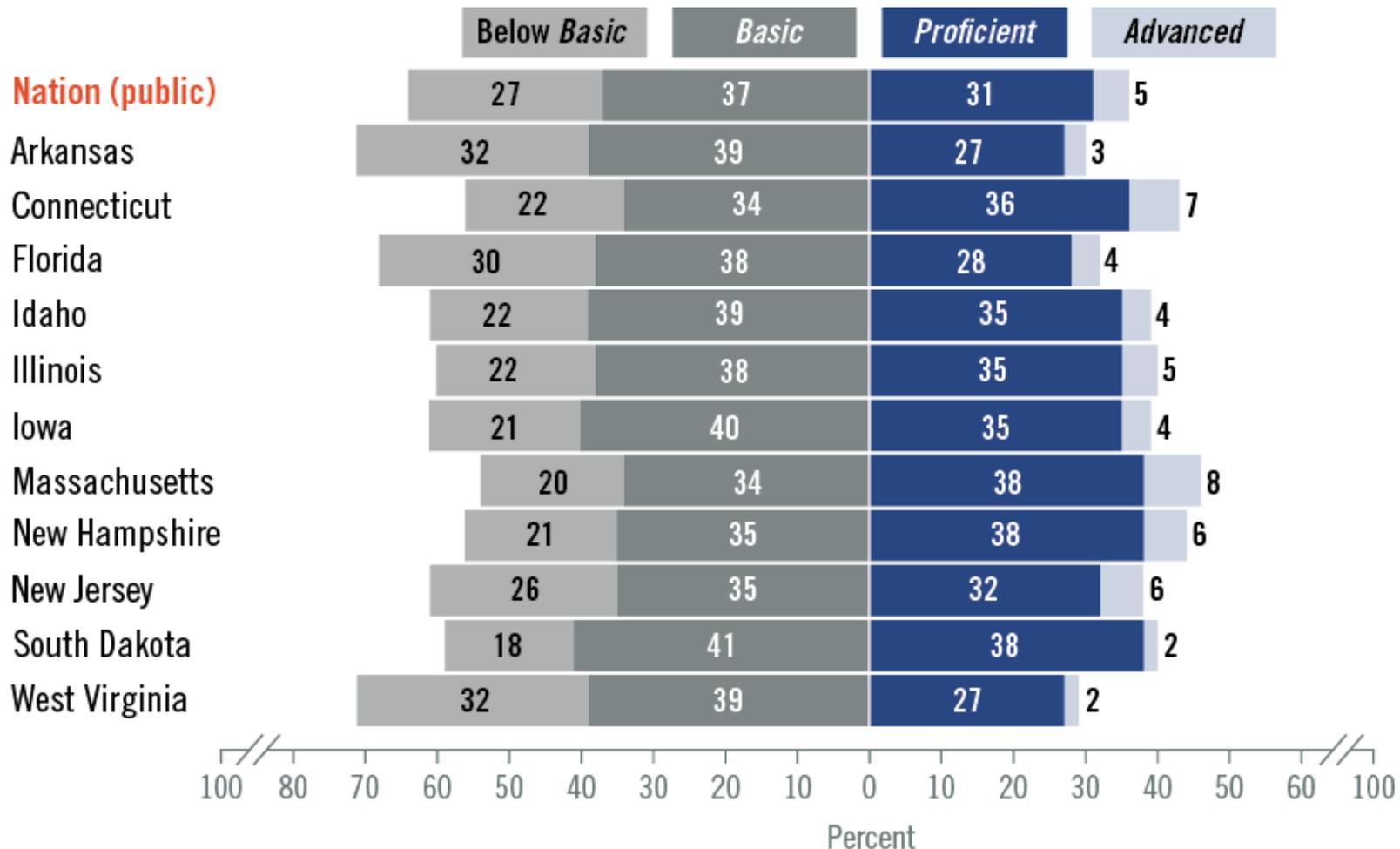
\* Significantly different ( $p < .05$ ) from 2009.

## Reading scores in seven states higher than the national average



	Average score
Nation (public)	287
AR	280
CT	292
FL	283
ID	290
IL	292
IA	291
MA	295
NH	293
NJ	288
SD	292
WV	279

## States show range of reading comprehension skills



## White and Asian/Pacific Islander students make gains since 2005

	Change in average scores	
	Since 1992	Since 2005
<b>Overall</b>	<b>-4</b>	<b>+2</b>
White	◆	<b>+3</b>
Black	◆	◆
Hispanic	◆	◆
Asian/Pacific Islander	◆	<b>+11</b>
American Indian/ Alaska Native	‡	◆

◆ Indicates no significant change in the score in 2009.

‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

## Gains for Asian/Pacific Islander students close gap with White students

Score gaps	Gap in 2009	Change in score gap	
		Since 1992	Since 2005
White – Black	27*	◆	◆
White – Hispanic	22*	◆	◆
Asian/Pacific Islander – White	2	▼	▼
White – American Indian/Alaska Native	13 <sup>‡</sup>	‡	◆
Female – Male	12*	◆	◆

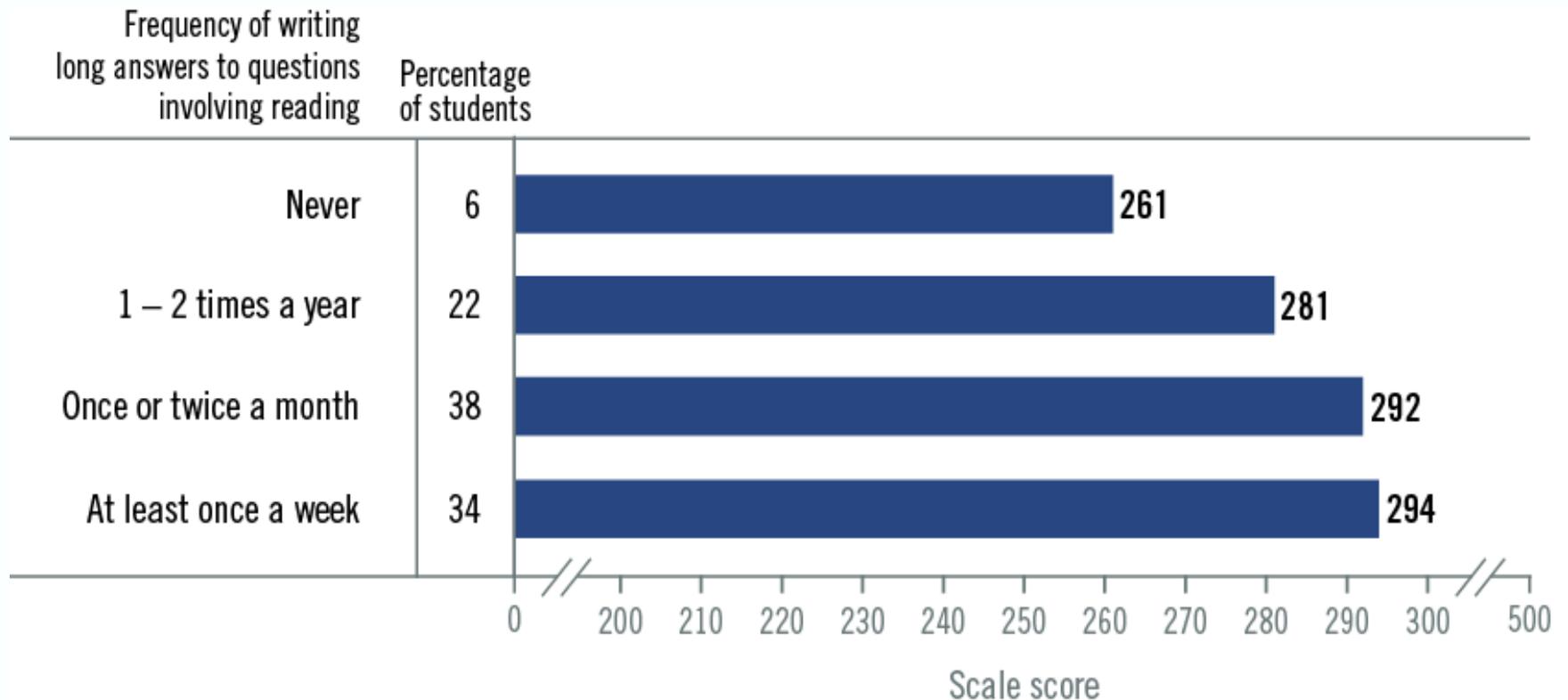
\* Statistically significant ( $p < .05$ ) score gap.

‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

◆ Indicates no significant change in the gap in 2009.

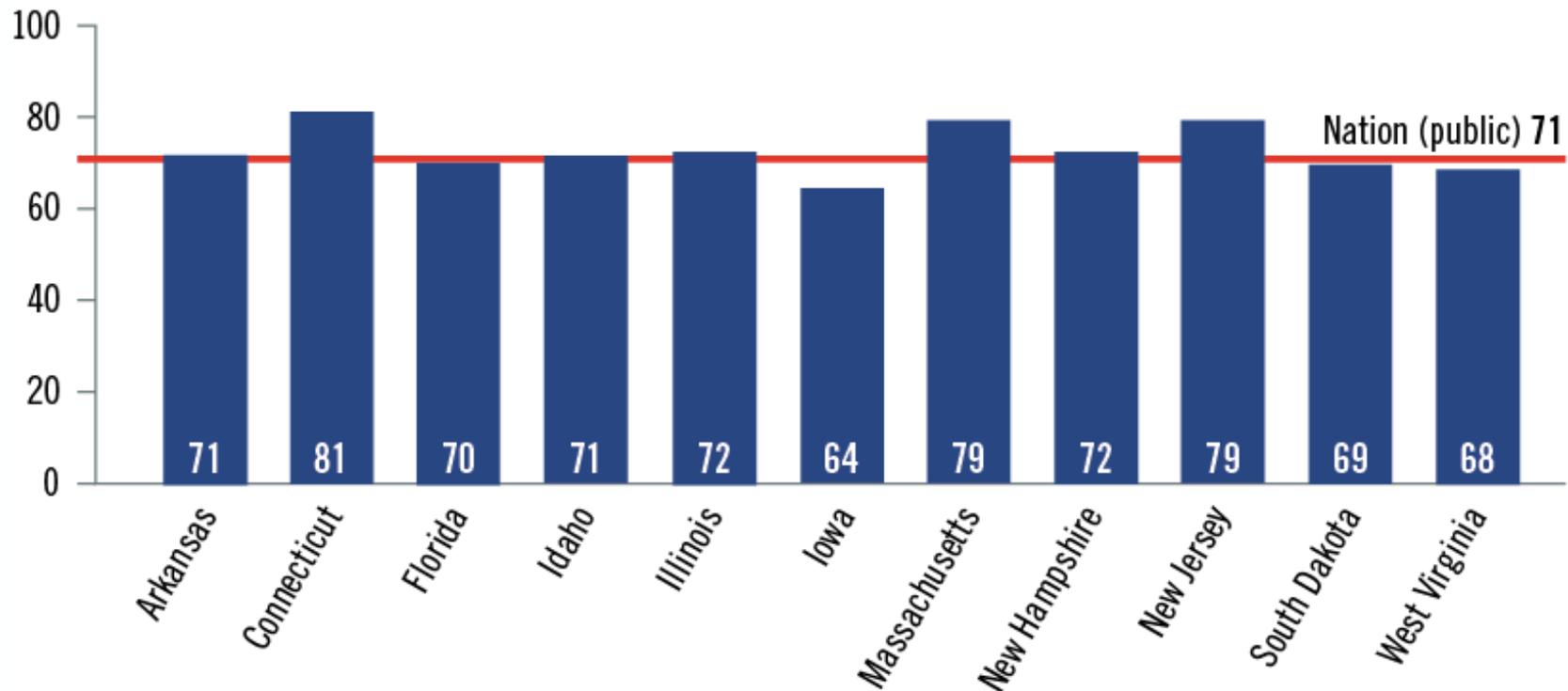
▼ Indicates the gap was smaller in 2009.

## Almost three-quarters of students write long answers to questions involving reading at least once a month

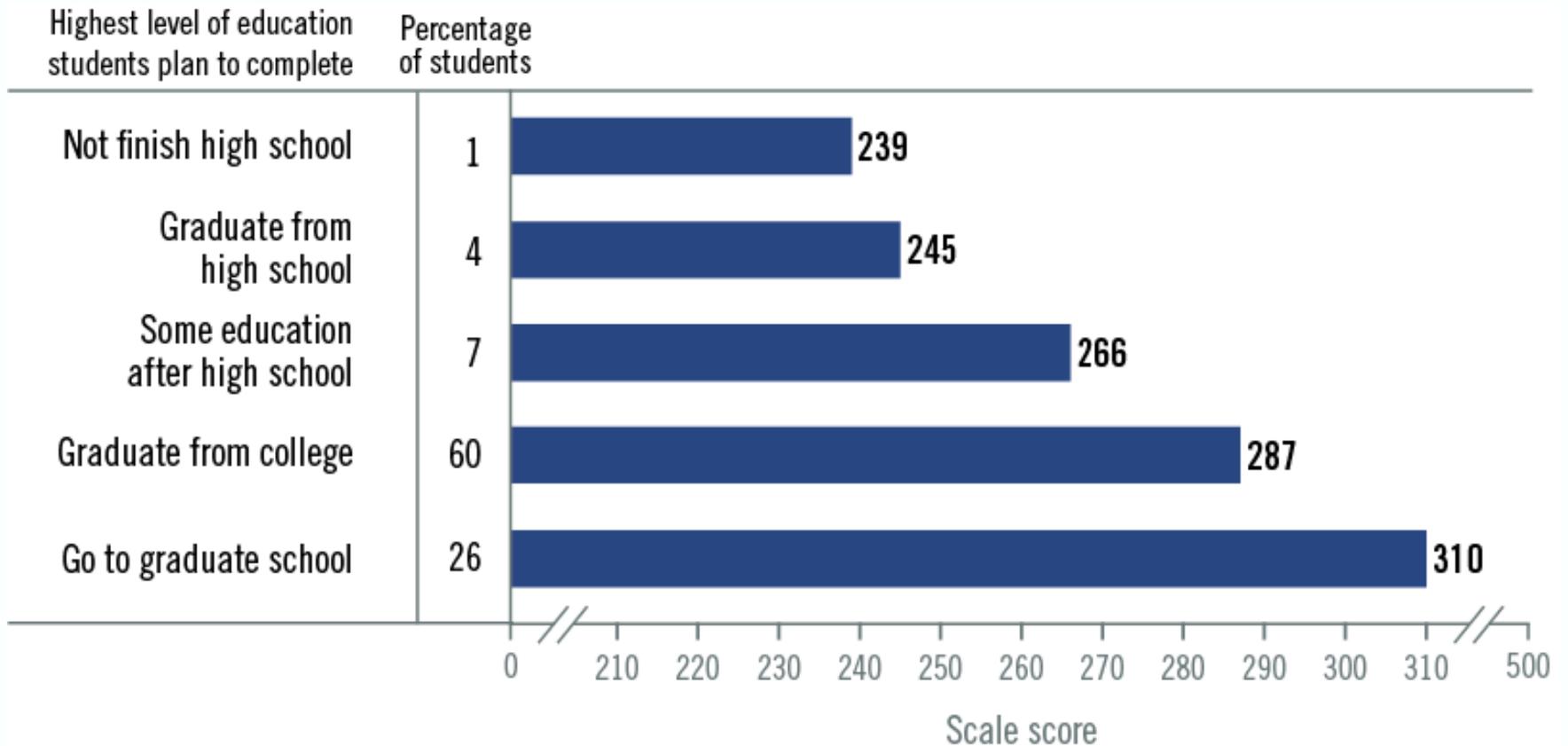


## Percentages of students writing long answers to questions involving reading at least monthly range from 64 to 81 percent in participating states

Percentage reporting writing long answers to questions involving reading at least once a month



## Most students plan to graduate from college



## HOUSING RENTAL AGREEMENT

Address \_\_\_\_\_  
\_\_\_\_\_

THIS AGREEMENT is made this \_\_\_\_\_ day of \_\_\_\_\_, by and between \_\_\_\_\_, herein called "Landlord," and \_\_\_\_\_, herein called "Tenant." Landlord hereby agrees to rent to Tenant the real property located in the City of \_\_\_\_\_, State of \_\_\_\_\_, described as follows: \_\_\_\_\_ Lease commences on the 1st day of \_\_\_\_\_ and monthly thereafter until the \_\_\_\_\_th day of \_\_\_\_\_, at which time this agreement is terminated. Landlord rents the demised property to Tenant on the following terms and conditions:

### 1. Rent

Tenant agrees to pay Landlord as base rent the sum of \$\_\_\_\_\_ per month, due and payable monthly in advance on the first day of each month during the term of this agreement. Rent must be received by 5:00 P.M. If the rent has not been received by 9:00 A.M. on the second of the month, then a seven (7) day notice will be posted.

### 2. Payment of Rent

Monthly rent payments may be paid by check until the first check is dishonored and returned unpaid. Rent shall be made payable to \_\_\_\_\_ and hand delivered (or sent by mail at Tenant's risk) to Landlord at \_\_\_\_\_ until received by Landlord. Any rents lost in the mail will be treated as if unpaid until received by Landlord.

### 3. Bad-Check Servicing Charge

In the event Tenant's check is dishonored and returned for any reason to Landlord, Tenant agrees to pay as additional rent the sum equal to thirty-five dollars (\$35) for each occurrence. This amount shall be in addition to all late fees, if check is not paid prior to the first of the month. If for any reason a check is returned or dishonored, all future rent payments must be cash or money order.

### 4. Use

Tenant agrees to use the property only as a residence for self and those persons identified below.

Landlord will hold Tenant solely responsible for all damages to property or for violations against this rental agreement.

### 5. Appliances

The house is rented with the following appliances: Refrigerator and Stove. Other appliances that may be included in the rental property are the sole responsibility of Tenant to maintain. Landlord will not be responsible for the maintenance of these other appliances and does not warrant the condition of these appliances.

### 6. Repair Policy

Tenant shall use customary diligence in care of the Property. All minor repairs are expected to be performed by or at the direction of Tenant, at the sole responsibility of Tenant. Any and all repairs made at the direction of Tenant shall be done by a competent professional, or by Tenant provided that Tenant is capable and qualified to make said repairs. All repairs shall be done in compliance with all applicable codes and regulations. Any repair that is estimated to cost more than fifty dollars (\$50) must receive permission of Landlord prior to being made. Under no circumstances will Landlord be responsible for any improvements or repairs costing more than \$50 unless Tenant is given written authorization to make repairs or improvements in advance.

### 7. Occupancy

Tenant is to maintain the dwelling unit as follows:

- Comply with all obligations primarily imposed upon Tenant by applicable provisions of building codes materially affecting health and safety.
- Keep that part of the property that Tenant occupies and uses as clean and safe as the condition of the property permits.
- Dispose from the dwelling unit all rubbish, garbage, and other waste in a clean and safe manner.
- Keep all plumbing fixtures in the dwelling unit as clean as their condition permits.
- Use in a reasonable manner all electrical, plumbing, sanitary, heating, ventilating, air-conditioning, and other facilities and appliances, including elevators, on the property.
- Not deliberately or negligently destroy, deface, damage, impair, or remove any part of the property or knowingly permit any person to do so.
- Not disturb neighbors' peaceful enjoyment of the property.

### 8. Security Deposit

Tenant has deposited with, and Landlord acknowledges receipt of, \$\_\_\_\_\_ as a Security Deposit. This Security Deposit is to guarantee the return of the property to Landlord in the same or better condition as when accepted by Tenant, reasonable wear excepted, and to satisfy any obligations of Tenant unfulfilled at the termination of this Rental Agreement, as specified herein. Satisfactory compliance with this section includes removing all trash and belongings of Tenant. If any provision of this Rental Agreement is violated, the Security Deposit is forfeited. The Security Deposit may not be applied by Tenant as payment for any rent due to Landlord. Should Tenant be responsible for damage and/or loss of value to the property greater than the value of the Security Deposit, Tenant hereby agrees to reimburse Landlord for such loss immediately upon the presentation of a bill for said damage and/or loss. Landlord shall return the balance of said Security Deposit, if any, to Tenant at Tenant's forwarding address, upon Tenant's vacating the property and returning keys to Landlord and upon termination of this contract according to other terms herein agreed. The Security Deposit will be returned within thirty (30) days after Tenant vacates the property, along with an itemized statement as to the deductions, if any, from said Security Deposit.

### 9. Alterations

Tenant shall make no alterations, decorations, additions, or improvements in or to the property without Landlord's prior written consent, and then only by contractors or mechanics approved by Landlord. All alterations, additions, or improvements upon the property, made by either party, shall become the property of Landlord and shall remain upon, and be surrendered with, said property, as a part thereof, at the end of the term hereof.

### 10. Vehicle Policy

Tenant must follow rules and laws of the City Parking Department concerning parking. Tenant must obtain all necessary parking permits and information for self and guests. Landlord is not responsible for Tenant's parking needs. Off-street parking is not provided by Landlord, unless otherwise noted in this agreement.

### 11. Utilities

Tenant will be responsible for payment of all utility and garbage bills, water and sewer charges, telephone bills, gas bills, and any other bills incurred during residency. Tenant specifically authorizes Landlord to deduct amounts of unpaid bills from the Security Deposit in the event bills remain unpaid after termination of this agreement.

### 12. Access to Property

Landlord reserves the right to enter the residence at reasonable times to inspect, make necessary repairs, supply services, or show it to prospective residents, purchasers, mortgagors, workers, or contractors. Whenever practicable, a 24-hour notice of Landlord's intent to enter shall be given to Tenant. Landlord may also display "for rent" and "for sale" signs on the building of which the rented residence is a part.

### 13. Full Disclosure

Tenant signing this Rental Agreement hereby states that all questions about this Rental Agreement have been answered, and that Tenant fully understands all the provisions of the agreement and the obligations and responsibilities of each party, as spelled out herein. Tenant further states that he/she agrees to fulfill Tenant's obligations in every respect or suffer the full legal and financial consequences of his/her actions or lack of action in violation of this agreement. Signature by Tenant on this Rental Agreement is acknowledgment of receipt of a signed copy of the Rental Agreement.

Accepted this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_, Landlord \_\_\_\_\_, Tenant

\_\_\_\_\_, Tenant

\_\_\_\_\_, Tenant

\_\_\_\_\_, Tenant

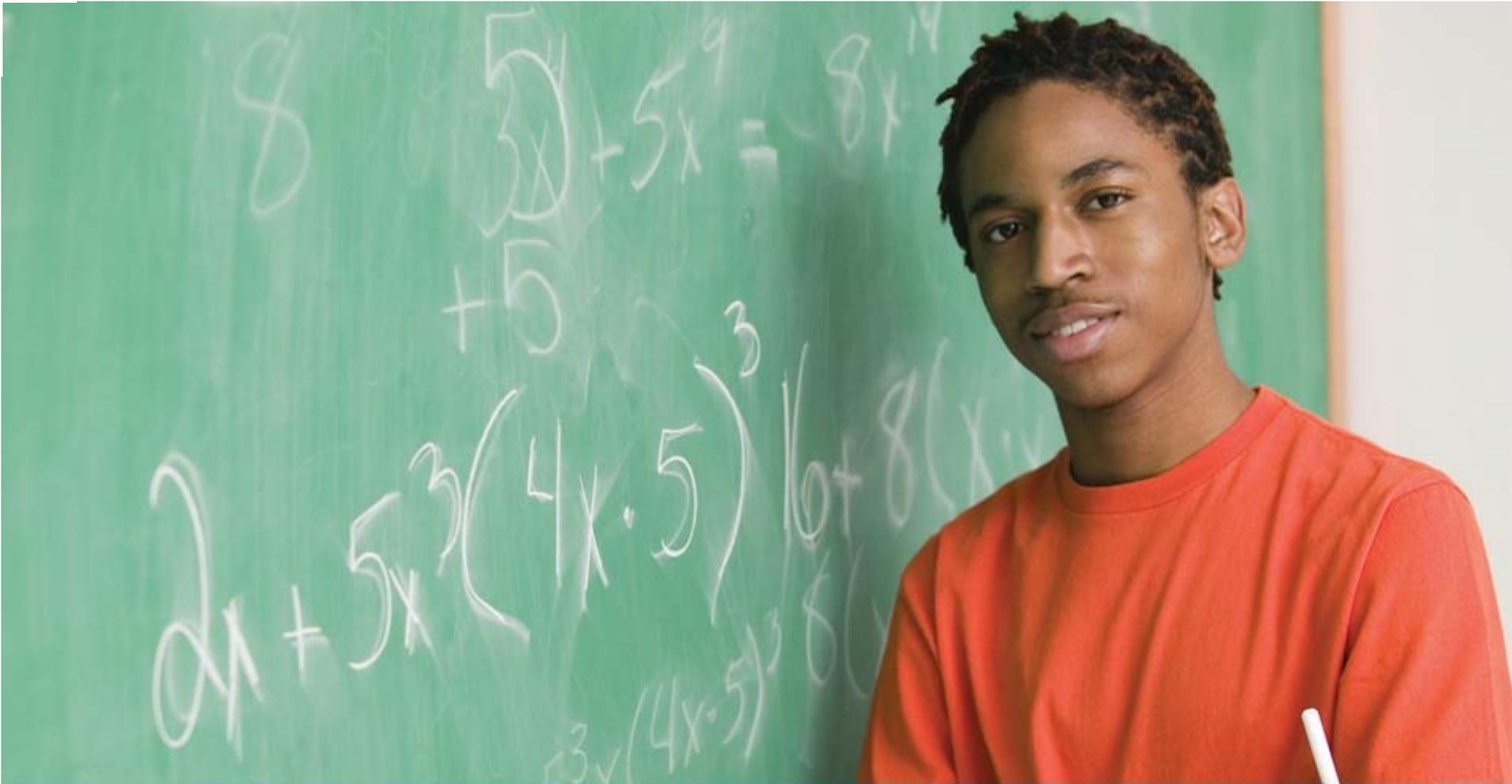
## Sample Question: Critique and Evaluate

Explain how the language used in Section 12 favors the landlord. Support your answer with an example from Section 12.

Full comprehension response:

The language of section 12 is vague, which favors the landlord. For example, section 12 says the landlord may enter the residence at "reasonable" times and give a 24-hour notice "whenever practicable." These vague terms give the liberty to the landlord to decide when and what is "reasonable" or "practicable."

Full comprehension	Partial comprehension	Little or no comprehension	Omitted
7%	59%	24%	9%

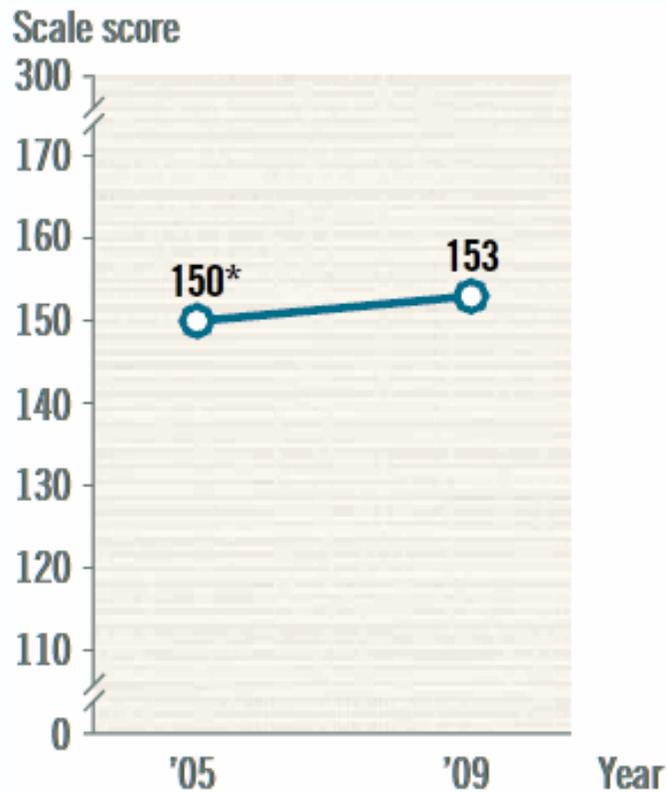


# MATHEMATICS

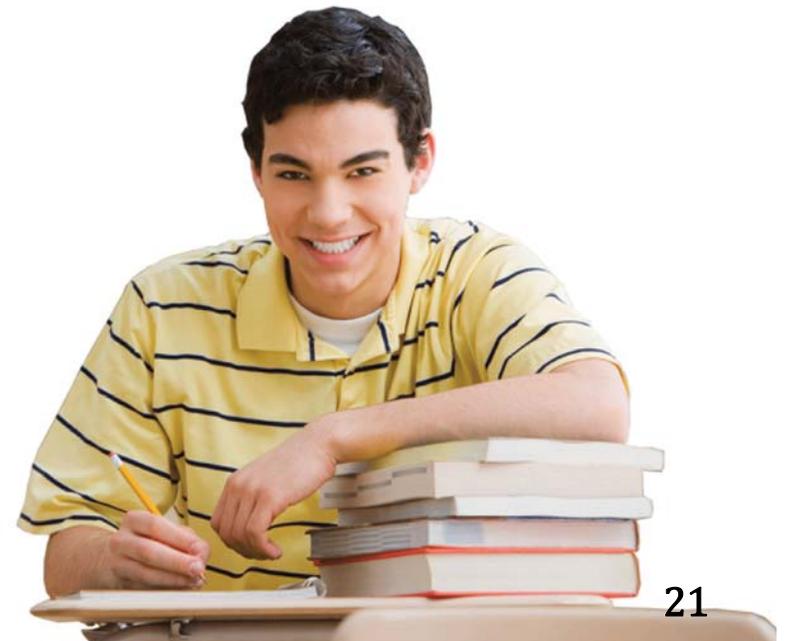
## Overview of the 2009 Mathematics Assessment

- New framework
  - Comparisons to 2005 maintained
- Students assessed in four mathematical content areas
  - Number properties and operations
  - Measurement and geometry
  - Data analysis, statistics, and probability
  - Algebra
- Average scores reported on 0–300 scale

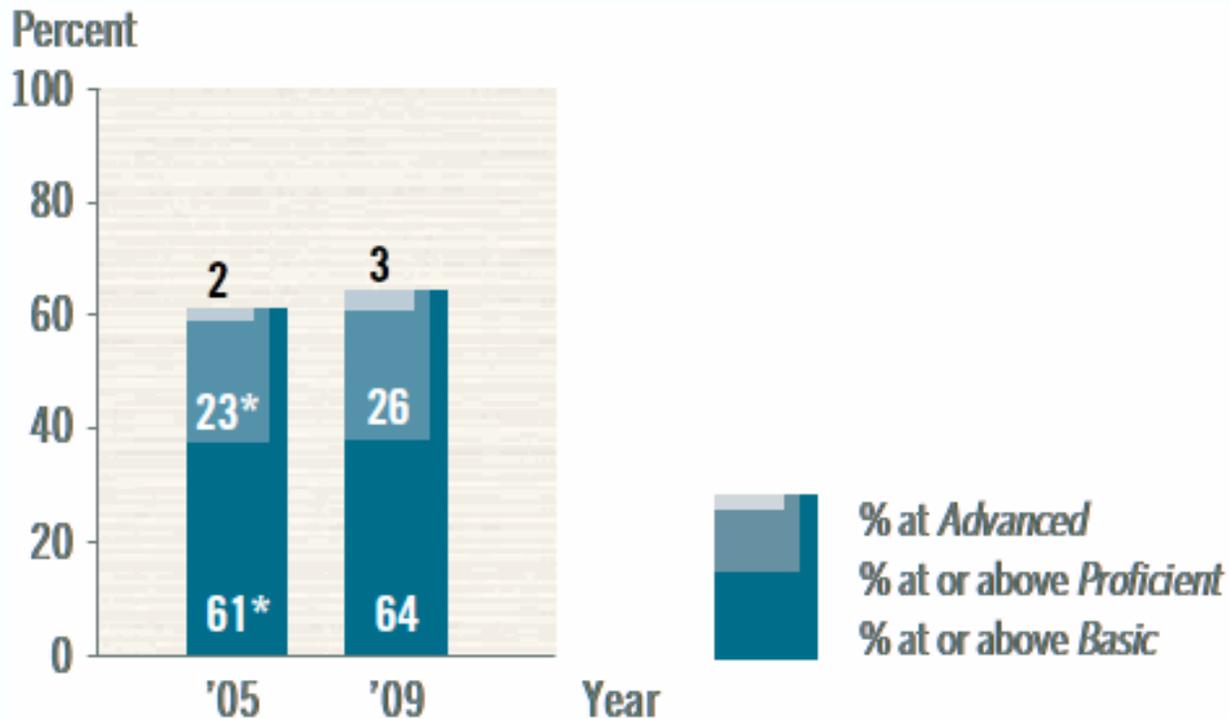
## Average score up 3 points since 2005



\* Significantly different ( $p < .05$ ) from 2009.



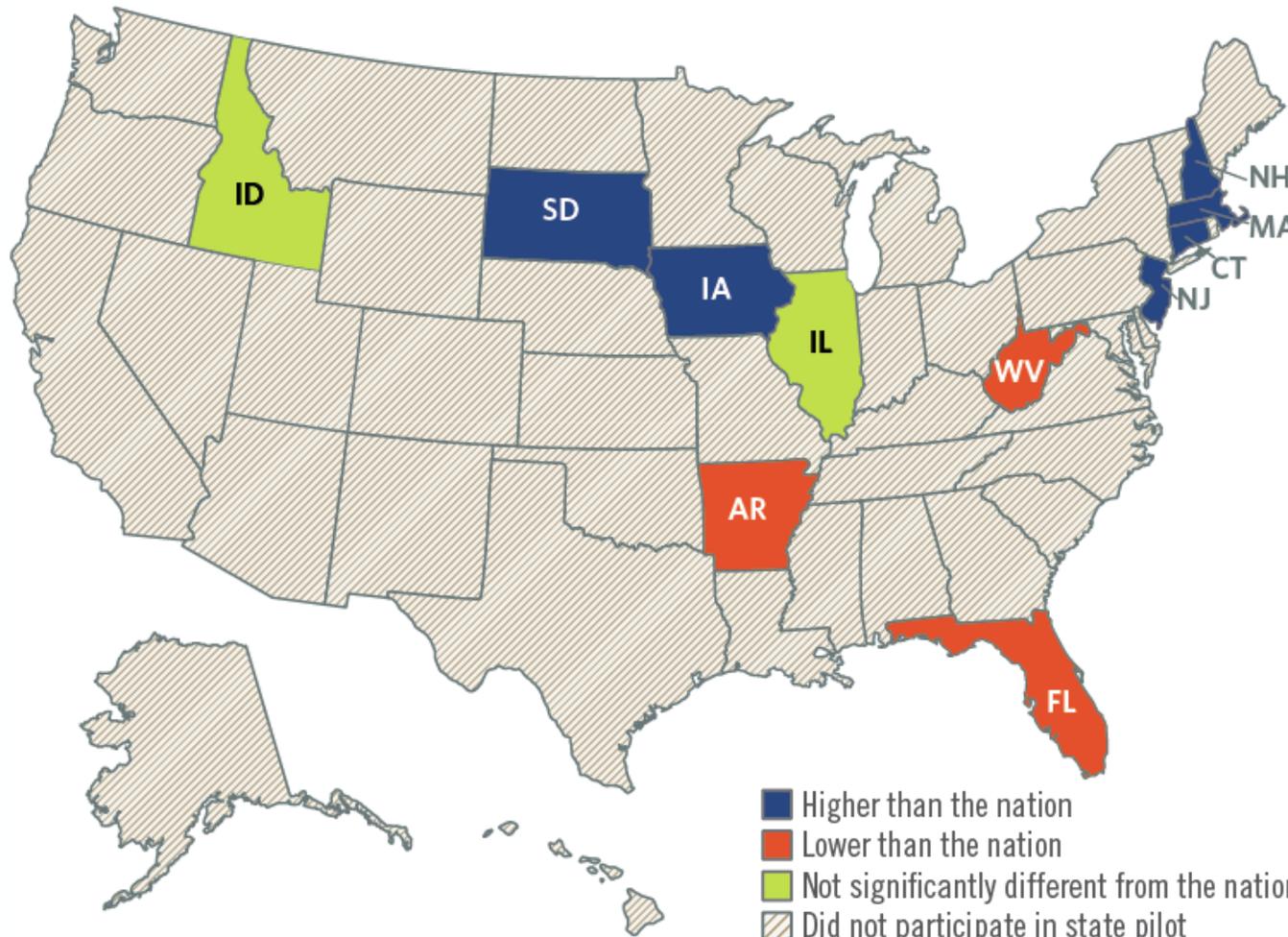
## Percentages of twelfth-graders at or above *Proficient* and *Basic* levels increase since 2005



\* Significantly different ( $p < .05$ ) from 2009.

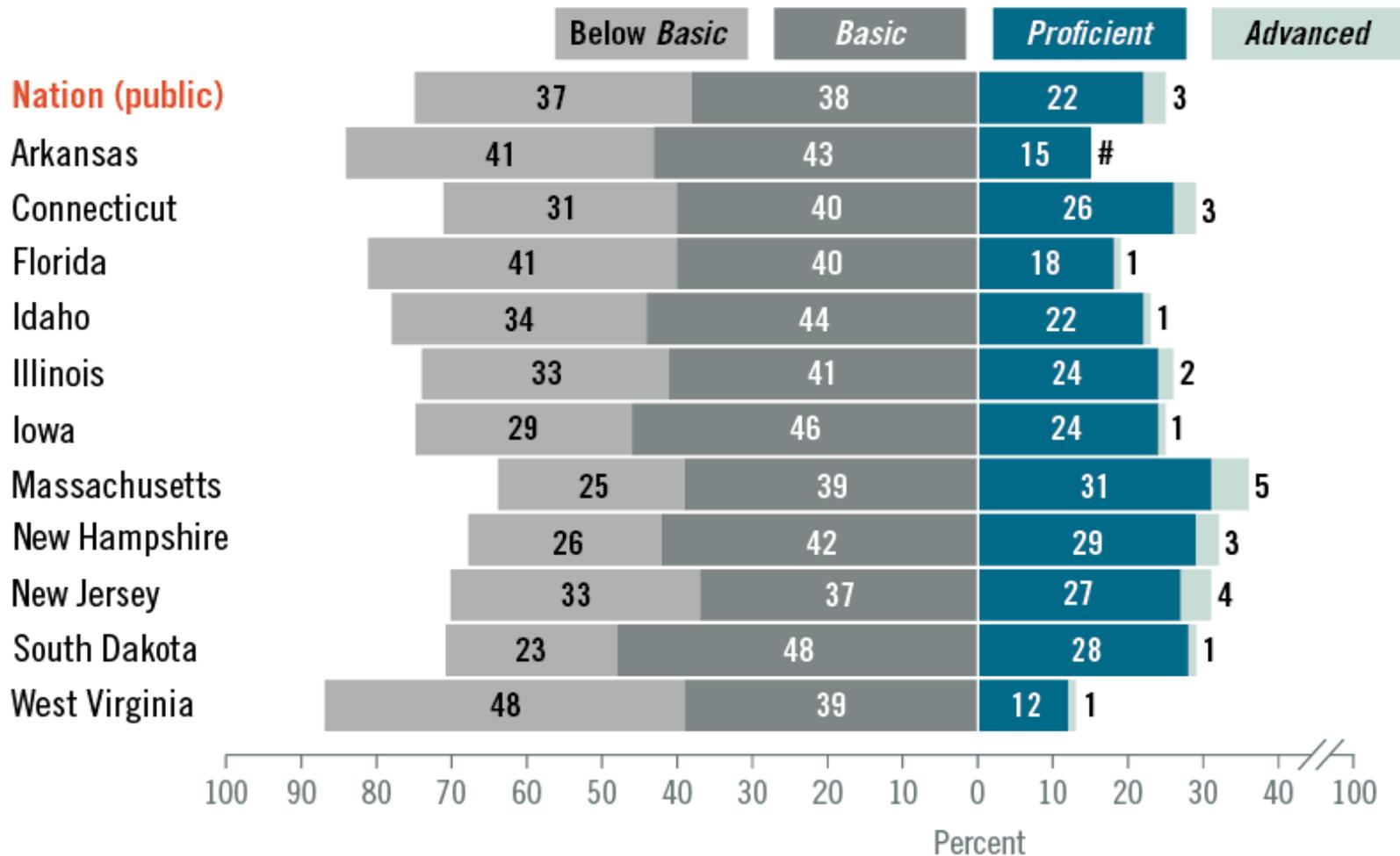


## Mathematics scores in six states higher than the national average



	Average score
Nation (public)	152
AR	146
CT	156
FL	148
ID	153
IL	154
IA	156
MA	163
NH	160
NJ	156
SD	160
WV	141

## States show range of mathematics knowledge and skills



## All racial/ethnic groups make gains since 2005

	<u>Change in average scores</u>
	Since 2005
<b>Overall</b>	<b>+3</b>
White	<b>+4</b>
Black	<b>+4</b>
Hispanic	<b>+5</b>
Asian/Pacific Islander	<b>+13</b>
American Indian/Alaska Native	<b>+10</b>

## Increase in Asian/Pacific Islander – White gap since 2005

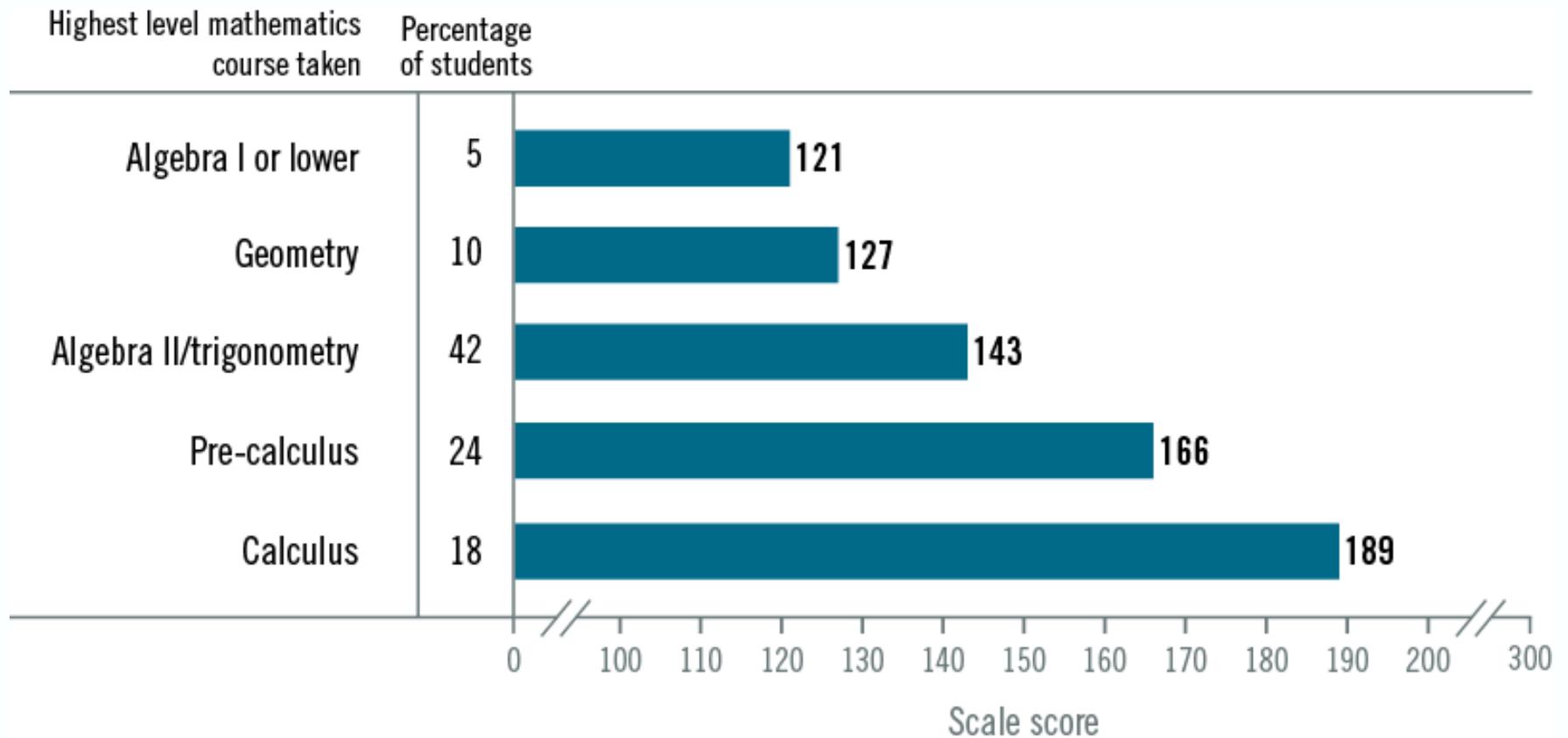
Score gaps	Gap in 2009	Change in score gap since 2005
White – Black	30*	◆
White – Hispanic	23*	◆
Asian/Pacific Islander – White	14*	▲
White – American Indian/Alaska Native	17*	◆
Male – Female	3*	◆

\* Statistically significant ( $p < .05$ ) score gap.

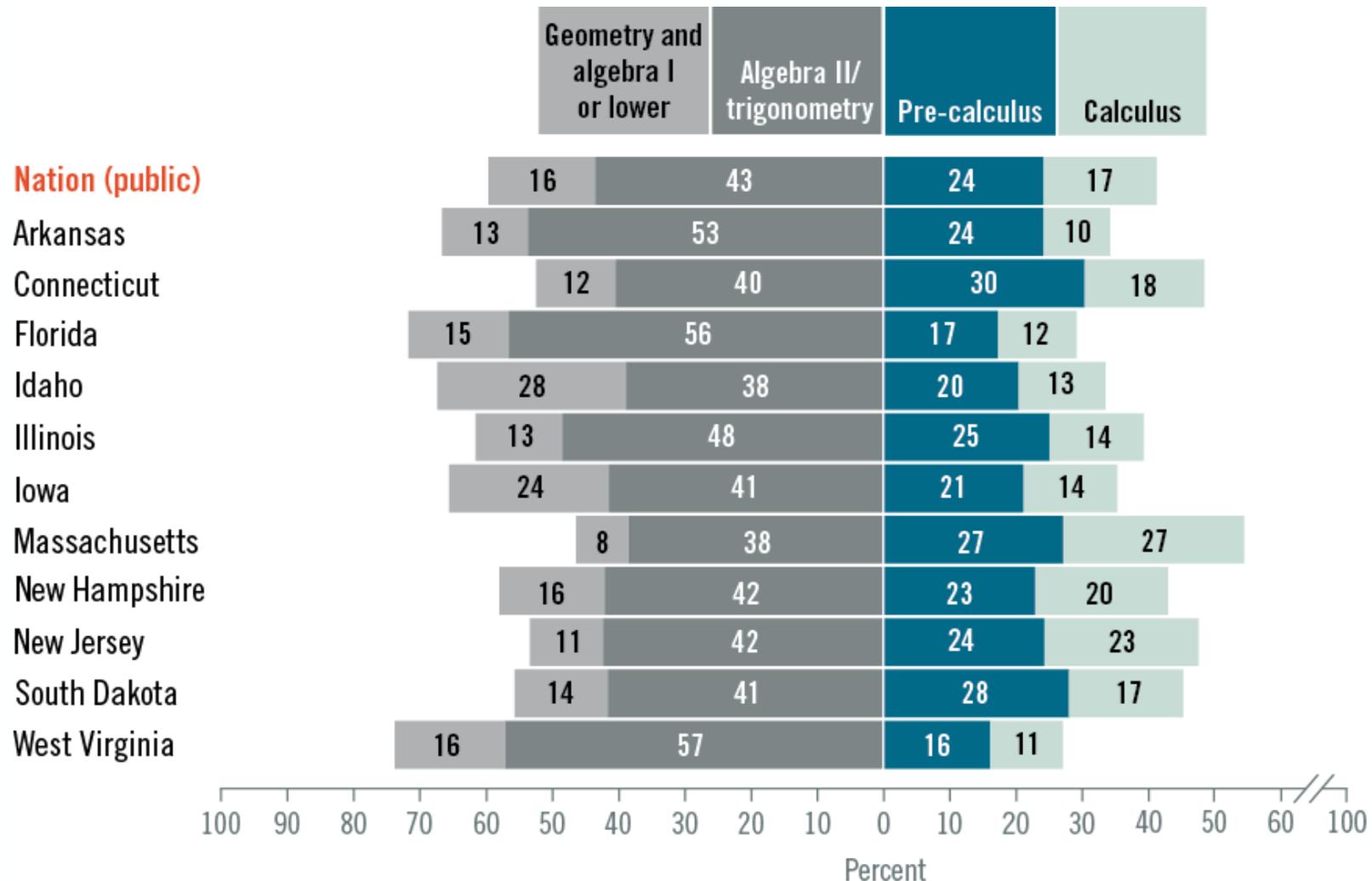
▲ Indicates the gap was larger in 2009.

◆ Indicates no significant change in the gap in 2009.

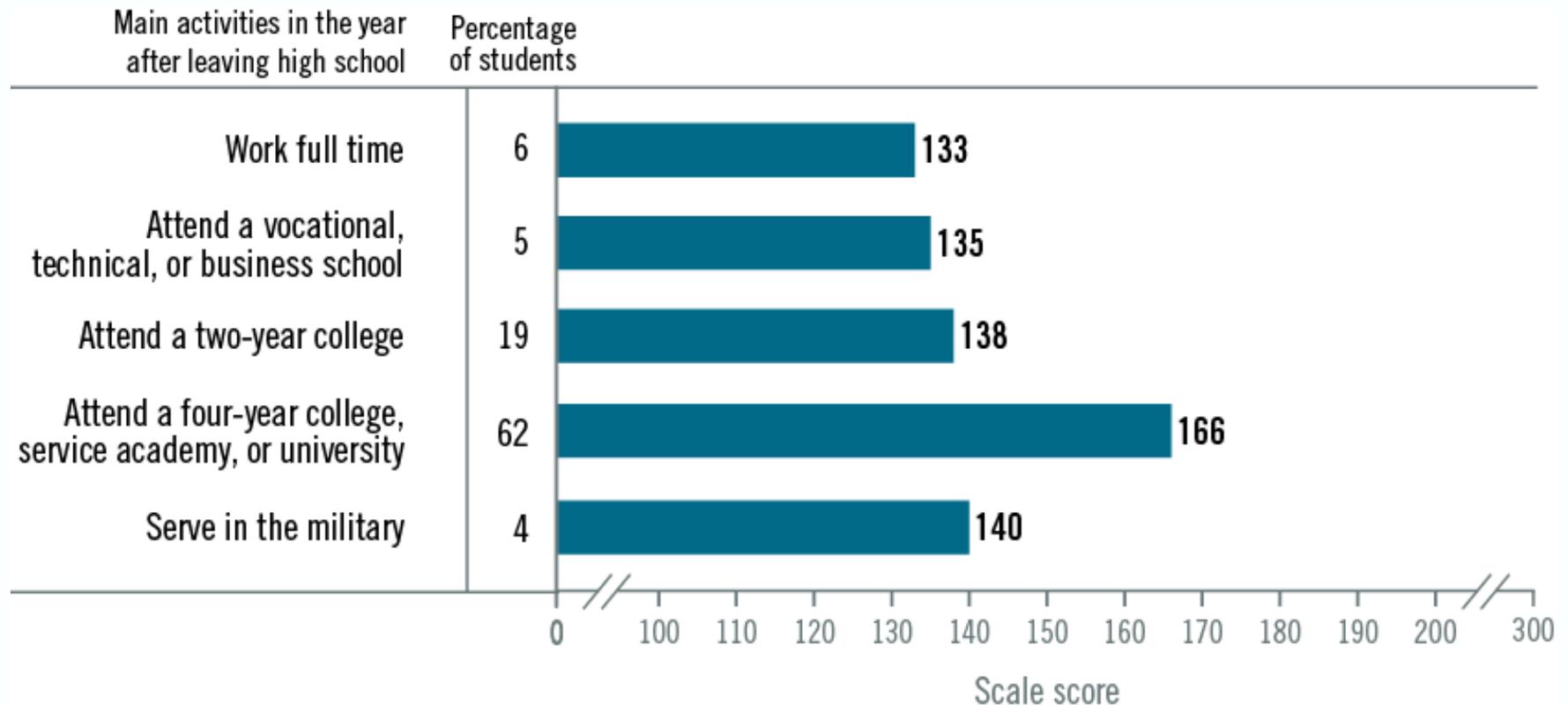
## Over 40 percent of students complete advanced courses



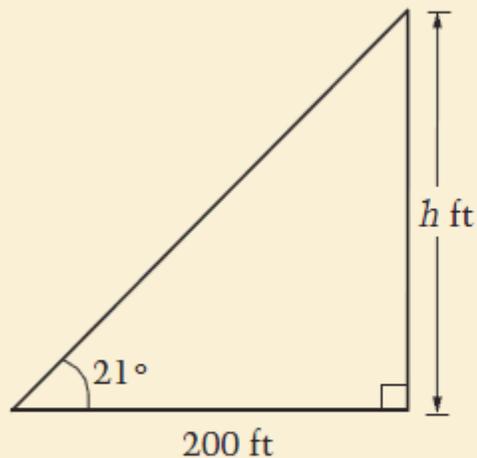
## Course taking varies by state



## Nearly two-thirds of students plan to attend a 4-year college in the year after leaving high school



## Sample Question: Measurement and Geometry



Note: Figure not drawn to scale.

On level ground from a distance of 200 feet, the angle of elevation to the top of a building is  $21^\circ$ , as shown in the figure. What is the height  $h$  of the building, to the nearest foot?

- (A) 72
- (B) 77
- (C) 187
- (D) 201
- (E) 521

Choice A	Choice B	Choice C	Choice D	Choice E	Omitted
9%	30%	24%	23%	10%	4%

## ARKANSAS

### Reading

Average scale scores in NAEP reading for twelfth-grade public school students in the nation and Arkansas, 2009

Entity	Average Scale Score
Nation	287
Arkansas	280

\* Significantly different (p < .05) from the nation.

Percentile scores in NAEP reading for twelfth-grade public school students in the nation and Arkansas, 2009

\* Significantly different (p < .05) from the nation.

Average scale scores in NAEP reading for twelfth-grade public school students in Arkansas, by race/ethnicity, 2009

Race/Ethnicity	Average Scale Score
White	297
Black	254
Hispanic	254

NAEP results are not shown for all students because of small sample sizes. NAEP results are not shown for all students because of small sample sizes.

Achievement-level results in NAEP reading for twelfth-grade public school students in the nation and Arkansas, 2009

Level	Nation (%)	Arkansas (%)
Advanced	19	19
Proficient	37	37
Basic	44	44

\* Significantly different (p < .05) from the nation.

**For Arkansas twelfth-graders in 2009,**

- the overall average reading score of 280 was lower than the score for the nation.
- Percentile score results showed
  - a lower score at the 25th percentile compared to the nation.
  - a lower score at the 75th percentile compared to the nation.
- Results for racial/ethnic groups showed
  - a White - Black score gap of 28 points.
  - a White - Hispanic score gap of 18 points.
- Results for parental education level showed
  - a 22-point score gap between students who reported neither of their parents finished high school and those who reported at least one parent graduated from college.
  - no significant differences in the score gap compared to the 28-point score gap for the nation.
- Results for how often students wrote long answers to questions that involved reading
  - 23% wrote long answers at least once a week.
  - 28% wrote long answers once or twice a month.
  - 22% wrote long answers once or twice a year.
  - 7% never wrote long answers.

**What is the highest level of education students plan to complete?**

- 14% plan to go to graduate school.
- 62% plan to graduate from college.
- 10% plan to complete some education after high school.
- 7% plan to graduate from high school.
- 1% do not plan to finish high school.

2009 U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Reading Results

48 THE NATION'S REPORT CARD

## Arkansas

### Mathematics

Average scale scores in NAEP mathematics for twelfth-grade public school students in the nation and Arkansas, 2009

Entity	Average Scale Score
Nation	162
Arkansas	146

\* Significantly different (p < .05) from the nation.

Percentile scores in NAEP mathematics for twelfth-grade public school students in the nation and Arkansas, 2009

\* Significantly different (p < .05) from the nation.

Average scale scores in NAEP mathematics for twelfth-grade public school students in Arkansas, by race/ethnicity, 2009

Race/Ethnicity	Average Scale Score
White	180
Black	128
Hispanic	128

NAEP results are not shown for all students because of small sample sizes. NAEP results are not shown for all students because of small sample sizes.

Achievement-level results in NAEP mathematics for twelfth-grade public school students in the nation and Arkansas, 2009

Level	Nation (%)	Arkansas (%)
Advanced	13	13
Proficient	25	25
Basic	62	62

\* Significantly different (p < .05) from the nation.

**For Arkansas twelfth-graders in 2009,**

- the overall average mathematics score of 146 was lower than the score for the nation.
- Percentile score results showed
  - a lower score at the 25th percentile compared to the nation.
  - a lower score at the 75th percentile compared to the nation.
- Results for racial/ethnic groups showed
  - a White - Black score gap of 32 points.
  - a White - Hispanic score gap of 18 points.
- Results for parental education level showed
  - a 17-point score gap between students who reported neither of their parents finished high school and those who reported at least one parent graduated from college.
  - a smaller score gap compared to the 29-point score gap for the nation.
- Results for the highest level mathematics course taken by students showed
  - 10% took calculus.
  - 24% took pre-calculus.
  - 52% took algebra II/trigonometry.
  - 11% took geometry.
  - 2% took algebra I or lower.

**What do students plan to do in the year after leaving high school?**

- 4% plan to work full time.
- 7% plan to attend vocational, technical, or business school.
- 16% plan to attend two-year college.
- 58% plan to attend four-year college, service academy, or university.
- 5% plan to serve in the military.

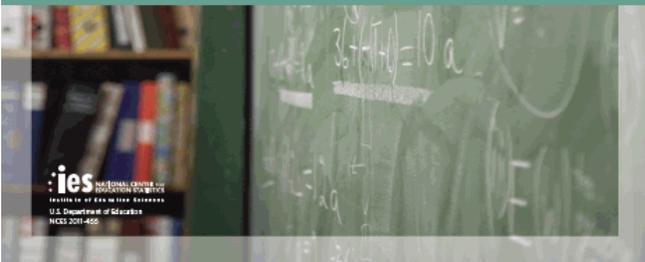
2009 U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Mathematics Results

STATE RESULTS 49



**Grade 12  
Reading and Mathematics 2009  
National and Pilot State Results**

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS



**ies** NATIONAL CENTER FOR  
EDUCATION STATISTICS  
Institute of Education Sciences  
U.S. Department of Education  
NCEES 2009-460

The  
Nation's  
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**Information for...**



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COMING SOON

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