



# Preparing Students for College Success

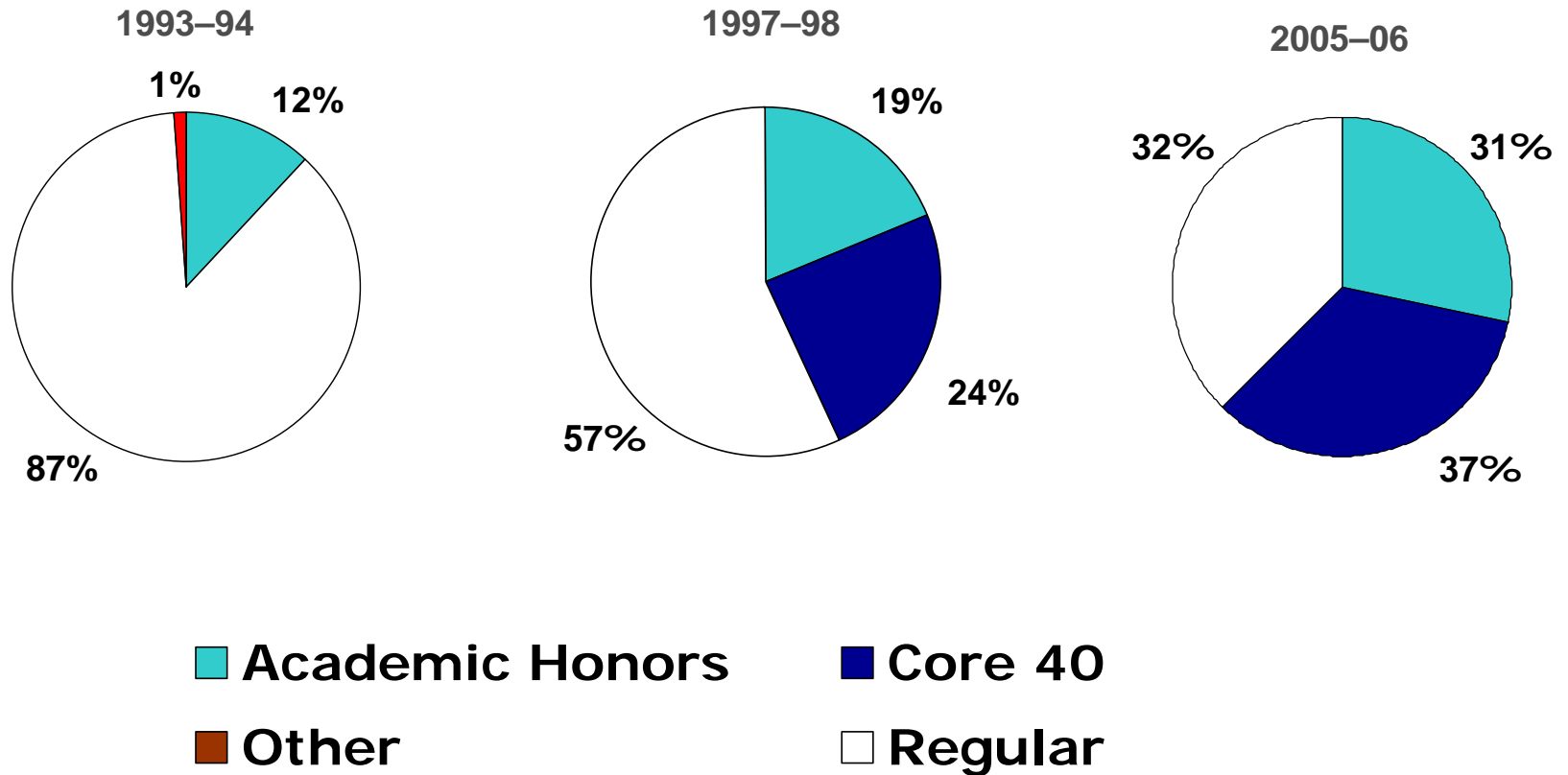
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January 2008

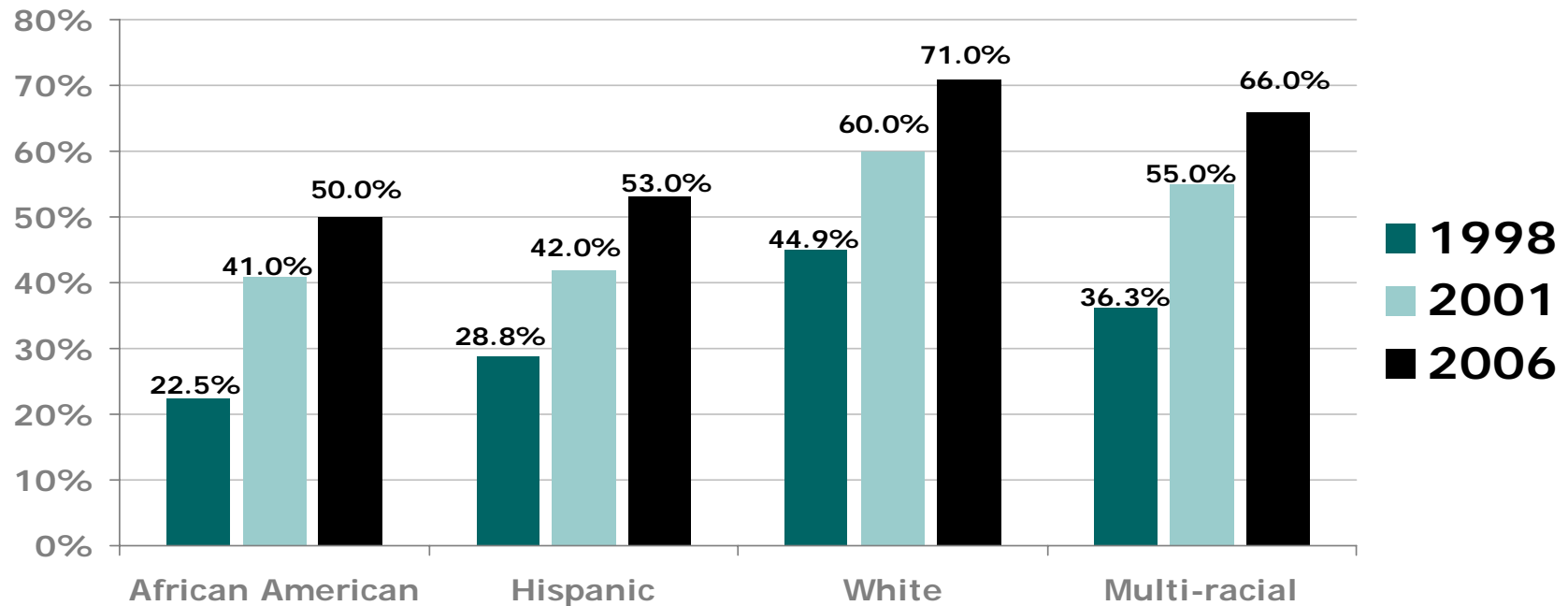
Indiana Commission for Higher Education

# Academic Honors and Core 40 together represent 67% all Indiana high school diplomas after a decade of voluntary participation

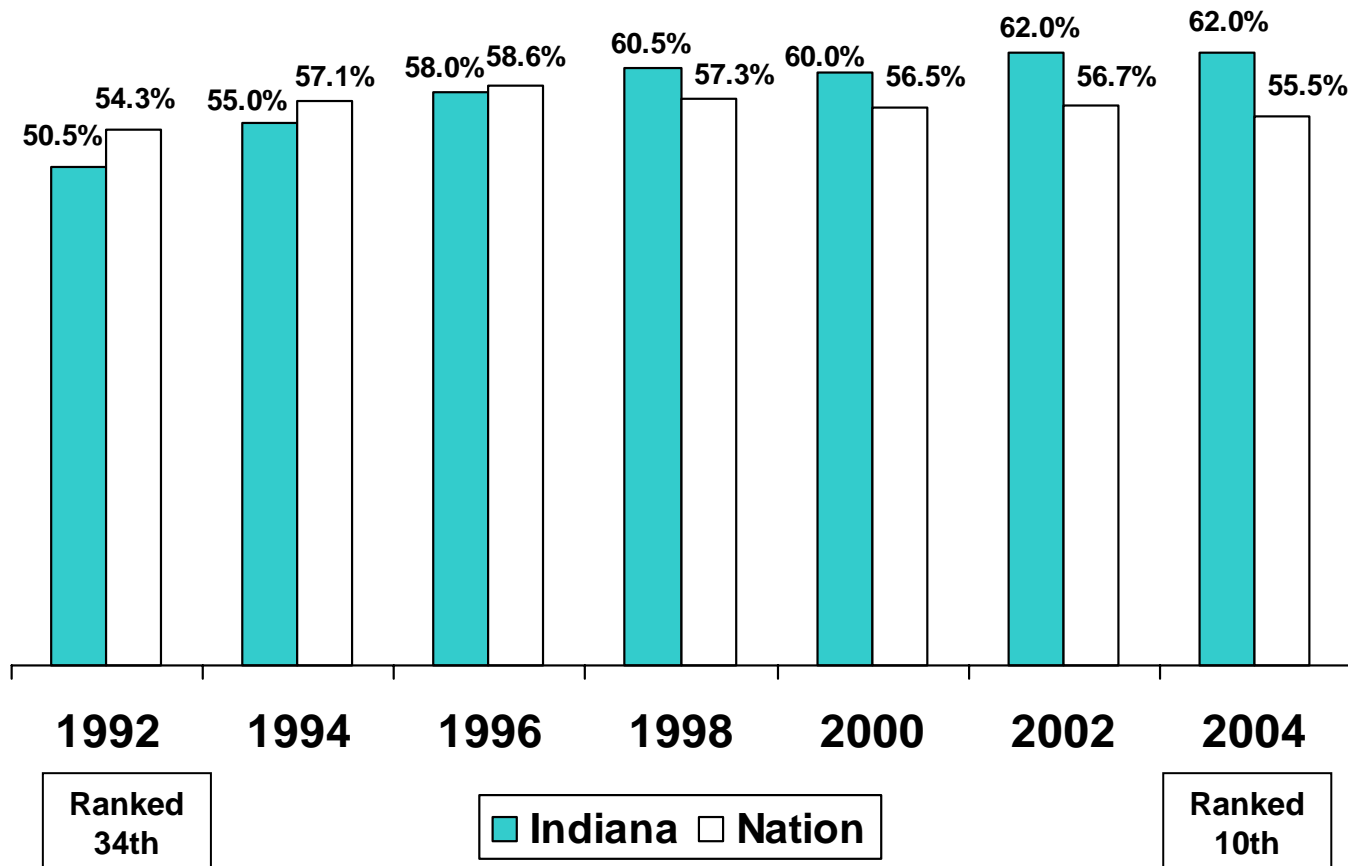
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# Indiana Core 40 diplomas awarded show all races benefit by a more rigorous curriculum



# Percent of high school graduates enrolled the next fall in higher education shows positive effect of Core 40 on college aspirations



Source: Mortenson, T. Postsecondary Education Opportunity, Oskaloosa, Iowa. (Note: Technical corrections were made to three states: Indiana, Kentucky, and Utah in the 2004 data and are reflected in the chart).

# But even with these efforts are we setting students up for college success...

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Without a solid high school academic foundation, students are not prepared to succeed at the college-level...

- 26% of recent high school graduates take a **remedial** math or English course or both in college
- 76% of remedial reading students and 63% of remedial math **do not complete a college degree**
- 35% of students at a public university receive low grades **(D or F) in or withdrawal** from their 1st college-level math course

# Effects of high school math completion on college success

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Completing one additional unit of intensive high school math (algebra II, trigonometry, pre-calculus, or calculus) increased the odds of completing a bachelor's degree by **73%**.

This takes into account students' race/ethnicity, gender, socioeconomic status, eighth grade achievement levels, high school behavior, parenting variables, and psychological variables.

# Results from Indiana End-of-Course Assessments and Pilot College Readiness Indicator

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## ○ End-of-Course Assessments

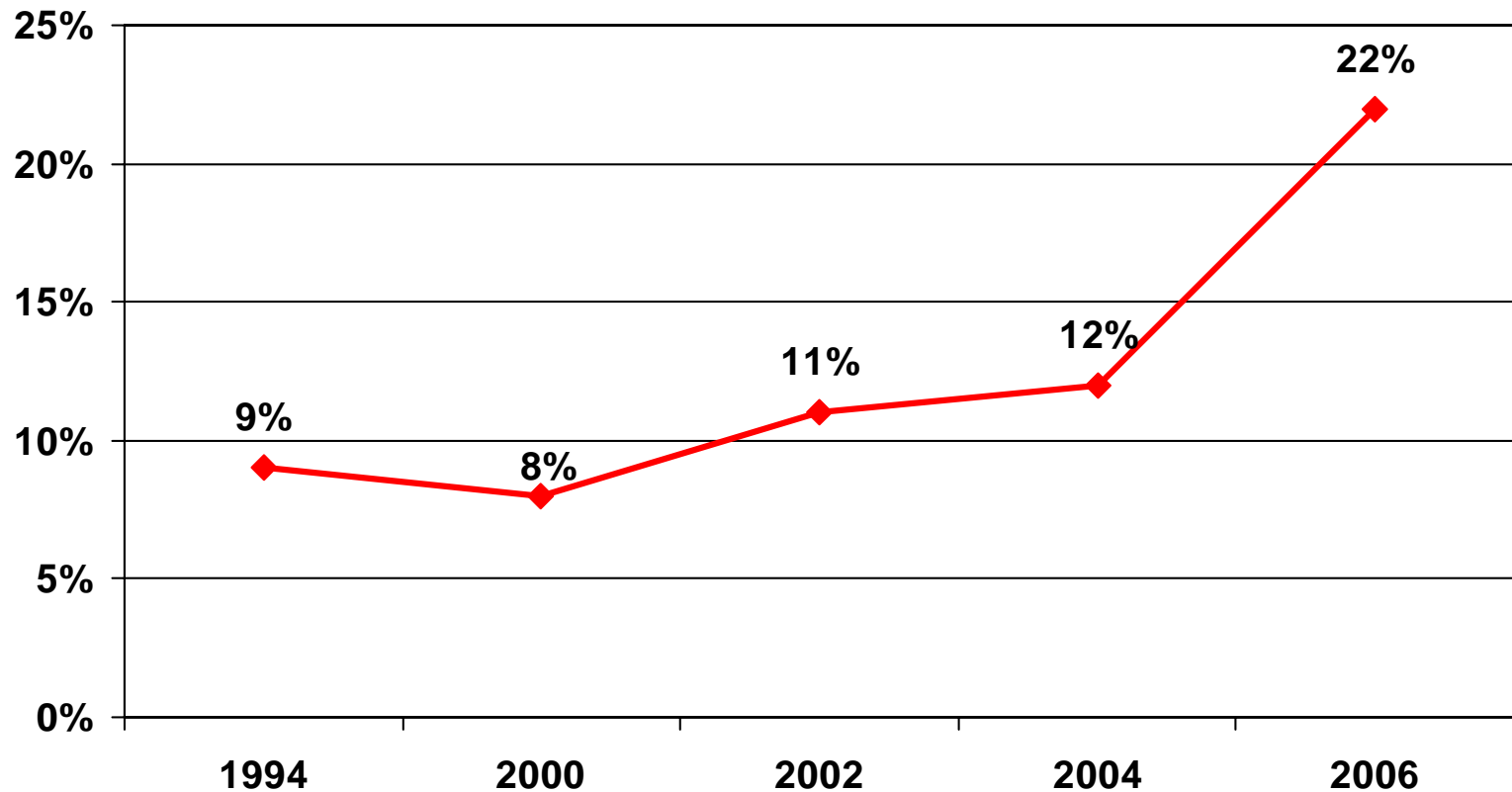
- **20%** - Pass Rate for Algebra I
- **50%** - Pass rate for English Grade 11

## ○ Pilot College Readiness Indicator

Participating high school students completing Algebra II course:

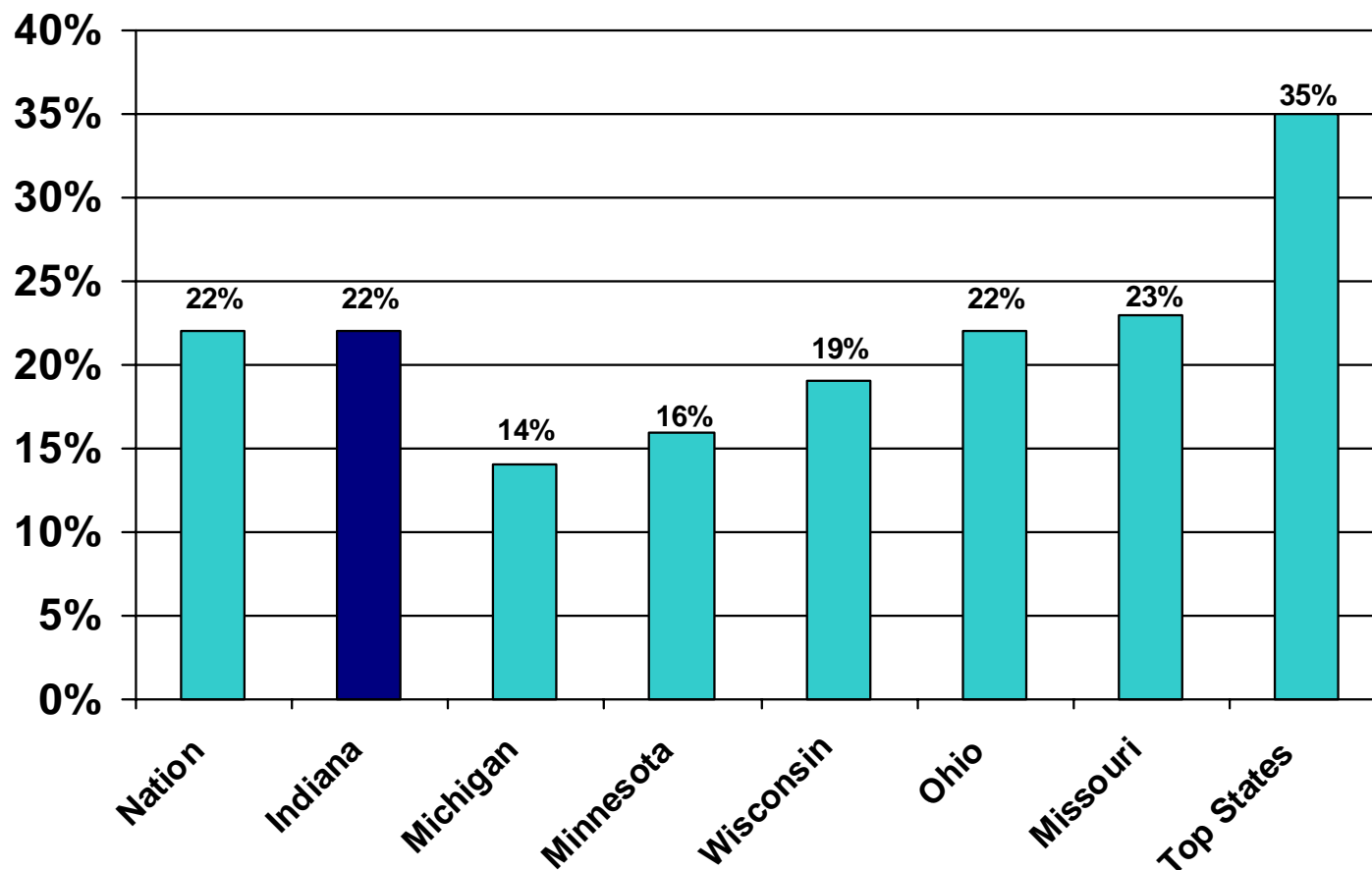
- **5%** - Would place in college-level math
- **95%** - Were not proficient in Algebra II
- **57%** - Were not proficient in Algebra I

# Percent of Indiana students enrolling in Algebra I by the end of Grade 8



Source: Source: Calculations based on unpublished data provided by the Science and Math Indicator Project team at the Council of Chief State School Officers. Rolf K. Blank and Doreen Langesen. State Indicators of Science and Mathematics Education 2005: State-by-State Trends and New Indicators from the 2003–04 School Year. Washington, D.C.: Council of Chief State School Officers, 2005. (As reported by the National Center for Public Policy and Higher Education in Measuring Up 2006).

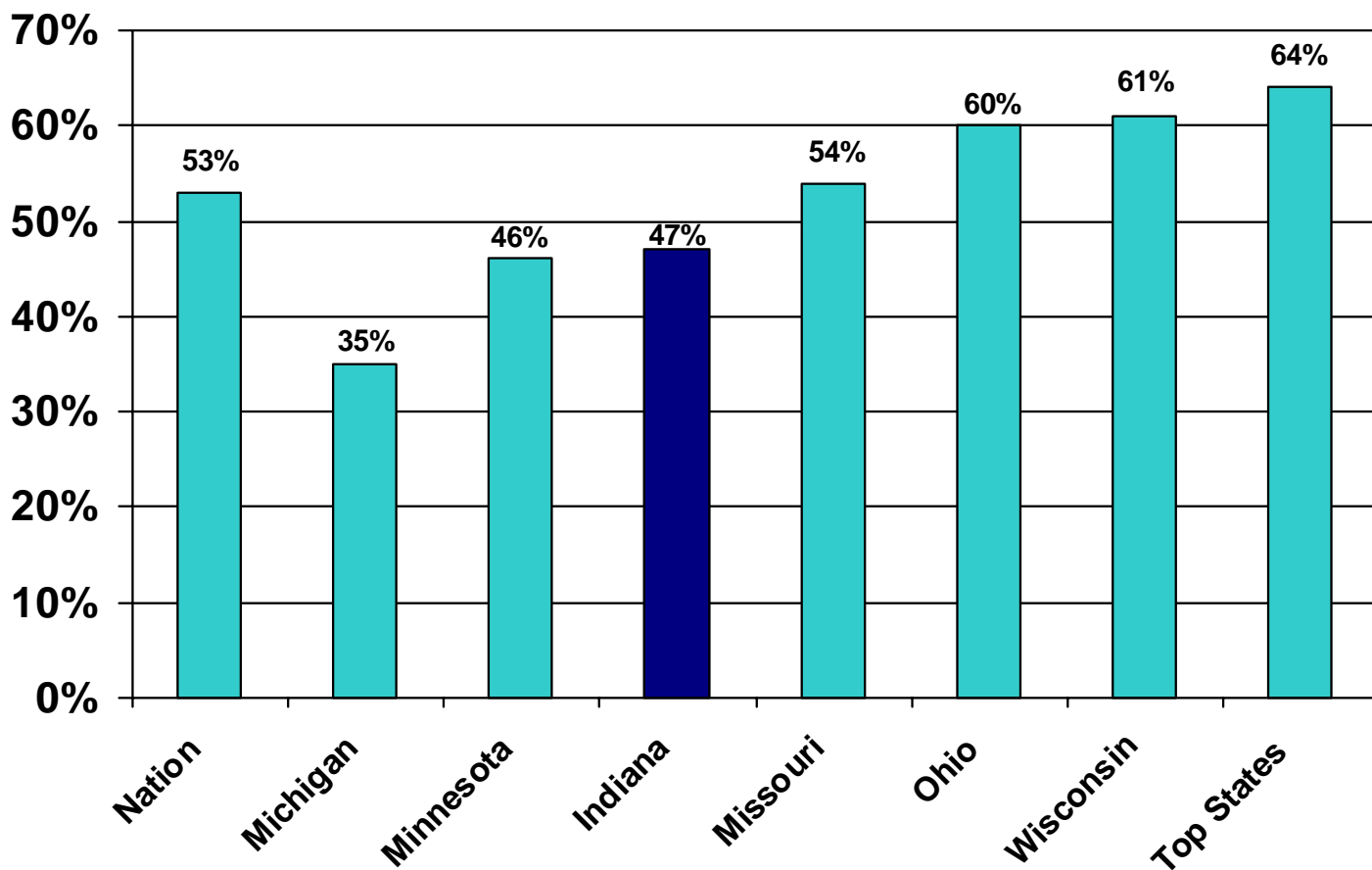
# Comparison of Grade 8 students enrolling in Algebra I, 2003-04



Top States: California, Massachusetts, Utah.

Source: Calculations based on unpublished data provided by the Science and Math Indicator Project team at the Council of Chief State School Officers. Rolf K. Blank and Doreen Langesen. State Indicators of Science and Mathematics Education 2005: State-by-State Trends and New Indicators from the 2003-04 School Year. Washington, D.C.: Council of Chief State School Officers, 2005. (As reported by the National Center for Public Policy and Higher Education in Measuring Up 2006).

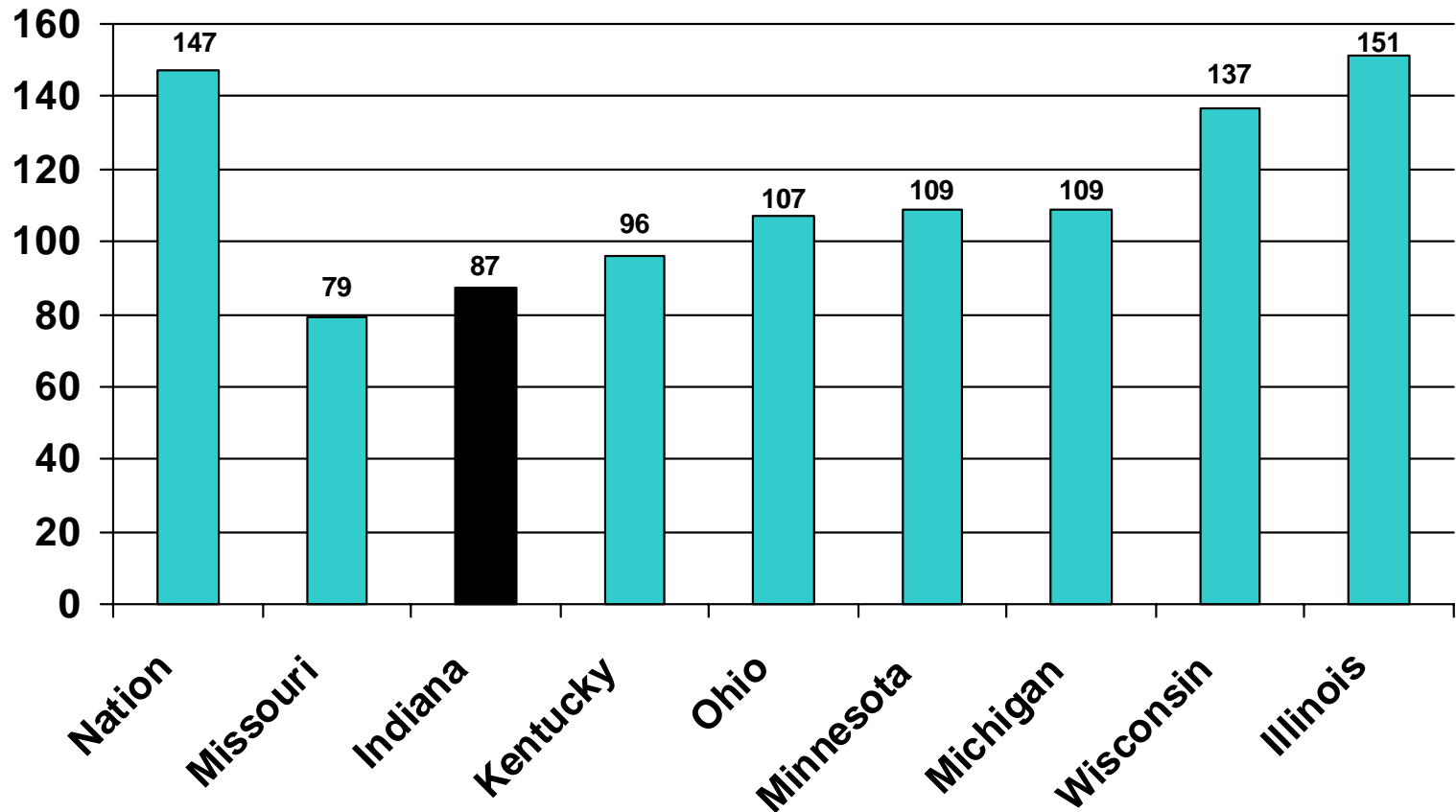
## Comparison of Grade 9 to Grade 12 students enrolling in at least one upper-level math course, 2003-04



Top States: Nebraska, North Carolina, Texas, West Virginia.

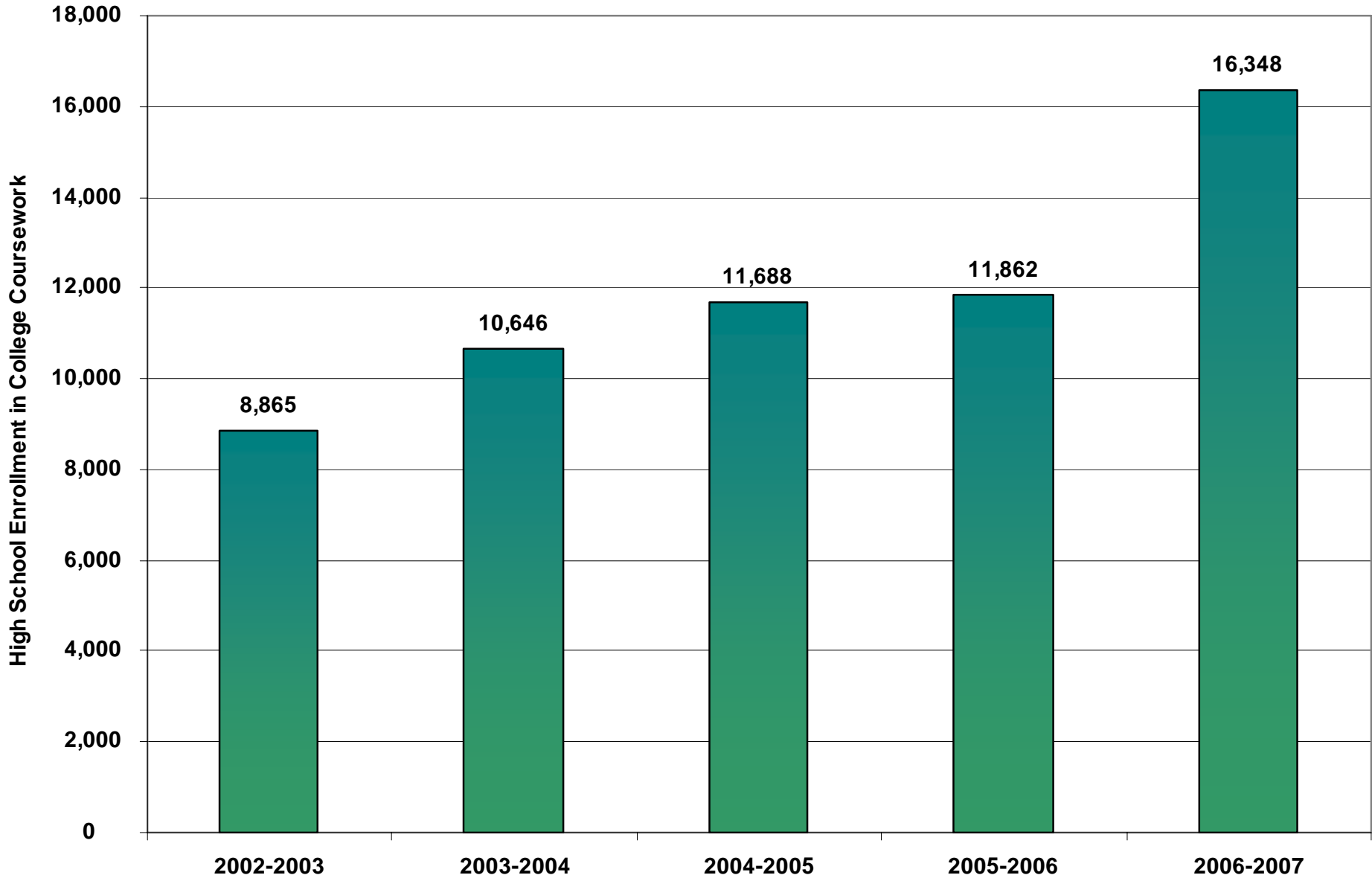
Source: Rolf K. Blank and Doreen Langesen. State Indicators of Science and Mathematics Education 2005: State-by-State Trends and New Indicators from the 2003-04 School Year. Washington, D.C.: Council of Chief State School Officers, 2005. (As reported by the National Center for Public Policy and Higher Education in Measuring Up 2006).

# Number of 3-5 Scores on Advanced Placement exams per 1,000 high school juniors and seniors, 2005



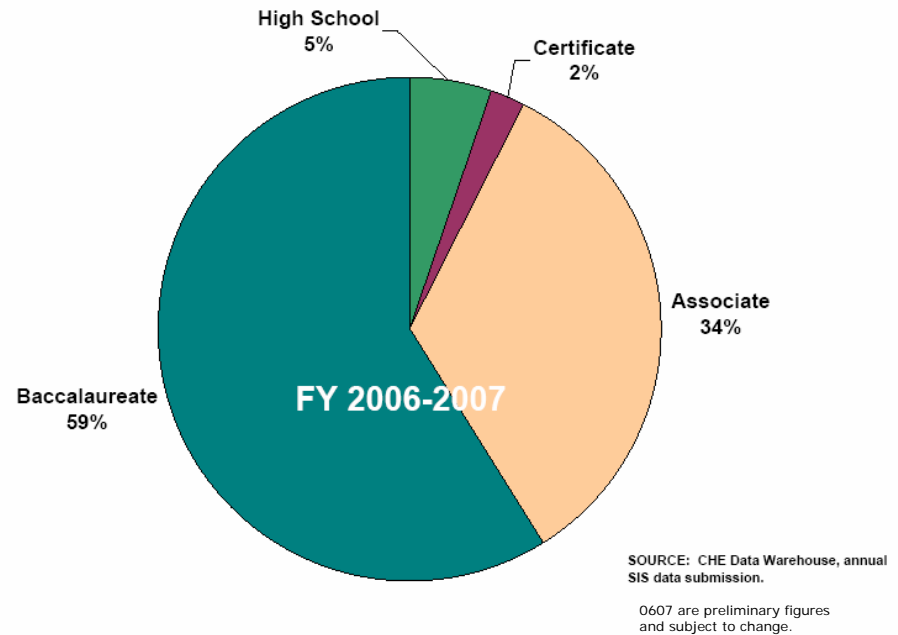
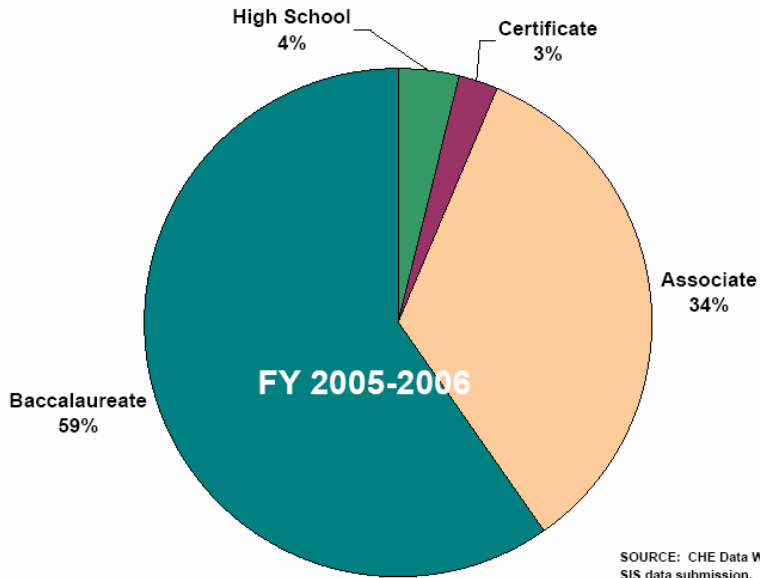
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# High School Enrollment in College Coursework



SOURCE: CHE Data Warehouse, annual SIS submissions  
2006-2007 are preliminary figures and subject to change.

# Undergraduate Enrollment , Distribution by Class Level FY06 and FY07



# Fall 2005 Math Enrollment and D,F,W, Grades at One Selective Indiana Four-Year University

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Math Category	D Grades		F Grades		W Grades		TOTAL HCT
	<u>HCT</u>	<u>% of Total</u>	<u>HCT</u>	<u>% of Total</u>	<u>HCT</u>	<u>% of Total</u>	
Remedial	0	0.0%	57	8.1%	119	16.8%	707
Algebra	7	4.7%	5	3.4%	27	18.2%	148
Pre-calculus	91	10.6%	70	8.1%	241	28.0%	861
Calculus	210	6.9%	180	5.9%	706	23.2%	3,046
<b>Total</b>	<b>308</b>	<b>6.5%</b>	<b>312</b>	<b>6.6%</b>	<b>1,093</b>	<b>23.0%</b>	<b>4,762</b>

# Percent of entering students (2004 Indiana high school graduates) enrolled in at least one remedial course, 2005-06

<b>Campus</b>	<b>% Remedial</b>	<b>% Not Remedial</b>
IU-Bloomington	7%	93%
PU-West Lafayette	0%	100%
Ball State University	0%	100%
Indiana State University	11%	89%
IUPUI	18%	82%
University of Southern Indiana	26%	74%
IU-East	56%	44%
IU-Kokomo	29%	71%
IU-Northwest	23%	77%
IU-South Bend	15%	85%
IU-Southeast	34%	66%
PU-Calumet	31%	69%
PU-North Central	0%	100%
IPFW	41%	59%

# Percent of entering students (2004 Indiana high school graduates) enrolled in at least one remedial course, 2005-06

<b>Campus</b>	<b>% Remedial</b>	<b>% Not Remedial</b>
Ivy Tech Community College of Indiana	68%	32%
Vincennes University	54%	46%
Four-year Campus (not including IU and PU regional campuses) Total	6%	94%
Four-year IU and PU Regional Campus Total	26%	74%
Two-Year Campus Total	65%	35%
State Total	26%	74%

# Potential Strategic Directions in College Preparation

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- **Senior Year Math –**
  - All students completing Core 40 should take a senior year math course as rigorous as Algebra II.
  
- **Core 40 End-of-Course Assessments –**
  - Core 40 exam scores should be included on the high school transcript.
  - Algebra II and English 11 exams should be used for college placement.
  
- **Advanced Placement –**
  - Expand current policy of paying test fees for math and science to English composition and literature.
  - State should pay for AP teacher training institutes.
  - Consistent, communicated policy of Indiana colleges and universities acceptance of AP scores for college credit.

# Potential Strategic Directions in College Preparation (continued)

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- **First Year College Alignment –**
  - Indiana's colleges should evaluate entry-level math and English courses failure/attrition rates.
  - Indiana's colleges should evaluate the extent to which the standards in these entry-level courses align to Core 40 standards.
  
- **Reporting Alignment –**
  - Common high school transcript should be formalized through Indiana's e-Transcript.
  - Systematic reporting back to high schools on student performance in college should be developed and implemented.