

PROFICIENT AND PASSED OVER

Disparities in Eighth Grade Algebra 1 Enrollment

INTRODUCTION

Enrolling in advanced courses increases students' likelihood of success in college and career. Algebra 1 is an example of how advanced and accelerated coursework can place students on a path to postsecondary success. Completing the course before or during ninth grade is a **strong predictor** of long-term academic and economic success, resulting in students more likely to graduate from high school, enroll in college, and earn higher wages. At the same time, **evidence shows** that taking Algebra 1 in the eighth grade places students on track for calculus and other advanced high school coursework—expanding access to postsecondary opportunities, particularly in high-growth STEM fields like **Central New York's Micron semiconductor project**. When students who are academically prepared are denied early access to courses like Algebra 1 in eighth grade, the effects compound over time, limiting their future options.

Despite the benefits of access to advanced coursework, Black, Latinx, and Native American students, as well as students from low-income backgrounds continue to be underrepresented in these courses, even when they have demonstrated readiness for higher-level coursework. In a 2023 **joint report**, EdTrust and Just Equations analyzed national High School Longitudinal Study data and found stark disparities in eighth grade math access: just 24% of Black students, 34% of Latinx students, and 25% of students from low-income backgrounds took Algebra 1 or higher—compared with 39% of White peers, 64% of Asian peers, and 57% of students from higher-income backgrounds. Additionally, they found that by the end of high school, just 28% of Black students, 31% of Latinx students, and 22% of students from low-income backgrounds took advanced math courses—compared with about 46% of White peers and 70% of Asian peers and students from higher-income backgrounds.

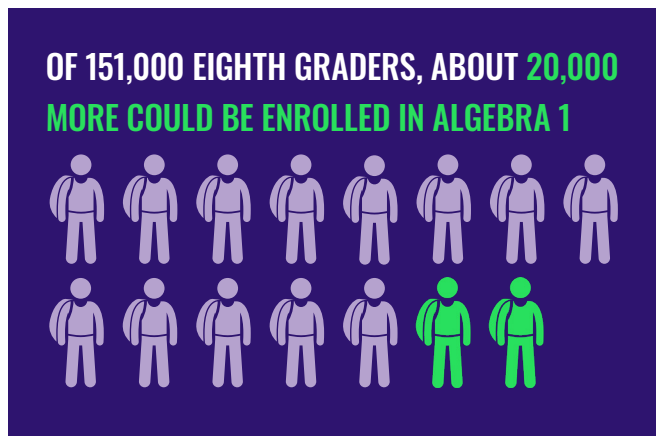
This underrepresentation may be a result of school and district policies where enrollment in Algebra 1 in the eighth grade depends on subjective factors such as teacher recommendations or family advocacy, rather than pure academic criteria. These “opt-in” systems consistently disadvantage Black, Latinx, and Native American students, as well as students from low-income backgrounds, reinforcing inequities long before high school.

To better understand how this issue plays out in New York, EdTrust-New York analyzed 2023-2024 seventh grade proficiency on the NYS Math 7 assessment alongside 2024-2025 eighth grade Algebra 1 enrollment. Our goal was to learn whether qualified seventh graders—particularly students of color and those from low-income backgrounds—are being given opportunities to take Algebra 1 and other advanced math courses in eighth grade. The analysis shows significant equity gaps in availability and access to Algebra 1 in eighth grade, as well as significant disparities in enrollment for Black and Latinx students and those from low-income backgrounds in eighth grade Algebra 1 and other advanced math courses.

Data Findings

FINDING 1: While students may be proficient in math in the seventh grade based on the results of the NYS Math 7 Assessment, their enrollment in Algebra 1 in eighth grade is not guaranteed.

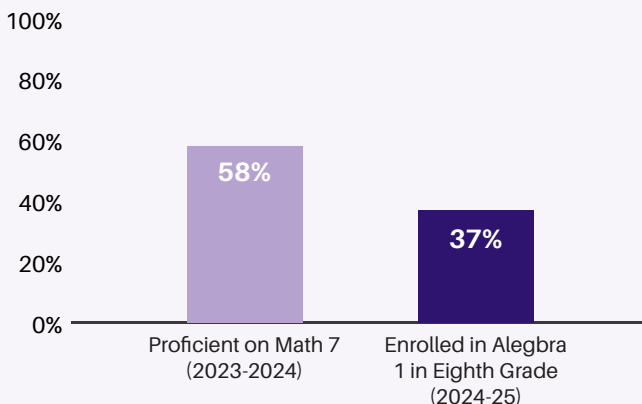
Across New York, 58% of seventh graders who took the Math 7 Assessment were deemed proficient in school year 2023-24, yet only 37% of eighth graders, in schools that serve both seventh and eighth grade, were enrolled in Algebra 1 in school year 2024-2025. **Of 151,000 eighth graders, about 20,000 more could be enrolled in Algebra 1**, based on the gap between seventh graders proficient on the Math 7 assessment in 2023-2024 and those enrolled in the eighth grade Algebra 1 courses during the 2024-2025 school year.



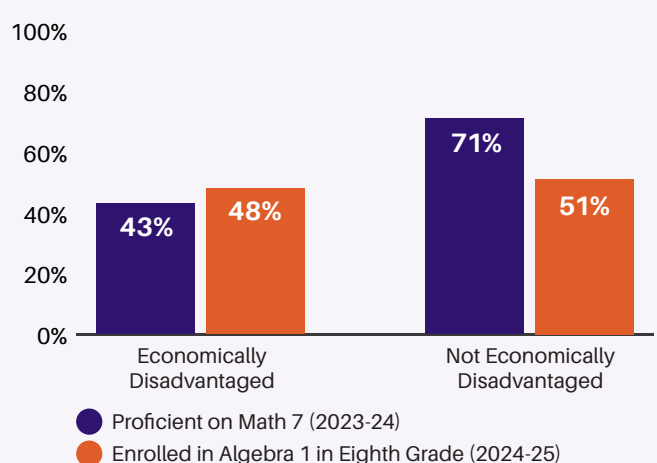
Equity gaps in proficiency and course access persist between students from low-income backgrounds and their more affluent peers. On the Math 7 assessment, only 43% of students from low-income backgrounds were proficient, compared with 71% of their affluent peers. The following year, 48% of students from low-income backgrounds were enrolled in Algebra 1 compared to 51% of their more affluent peers, which is not representative of their share in the eighth grade population.

When we look at proficiency and course access by student race/ethnicity, we find that thousands of eighth graders who are proficient in seventh grade math and ready for Algebra 1 in the eighth grade, are not in fact enrolled in Algebra 1 the following year. While 38% of Black students and 75% of Asian students were deemed proficient in the Math 7 Assessment, only 13% and 14% of those student groups, respectively, were enrolled in Algebra 1 in eighth grade.

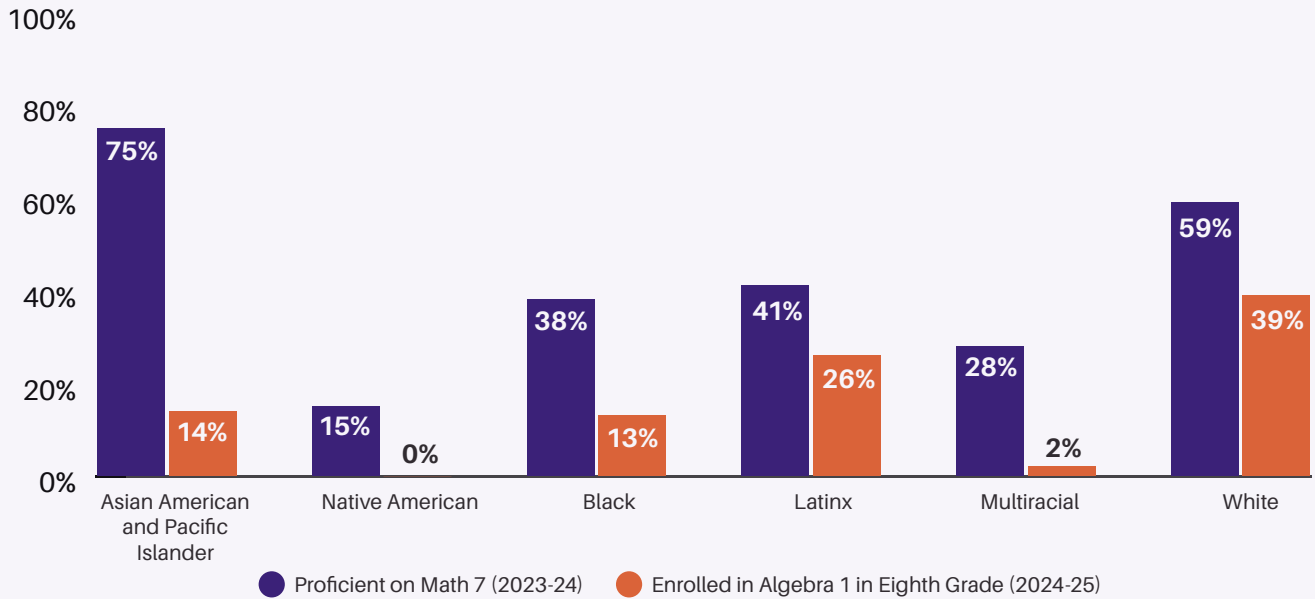
Proficient and Passed Over: Statewide



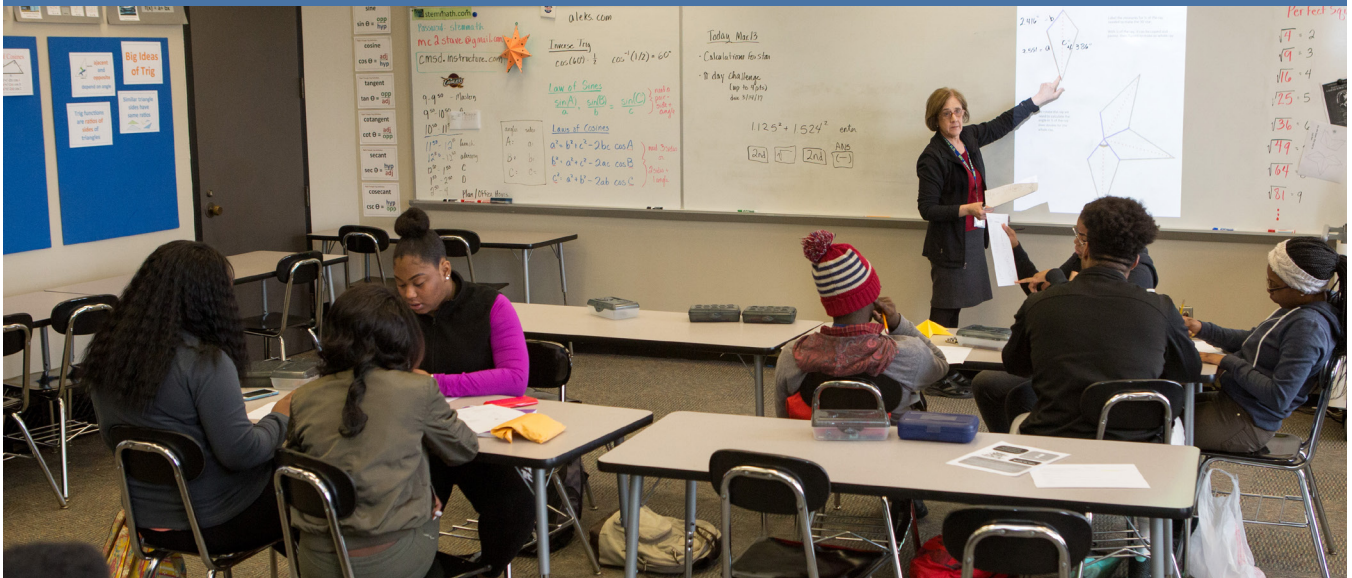
Proficient and Passed Over by Socioeconomic Status



Proficient and Passed Over by Student Race/Ethnicity

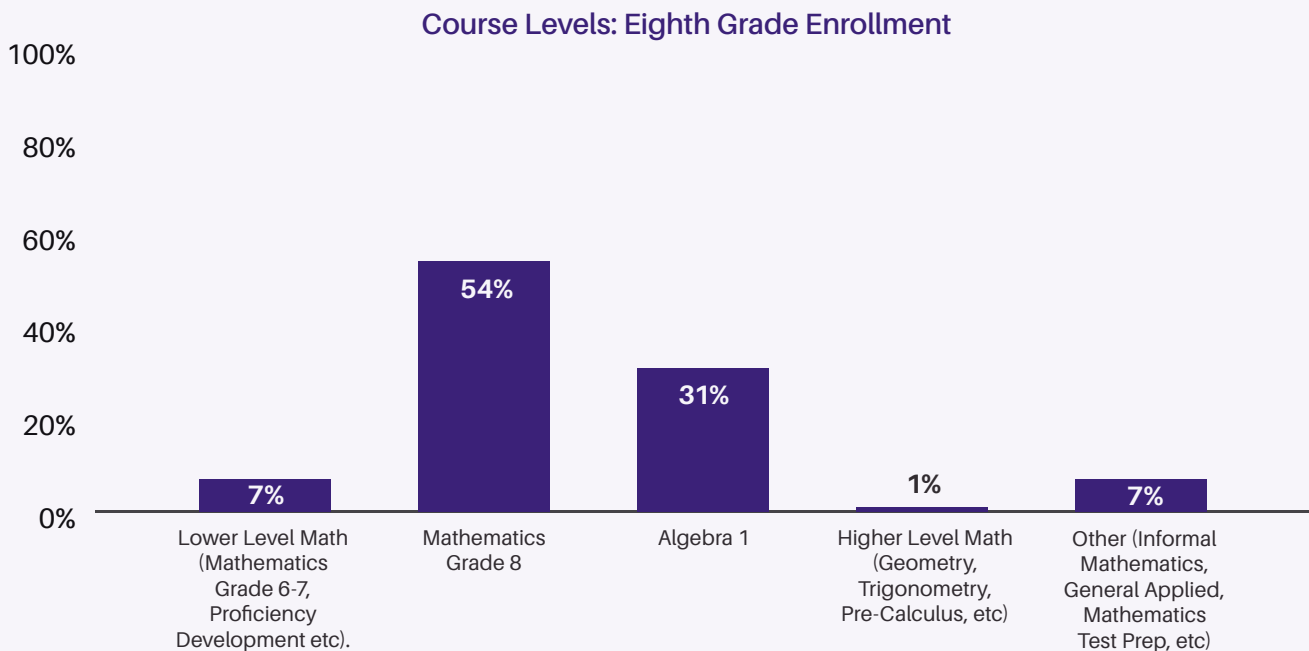


WHILE 38% OF BLACK STUDENTS AND 75% OF ASIAN STUDENTS WERE DEEMED PROFICIENT IN THE MATH 7 ASSESSMENT, ONLY 13% AND 14% OF THOSE STUDENT GROUPS, RESPECTIVELY, WERE ENROLLED IN ALGEBRA 1 IN EIGHTH GRADE.



FINDING 2: Most eighth graders are enrolled in the grade level math course rather than advanced courses.

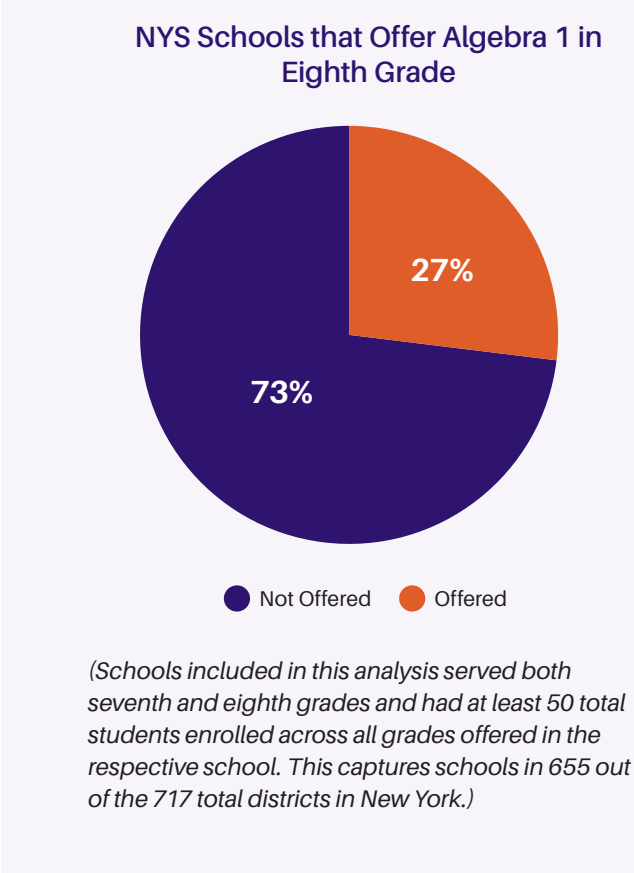
While there are advanced and accelerated math courses eighth graders in our state can take, including Algebra 1 and 2, Geometry and Trigonometry, over half of eighth grade students are enrolled in the grade level course, Mathematics Grade 8. Algebra 1 is the most enrolled accelerated math course in the eighth grade, with 31% of all eighth graders enrolled. For even more advanced courses like Algebra 2 and Geometry and Trigonometry, only 1% of eighth graders are enrolled in those courses.



FINDING 3: Many schools throughout the state do not offer Algebra 1 to eighth graders.

Across the state, over a quarter of schools that serve seventh and eighth graders (27%), do not offer Algebra 1 in the eighth grade. This leaves many seventh graders in those schools who are proficient on the NYS Math 7 assessment, without the option for advanced and accelerated math in the eighth grade that will prepare them for high school.

Of 655 districts that serve at least 50 seventh and eighth graders, 56 districts do not offer Algebra 1 in any of their schools, while 562 districts offer Algebra 1 in all schools in the eighth grade. The remaining 37 districts offer Algebra 1 to eighth graders in only some of their schools, resulting in some students in those districts being denied even the option for advanced math in the eighth grade. This category includes many large districts, such as Buffalo Public Schools, New York City Public Schools, and Yonkers Public Schools, as well as significantly smaller districts throughout the state.

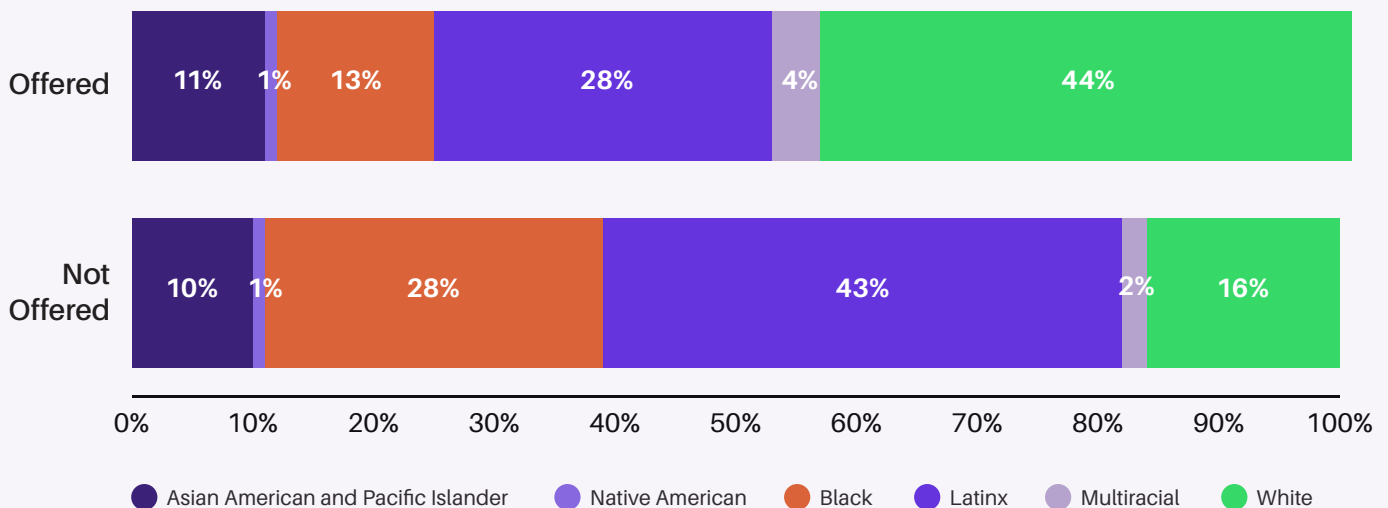


Eighth Grade Algebra 1 Availability	District Count	Share of Districts
Not Offered in All Schools	56	9%
Offered in All Schools	562	86%
Offered in Some Schools	37	6%
Total	655	100%

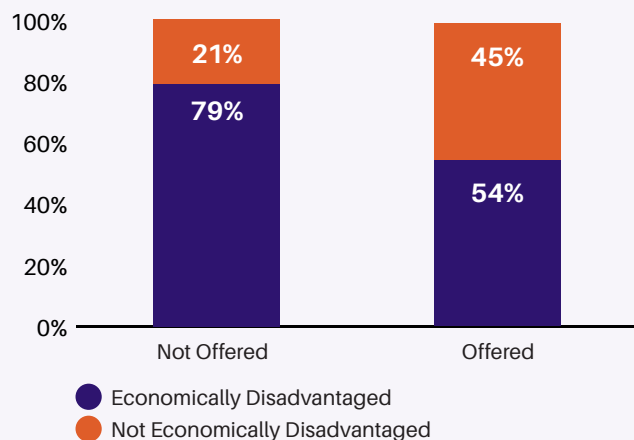
FINDING 4: Black and Latinx students, and those from low-income backgrounds, face access gaps; they are more likely to be enrolled in schools that do not offer Algebra 1 in the eighth grade.

Students from low-income backgrounds are more likely than their more affluent peers to be enrolled in a school that does not offer Algebra 1 in the eighth grade. Additionally, Black and Latinx students are also more likely than peers of other racial/ethnic groups to be enrolled in a school that does not offer the course.

Algebra 1 in Eighth Grade Access: Enrollment of Students by Race/Ethnicity



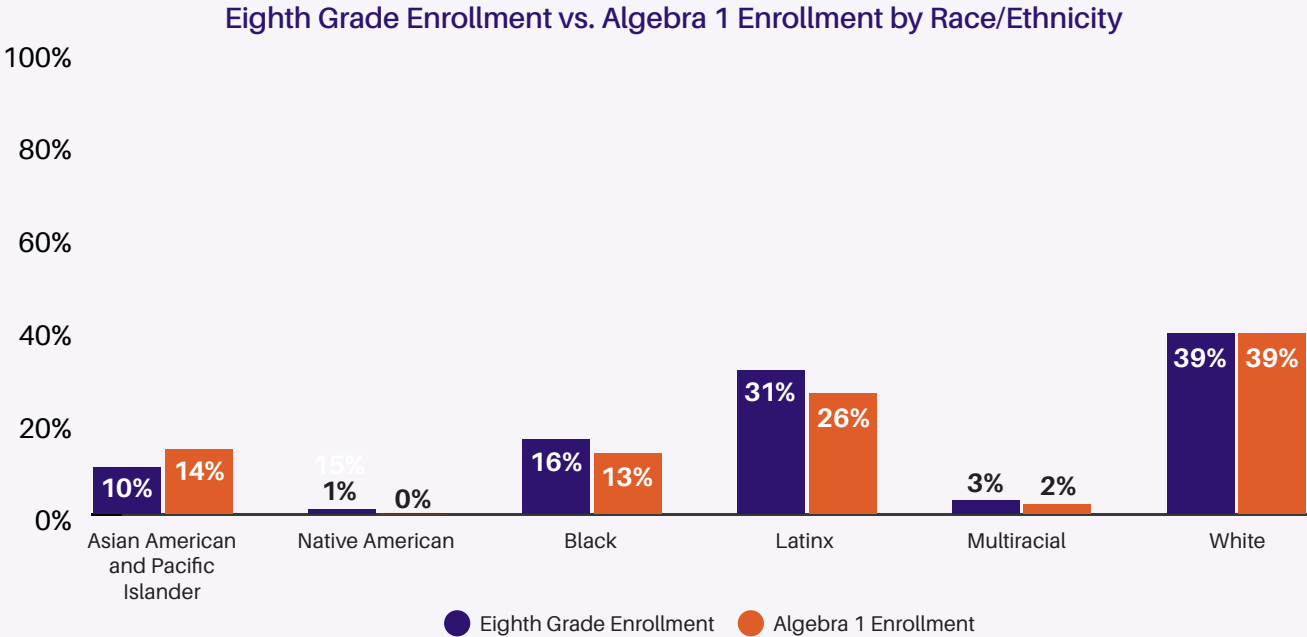
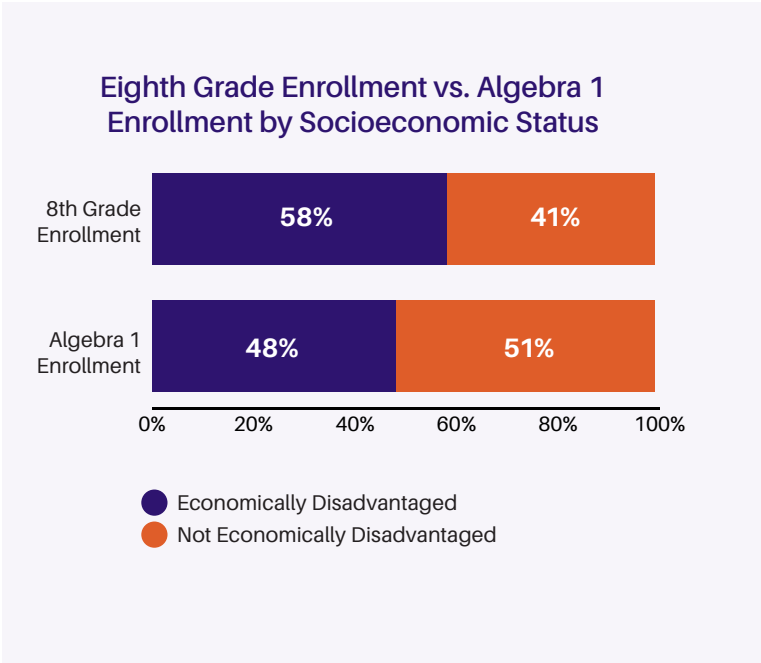
Algebra 1 in Eighth Grade Access: Enrollment of Students from Low-Income Backgrounds



FINDING 5: Students from low-income backgrounds, as well as Black and Latinx students, are underrepresented in Algebra 1 classrooms.

Due to a combination of lack of availability and “opt in” policies, in 2024–25, students from low-income backgrounds, Black students, and Latinx students were underrepresented in eighth grade Algebra 1 enrollment relative to their shares of the overall eighth grade population.

Students from low-income backgrounds made up 58% of students in the eighth grade, but only 48% of the eighth grade students enrolled in Algebra 1. By comparison, their more affluent peers are only 41% of eighth grade students, but 51% of the students enrolled in Algebra 1. Black students are 16% of eighth grade students, but only 13% of the students enrolled in Algebra 1, and similarly their Latinx peers are 31% of eighth grade students, but only 26% of students enrolled in Algebra 1.



Recommendations

1 Enroll All Proficient Seventh Graders into Eighth Grade Algebra 1

Based on our analysis, The New York Equity Coalition recommends shifting to an “opt-out” approach and implementing automatic enrollment for eighth grade Algebra 1. Automatic enrollment policies change the default by enrolling all students who demonstrate proficiency into advanced courses unless families choose to opt out. This approach removes reliance on subjective factors such as teacher recommendations or familial advocacy and ensures opportunity to enroll in advanced coursework is aligned with readiness.

States including [Washington, Illinois, Texas, Colorado, and North Carolina](#) have successfully implemented automatic enrollment policies, leading to substantial increases in advanced course participation and significant reductions in racial and socioeconomic enrollment gaps. At the district level, the Dallas ISD [implemented a policy](#) of automatically enrolling qualifying students in Algebra 1, resulting in a 13-percentage point increase in enrollment before high school, with particularly strong gains for Latinx students.

To ensure student success, automatic enrollment should be paired with targeted academic supports, such as tutoring or small-group instruction, to help students thrive in advanced coursework.

Based on [additional EdTrust-New York’s analysis](#), approximately 20,000 additional eighth grade students could be enrolled in Algebra 1 statewide if students proficient on the NYS Math 7 assessment were automatically placed into the course. An estimated 55% of these students are from low-income backgrounds, and 44% are students of color.

State leaders should pass legislation coupled with funding to help with implementation, in support of automatic enrollment in eighth grade Algebra 1. This policy would automatically enroll students who have demonstrated proficiency on their NYS Math 7 assessment or demonstrated readiness through their seventh grade math course grade. Allowing districts to use multiple measures, such as math course grades in addition to assessment results, could further expand access while ensuring students are prepared for rigorous coursework.



The state should also explore expanding auto enrollment policy into earlier grades and additional subjects to ensure students are on track to take advantage of advanced coursework in middle and high school, as North Carolina and Texas have done. Legislation should also require districts to track and publicly report enrollment and completion of data disaggregated by race/ethnicity, income, disability status, and language background to monitor equity outcomes.

To support districts in implementing this policy, we propose an \$8.5 million investment that would allow up to 15 school districts with high concentrations of economically disadvantaged students, and students eligible, but not enrolled in eighth grade Algebra 1. Funding would allow these districts to provide Algebra 1 to an additional 6,400 eighth grade students at a cost of about \$1,315 per student, which would support tutoring, professional learning, staffing, and administrative costs.



2

Support the Governor's Back to Basics Math Proposal

State and federal assessment data show that far too many New York students are not proficient in math. For example, New York ranks 37th in fourth grade math proficiency on the 2024 National Assessment of Education Progress (NAEP), and only 44% of Black and Latinx seventh graders were proficient in math on 2024-25 NYS math assessment. To help ensure that more eighth graders are qualified for Algebra 1 and other advanced coursework, state and district leaders must significantly improve math instruction in grades K-8. The Governor's 2027 Executive Budget proposal includes \$26 million in new support for math instruction including high-impact tutoring, professional learning across the state, the development of high-quality instructional materials, and new micro-credentials in math for educators. We urge the Legislature to include these critical investments in the final state budget.