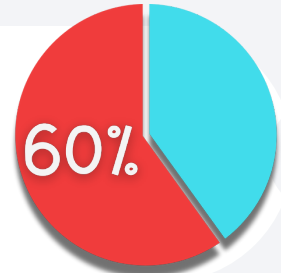


A **roadmap** to modernize high school mathematics education, addressing critical challenges and equipping students with the skills needed for the 21st century.

*Students should see themselves as mathematical learners and doers, which includes engaging in questioning and sense-making coupled with problem exploration and solving skills.*



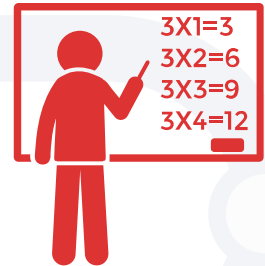
The majority of 12th grade students scored **below proficient** in math.



*Engaging mathematics is about students actively working to make sense of what they are doing.*

Traditional mathematics courses are the **most significant barrier** for students' post-secondary success.

*To truly infuse relevance into the classroom and bridge the gap between mathematics and the real world, students need to grapple with complex and meaningful situations.*



"School math" **lacks inherent value** and is disconnected from their practical needs for many students.



*Relevance becomes a defining characteristic of mathematics classrooms and learning through mathematical and statistical modeling and the use of contextual and interesting tasks.*

The Bureau of Labor Statistics projects **35.2% employment growth** for data scientists between 2022 and 2032.

# High School Mathematics Reimagined, Revitalized, and Relevant

 NATIONAL COUNCIL OF  
TEACHERS OF MATHEMATICS

“

*Our goal is to foster generations of students who leave with the conviction that they can understand, learn, and apply mathematics.*

”

## Revitalizing Content and Structure

The mathematics curriculum should be revitalized and reimagined to make it more relevant, connected, and coherent, with a focus on organizing content in ways that are meaningful and applicable to students' lives and future careers.

## Engaging Pedagogy

Revitalized teaching practices should move away from traditional, teacher-centered instruction to involve dynamic, student-centered learning that promotes collaboration, problem-solving, and active sense-making.

## Equitable Access

All students, regardless of background, must have equitable access to high-quality, relevant mathematics education that prepares them for future opportunities, with a focus on dismantling tracking systems and creating interest-driven pathways.

## Mathematical and Statistical Modeling

Revitalized mathematics education places modeling at the core, allowing students to apply mathematical concepts to real-world situations, fostering deeper understanding and relevance.

## Relevance to Real-World Applications

High school mathematics should be relevant and aligned with the demands of today's world, incorporating topics such as data science, statistical reasoning, and quantitative literacy to prepare students for diverse postsecondary options.

“

*Promote a classroom culture in which mistakes and errors are viewed as important reasoning opportunities, to encourage a wider range of students to engage in mathematical discussions with their peers and the teacher.*

”

“

*Relevance becomes a defining characteristic of mathematics classrooms and learning through mathematical and statistical modeling and the use of contextual and interesting tasks.*

”



Learn more about *High School Mathematics Reimagined, Revitalized, and Relevant*

[nctm.org/HSreimagined](https://nctm.org/HSreimagined)



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