

FRESNO COUNTY SUPERINTENDENT OF SCHOOLS
FRESNO COUNTY BOARD OF EDUCATION**Instruction**
MATHEMATICS INSTRUCTION

The County Superintendent and County Board desire to offer a rigorous mathematics program that progressively develops the knowledge and skills students will need to succeed in college and career. The County Superintendent/County Board mathematics program shall be designed to teach mathematical concepts in the context of real-world situations and to help students gain a strong conceptual understanding, a high degree of procedural skill and fluency, and ability to apply mathematics to solve problems.

The County Superintendent/County Board mathematics program shall also incorporate recognized principles, concepts, and research-based strategies to meet the needs of all students and provide equal access to learning through lessons that are relevant to students. Instructional resources adopted for use in County Superintendent/County Board schools shall provide guidance to support a diverse student population, including students who are English learners, at-promise, advanced learners, and students with learning disabilities.

For each grade level, the County Superintendent and County Board shall adopt academic standards for mathematics that meet or exceed the Common Core State Standards. The County Superintendent or designee shall develop or select curricula that are aligned with these standards and the state curriculum framework.

The County Superintendent/County Board mathematics program shall address the following standards for mathematical practices which are the basis for mathematics instruction and learning:

1. Overarching habits of mind of a productive mathematical thinker: Making sense of problems and persevering in solving them; attending to precision
2. Reasoning and explaining: Reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others
3. Modeling and using tools: Modeling with mathematics; using appropriate tools strategically
4. Seeing structure and generalizing: Looking for and making use of structure; looking for and expressing regularity in repeated reasoning

In addition, the program shall be aligned with grade-level standards for mathematics content.

For grades K-8, mathematics content shall address, at appropriate grade levels, counting and cardinality, operations and algebraic thinking, number and operations in base ten, fractions, measurement and data, geometry, ratios and proportional relationships, functions, expression and equations, the number system, and statistics and probability. Students shall learn the concepts and skills that prepare them for the rigor of higher mathematics.

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For higher mathematics, the County Superintendent shall offer a pathway of courses through which students shall be taught concepts that address number and quantity, algebra, functions, modeling, geometry, and statistics and probability. Any pathway offered shall be designed in a manner that provides maximum opportunities for students to access advanced mathematics courses during high school.

The County Superintendent or designee shall ensure that students are appropriately placed in mathematics courses and are not required to repeat a course that they have successfully completed in an earlier grade level. Placement decisions shall be based on consistent protocols and multiple academic measures.

The County Superintendent or designee shall ensure that certificated staff have opportunities to participate in professional development activities designed to increase their knowledge and skills in effective mathematics teaching practices.

The County Superintendent or designee shall ensure that students have access to sufficient instructional materials, including manipulatives and technology, to support a balanced, standards-aligned mathematics program.

County Superintendent staff shall provide the County Superintendent and County Board with data mathematics assessments and program evaluations to enable the County Superintendent and County Board to monitor program effectiveness.

Adopted: 10/20/2011

Amended: 11/19/2020, 11/21/2024

Legal ReferenceEducation Code

51002 Common state curriculum

51210 Areas of study, grades 1-6

51220 Areas of study, grades 7-12

51224.5 Algebra in course of study for grades 7-12

51224.7 California Mathematics Placement Act of 2015

51225.3 High school graduation requirements

51284 Financial literacy

60605 State-adopted content and performance standards in core curricular areas

60605.8 Common Core standards

Management ResourcesCSBA Publications

Governing to the Core; Pathway Options for High School Mathematics Governance Briefs, May 2014

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California Department of Education Publications

2023 Mathematics Framework for California Public Schools: Kindergarten Through Grade Twelve, June 2023

California Common Core State Standards: Mathematics, rev. January 2013

Common Core State Standards Initiative Publications

Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards

Websites

California Department of Education: <https://www.cde.ca.gov>

Common Core State Standards Initiative: <https://www.corestandards.org>