

Frequently Asked Questions about Common Core State Standards for Mathematics in SFUSD Grades 6-8

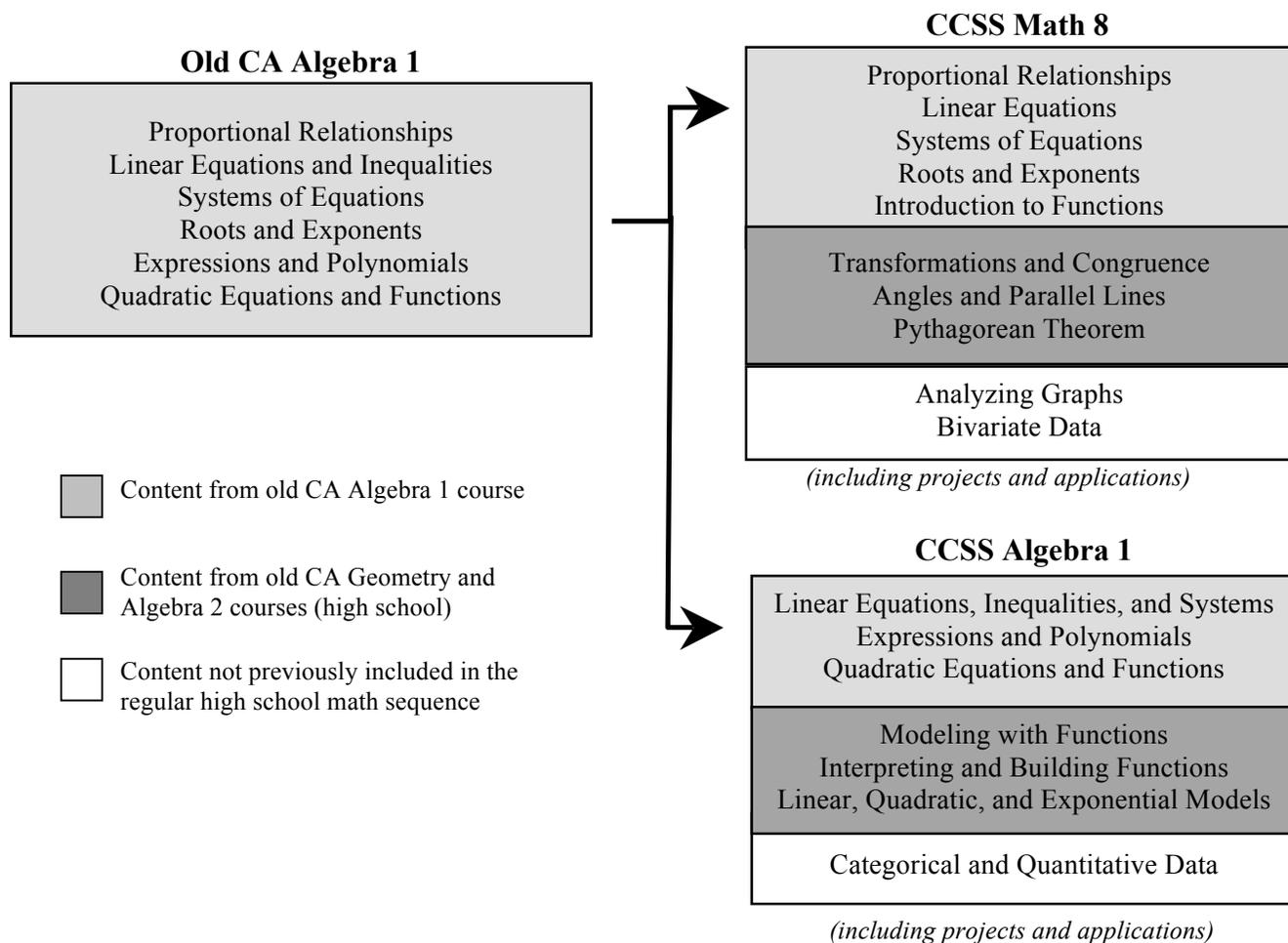
What are the Common Core State Standards?

The Common Core State Standards (CCSS) for Mathematics are a more coherent, focused, and rigorous progression of mathematics learning from Kindergarten through Advanced Algebra. At the middle grades level, they define a three-year course sequence that includes many algebra, geometry, and statistics topics traditionally taught in high school. Each of the middle grades courses (CCSS Math 6, CCSS Math 7, and CCSS Math 8) contains extensive new mathematics that are critical for student success in all future math courses in high school as well as college.

The Common Core State Standards are the result of a national initiative launched by the National Association of State Governors and the National Association of State School Superintendents to create unified standards for English Language Arts and Mathematics based on researching the standards of high-achieving countries. They are voluntary for states to adopt, and at this point California and forty-four other states have adopted them.

How do the CCSS Math 8 and CCSS Algebra 1 courses compare to the old Algebra 1 course?

The standards that defined an Algebra 1 course under the old California standards are now divided between the CCSS Math 8 course and the CCSS Algebra 1 course, as shown below. CCSS Math 8 and CCSS Algebra 1 courses also include content from more advanced high school courses and concepts not previously taught in high school math, especially statistics.



Is CCSS Math 8 the same as the old 8th grade Pre-Algebra course?

No. CCSS Math 8 is *much more* rigorous than the 8th grade math courses of the past, and covers many standards that used to be part of Algebra 1. The old Pre-Algebra course primarily reviewed standards taught in earlier grades—fractions, decimals, and percents, ratios and proportions, equations, and geometric measurement—which remain the focus of Common Core courses in earlier grades. The content of CCSS Math 8 is based on standards from three main domains: Algebra and Functions (about 65%), Geometry (about 25%), and Statistics (about 10%).

<p>Algebra and Functions (about 65%)</p> <ul style="list-style-type: none"> Proportional Relationships Linear Equations and Inequalities Systems of Equations Roots and Exponents Introduction to Functions Modeling with Functions
<p>Geometry (about 25%)</p> <ul style="list-style-type: none"> Transformations and Congruence Angles and Parallel Lines Pythagorean Theorem
<p>Statistics (about 10%)</p> <ul style="list-style-type: none"> Analyzing Graphs Bivariate Data

Can students skip CCSS Math 8 and go straight into CCSS Algebra 1?

No. CCSS Math 8 introduces extensive new mathematics content and is *not* a course that can be skipped. The content of the middle grades course sequence (CCSS Math 6, CCSS Math 7, and CCSS Math 8) is essential for preparing students for *both* CCSS Algebra 1 and CCSS Geometry in high school. The authors of the Common Core developed an intentional vertical connection of algebraic and geometric topics from grades K-8 through high school. CCSS Algebra 1 builds on the content students learn in CCSS Math 8 and *does not repeat* content from CCSS Math 8.

CCSS Algebra 1 is also much more rigorous than the old CA Algebra 1. It assumes students have already worked with linear equations and functions and then extends their study of non-linear functions to include quadratic and exponential functions—topics that were introduced in Advanced Algebra in the past. The CCSS Algebra 1 course also includes a significant focus on statistics and applying algebraic tools to solve complex, real-world problems.

Will students still be able to take AP Calculus in high school?

Yes, by compressing courses in high school. Due to the essential nature of all CCSS courses, students can no longer accelerate in math by skipping a course. The current district plan includes the option to accelerate in high school by compressing CCSS Algebra 2 with Precalculus into a one-year course.

CCSS Math 8 is designed for students to have time to develop deep conceptual understanding and reasoning around linear functions, solving linear equations, the Pythagorean Theorem, similar shapes, and geometric transformations. In CCSS Algebra 1 and CCSS Geometry, students build on this conceptual foundation to deepen their understanding, work with concepts more abstractly, and apply their understanding to prove algebraic and geometric relationships.