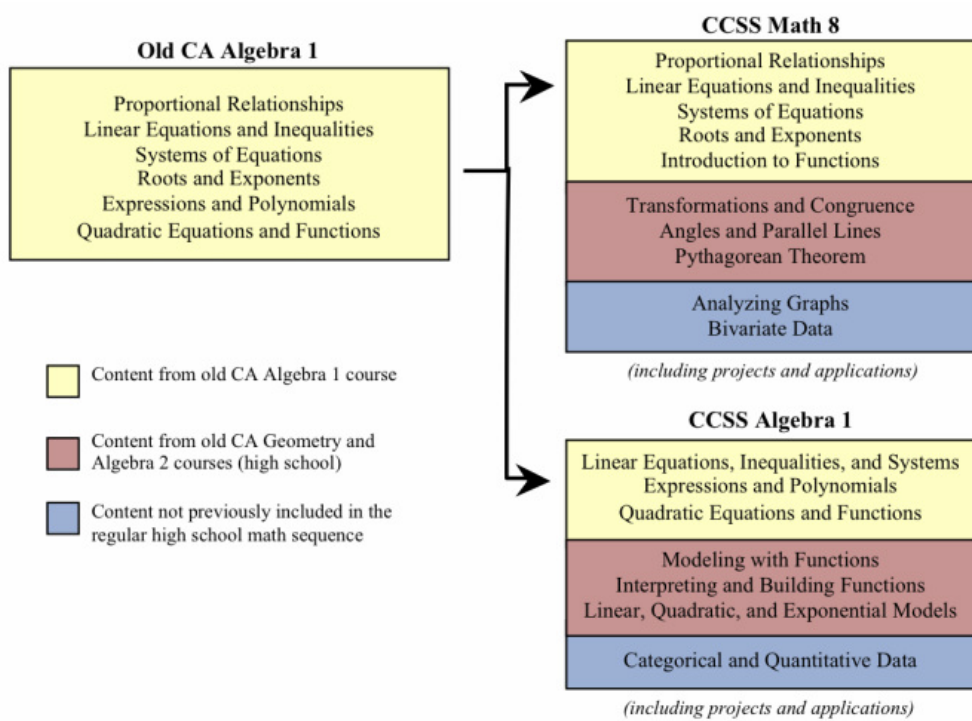# GATEWAY MIDDLE SCHOOL

Frequently Asked Questions about the new Common Core
8th and 9th Grade Math Courses:

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.

Old CA Algebra 1

Proportional Relationships
Linear Equations and Inequalities
Systems of Equations
Roots and Exponents
Expressions and Polynomials
Quadratic Equations and Functions

☐ Content from old CA Algebra 1 course

☐ Content from old CA Geometry and Algebra 2 courses (high school)

☐ Content not previously included in the regular high school math sequence

CCSS Math 8

Proportional Relationships
Linear Equations and Inequalities
Systems of Equations
Roots and Exponents
Introduction to Functions

Transformations and Congruence
Angles and Parallel Lines
Pythagorean Theorem

Analyzing Graphs
Bivariate Data

(including projects and applications)

CCSS Algebra 1

Linear Equations, Inequalities, and Systems
Expressions and Polynomials
Quadratic Equations and Functions

Modeling with Functions
Interpreting and Building Functions
Linear, Quadratic, and Exponential Models

Categorical and Quantitative Data

(including projects and applications)

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%).

Algebra and Functions (about 65%)
Proportional Relationships
Linear Equations and Inequalities
Systems of Equations
Roots and Exponents
Introduction to Functions
Modeling with Functions

Geometry (about 25%)
Transformations and Congruence
Angles and Parallel Lines
Pythagorean Theorem

Statistics (about 10%)
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. 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. If students choose to pursue taking AP Calculus, they will take an accelerated math course in 11th grade (by compressing CCSS Algebra 2 with Precalculus into a one-year course.)