

Introduction to Higher Mathematics Standards



The standards for higher mathematics are organized in two ways—as model courses and in conceptual categories—and include California additions.¹ The model courses consist of three courses in the traditional pathway (Algebra I, Geometry, and Algebra II); three courses in the integrated pathway (Mathematics I, II, and III); and two advanced courses (Advanced Placement Statistics and Probability and Calculus). The model courses provide guidance for developing curriculum and instruction. The forthcoming *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve*, will offer expanded explanations of the model courses and suggestions for additional courses, including Pre-Calculus and Statistics and Probability.

The six conceptual categories are as follows:

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

Conceptual categories portray a coherent view of higher mathematics and cross traditional course boundaries. There are no standards listed in the conceptual category of modeling. Instead, modeling standards appear throughout the other conceptual categories and are indicated by a star symbol (★).

The higher mathematics standards specify the mathematics that all students should study in order to be college and career ready. Additional mathematics that students should learn in preparation for advanced courses, such as calculus, advanced statistics, or discrete mathematics, is indicated by a plus symbol (+). All standards without a (+) symbol should be in the common mathematics curriculum for all college and career ready students. Standards with a (+) symbol may also appear in courses intended for all students.

Table 1: Model Mathematics Courses, by Grade Level

Discipline	Grade Seven	Grade Eight	Grade Nine	Grade Ten	Grade Eleven	Grade Twelve
Algebra I/Mathematics I						
Geometry/Mathematics II						
Algebra II/Mathematics III						
Advanced Placement Probability and Statistics						
Calculus						

Local districts determine which course offerings and sequences best meet the needs of students. The table above provides guidance on possible course-taking sequences in higher mathematics. It is not intended to be an exhaustive list of courses or sequences of courses that students could take. In the forthcoming *Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve*, courses in Pre-Calculus and Statistics and Probability will also be presented.

1. California additions appear in boldface type and with a CA notation.