

MATH *at* HOME



HELPING
YOUR CHILDREN
LEARN AND ENJOY
MATHEMATICS

PREPARING FOR COLLEGE AND CAREER

Who needs high school math? Everyone! Research has shown that taking mathematics courses in high school can open doors to more opportunities. Higher-level math—that is, coursework beyond algebra I—is essential for getting into college and for most careers, even careers that don't directly involve math.

For students who want to attend a four-year college or university, three years of high school math is generally required, and four years is recommended. This means that your children should probably take a math class in each year of high school. Following algebra I, most students take geometry, algebra II, and trigonometry and/or calculus. These classes prepare them for college entrance exams and college-level math.

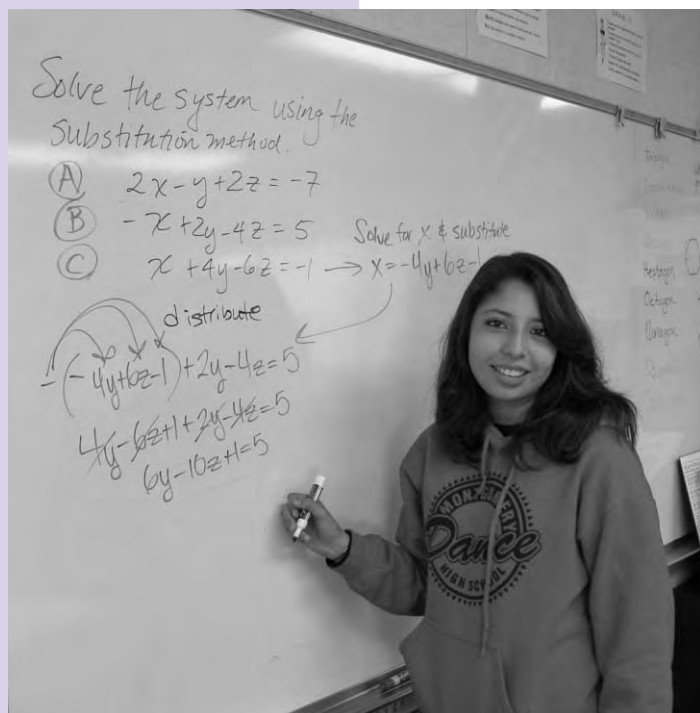
Completing these high school math courses is closely associated with

future college success. A federal study completed in 2006 found that students who complete algebra II in high school more than double their chances of earning a four-year college degree.

Two-year colleges also require rigorous math. Although higher-level math is not an admission requirement, students planning to attend junior college should also consider taking the progression of classes leading to algebra II. If their goal is to transfer to a four-year college or university, the reasoning is obvious: they'll be better prepared for the demands and requirements leading to graduation and a four-year degree. But even two-year junior college programs usually require at least one college-level math course.

Whether they're in a two-year or four-year college program, students who haven't taken higher-level high school math will usually need

to enroll in remedial classes before advancing to the required college math



classes. Unfortunately, students in remedial courses are more likely to drop out or leave college without earning a degree. This is a strong argument for doing the hard work that’s needed in high school math classes.

Students who aren’t college-bound will also benefit from more high school math. Due to advances in technology and the changing nature of the workplace, most jobs that pay a good wage and allow for career advancement now demand strong math skills. For students directly transitioning to careers or career training after high school, higher-level math classes provide a foundation of logic, problem solving, and reasoning skills that can translate to more highly paid positions.

No matter which direction your children are headed, if they take more demanding math courses in high school, they’ll be better prepared for future success.

COLLEGE ADMISSIONS REQUIREMENTS

In order to attend a four-year college or university, your children must fulfill what’s known as the “a-g” requirements. This is a series of 15 to 18 courses that prepare high school students for advanced study at the college level. If your children complete each of the a-g courses with a C or better, they will be prepared to attend most colleges and universities in the United States. The a-g courses are *required* for admission to both the University of California and California State University systems.

Area	Subject	Years
a	History and Social Science One year of U.S. history (or one semester of U.S. history and one semester of civics and American government) and one year of social science	2
b	English Four years of college-preparatory English composition and literature	4
c	Mathematics Algebra I, geometry, algebra II, or higher mathematics—take one each year	3*
d	Laboratory Science One year of biological science and one year of physical science	2*
e	Language other than English Two years of the same language	2*
f	Visual and Performing Arts One year of dance, drama or theatre, music, or visual arts	1
g	College Preparatory Elective One additional year selected from the subjects listed above or another approved course	1
Total required courses		15

* This is the required number of years, but an additional year is recommended in these subject areas.