

“It doesn’t matter what I take in high school because I’m just going to community college when I graduate.”

“I won’t ever go after a job where I need math skills because math is too hard.”

“My major is going to be political science—why do I need advanced math?”



Sound familiar?

Many high school students say this—but they couldn’t be more wrong.

In our information-dependent society, career and college success demand critical thinking, communication and problem-solving skills. High school graduates face higher expectations than ever before from the workplace and higher education. **It’s no longer acceptable to say “I’m no good in math.”**

Once thought of as only for a brainy few, advanced math is now essential to help students thrive in a competitive world. Whether students dream of a career in architecture, law enforcement, music, technology or science, advanced math skills form the foundation for future opportunities.

more math = more money
It’s a pretty simple equation. A majority of workers who earn more than \$40,000 annually have two or more high school credits at the algebra 2 level or higher.³

“Because I took four years of math in high school, I didn’t have to take remedial classes like some of my friends. They had to spend money on classes that I took free in high school.”

—Andrea Naccarato, *College Student, Whitworth College*

Resources for parents and students

Transition Mathematics Project

The Transition Mathematics Project—a joint effort of Washington’s K-12 schools, community and technical colleges and public four-year universities—is working to help more students make a successful transition from high school to college-level math courses. The Project communicates what it takes to be ready for college math to students, teachers and faculty.

To learn more: www.transitionmathproject.org.

Partnership for Learning

Partnership for Learning is an independent, statewide nonprofit organization supported by Washington businesses and community leaders. The Partnership informs and mobilizes opinion leaders, educators, parents and the general public to improve our public schools and better prepare our high school graduates for the demands of today’s global society.

To learn more: www.partnership4learning.org.



Council of Presidents



This publication was prepared by Partnership for Learning with generous support from the Transition Mathematics Project. Printing was donated by The Boeing Company. Copyright Partnership for Learning 2006.

To order additional copies of this brochure, visit the Transition Mathematics Project on the web at: www.transitionmathproject.org

Got Math?

Multiply your options for the future



“I tell all my students—take more math. Higher level math is the key to opening more doors for you in the future—no matter what you dream of becoming.”

—Esteban Delgadillo, *Math Teacher, Hudson’s Bay High School, Vancouver School District*

Students and Parents:

Get the Facts!

Students' math skills don't add up.

Most Washington colleges and businesses report that students are unqualified for entry-level classes and jobs. Why? Too few students take enough math—or the right math—in high school.



Though some school districts require more, Washington state only requires two years of math in high school. Minimum graduation requirements are just that—the minimum level of competency.

And that's a problem for many students when they graduate. During 2005, twenty-six thousand Washington employers reported that they could not find applicants with the math skills needed to fill their entry-level jobs.¹ And while most Washington students—nearly 75%—enter some form of college (a job training program, community college or a four-year university) within three years of graduating from high school, too many of these students are not ready for college.

Whatever their path, all students need more math skills.

Learn now —or pay later.

If they are not prepared adequately while in high school, students pay the consequences by needing to play catch-up in college or on the job. Businesses pay the consequences when they can't find enough applicants with the math skills to do the job and they have to train employees in math. Taxpayers pay the consequences because the state subsidizes college students who aren't ready for college.

Here's a sobering statistic: Nearly 50% of high school graduates who enter Washington's community and technical colleges directly after high school need to take remedial math before they can take math courses for credit.²

Why? Students who enroll in any two- or four-year college are required to take a placement test to determine what level of reading, writing and math courses they are ready for. Students who don't qualify for college level courses must enroll in "pre-college," or remedial classes. Students pay the same amount for remedial classes—for no credit.

What's more, taking pre-college classes extends the time students spend to complete a program. In fact, needing to take remedial math significantly decreases a student's chances of completing a program.

Four years of challenging math in high school, including algebra 2, increases opportunities.

Students' best bet: Do well on the WASL—and then take more math.

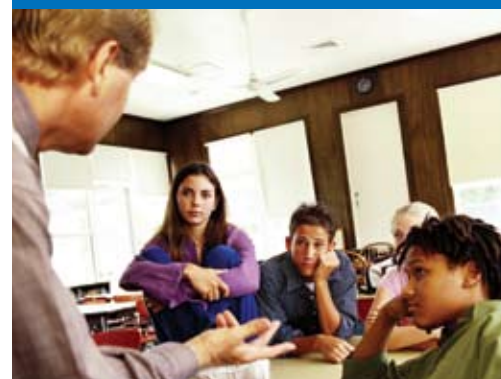
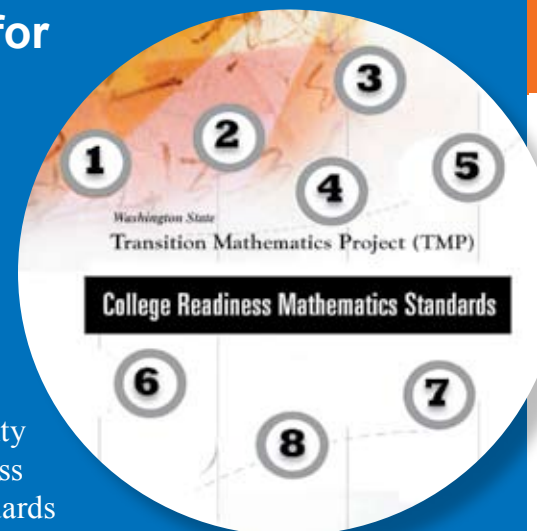
While still in high school, all students should learn how to apply mathematical skills they will need during their lifetime. Math is essential for everyday decision making. All of us pay bills, complete tax returns, buy cars and evaluate health care options.

Washington state has clear academic standards, which spell out the skills that all students need to know by 10th-grade. Before common standards, too many young people graduated without being able to read, write and perform math at even the most basic level.

The 10th-grade standards tested on the Washington Assessment of Student Learning (WASL) are basic computation, beginning algebra and problem solving. These skills are the floor, not the ceiling, for achievement. In order to ensure that their diplomas are meaningful, all students in the classes of 2008 and beyond must pass the 10th-grade WASL before they graduate. But 10th-grade skills are not enough for success in demanding jobs or college.

Setting the Standard for Student Success.

To more clearly define the level of skills and knowledge students will need to begin taking credit-bearing math classes at the college level in Washington state, the Transition Math Project, in collaboration with K-12 and higher education faculty, students, parents and local community leaders, created the College Readiness Mathematics Standards. These standards spell out what students need to be college ready.



To view, print, or order the College Readiness Standards, visit the TMP website at:

www.transitionmathproject.org/standards.asp

"Because most high school diplomas only require two years of math, some students think algebra 2 is an elective. But it is required for both associate of arts and baccalaureate degrees. It's far better to take intermediate algebra free in high school than to pay tuition for it in college."

—Tim Washburn, Assistant Vice President of Enrollment Services, University of Washington

Parents: You can make the difference.

Take the important steps to ensure your teenager is prepared for life after high school. Research shows a plethora of challenging coursework is the strongest predictor of success in college. Here's what you can do:

- + Participate in your student's course selection each semester and each year in high school.
- % Help your student make the connection between high school courses and future career options.
- = Encourage your student to accept challenges and take the highest level of math available.
- x Remind your student that it is not about the grade. It's about learning and being prepared for the future.
- + Be your student's best advocate—make sure he or she is getting the help necessary to succeed. Support is available.

No matter the career, math matters.

Technology advances at light speed in our society. More and more careers require advanced and applied math skills. Math is the foundation for science, music, art. Talk to an auto technician, a cosmetologist or a dental assistant and you'll hear first hand how much math is needed to do the job.

| | | Algebra 2 | Chemistry | College Chemistry | College Calculus | Job-Related Computer and Technology Skills |
|--------------------|--------------------------------------|-----------|-----------|-------------------|------------------|--|
| Technical Training | Auto Mechanic | X | X | | | X |
| | Computer Programmer | X | | | | X |
| | Medical Lab Technician | X | X | X | | X |
| 2-year degree | Dental Hygienist | X | X | X | | X |
| | Firefighter | X | X | | | X |
| | Web Designer | X | | | | X |
| 4-year degree | Accountant | X | X | | X | X |
| | Agricultural Technology & Management | X | X | X | | X |
| | Registered Nurse | X | X | X | | X |
| | Software Engineer | X | X | | X | X |

Does everyone need to go to college? In today's knowledge economy, 85% of jobs require some level of post-high school education or training.⁴

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

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