



The AMC:

Your edge for top-tier college acceptance ←

With college admissions becoming ever more competitive, families are beginning to discover the AMC. Their most common question: How useful are these tests for college admissions?

The AMC is a key differentiator among top-tier applicants.

- *Unlike* the usual tests and grades, the AMC is a nationally-known challenge.
- *Like* Division I sports, this is a long-term pursuit. It's not just one of many items on a college checklist.

The AMC is your chance to be an Olympian of mathematics.



What is the AMC?

The American Math Competition (formerly the American High School Math Examination) is a once-a-year opportunity for STEM-minded middle- and high-school students to demonstrate their excellent problem-solving skills and extra-curricular math knowledge. It's far more challenging (read: interesting and engaging) than almost every other competition of its kind.

There are three versions; you take the one appropriate to your level of math knowledge. You get about an hour (more or less depending on your level) to answer 25 questions. Doing very well puts you in the running to train to represent the USA in the **International Math Olympiad**, a world-wide event with nearly a century of history.

Relatively few schools know about it, and fewer still offer it, even though it's been around for 80 years. But most schools are willing to get on board if they have even just one interested student. Despite its low profile, it's a big competition: tens of thousands of students participate each year. Something like two thousand advance beyond the first round.

Note: the AMC 8 (the middle-school version) works a bit differently from the AMC 10 and the AMC 12. From here on, I'll use "AMC" to refer primarily to the AMC 10 and AMC 12 exams.





Why you should become an athlete of the AMC

Many advanced students never prepare for tests, because “going in cold” is good enough for a good outcome. As a result, these students never develop study skills, nor performance skills normally associated with athletes (e.g. deliberate practice, grit, and patience).

Because this test is actually *challenging*, even for this sort of student, it represents a golden opportunity in two ways:

- Success here *matters more* than success in other less-challenging arenas such as school and the ACT/SAT.
- Success requires the skills that can only be developed when confronting real adversity.

The AMC helps excellent students get the admissions attention they deserve, while training the skills they’ll most need in a highly-competitive university.

This is not your ACT/SAT

By contrast, the ACT and SAT exams don’t actually challenge the academic ability of top students. Instead, a top ACT/SAT merely score shows a base level of skill, a significant work ethic, and (often) the family’s financial means to obtain quality preparation services. (And little else.) The questions simply aren’t difficult enough to allow truly gifted students to demonstrate their abilities.

Therefore, your top score doesn’t indicate that you are well-suited to serious academic challenge. Instead, it merely demonstrates that you can work for four hours straight without making more than a few unforced errors.

And that, in a nutshell, is why it’s no longer as valuable to colleges as it used to be. You may have to take the test, but all that accomplishes is keeping you from moving from the “maybe” pile to the “no” pile right off the bat. The ACT/SAT does not earn you a place in the “yes” pile, no matter how well you do.

In fact, neither (inflated) grades nor the SAT/ACT are good tests of high-to-extreme ability, and college admissions officers know it.



How you can become an athlete of the AMC

Start training now and make your mathematical talent work for you.

Talent without training is no longer enough, and the AMC recognizes this distinction by penalizing those who expect to study the same old way and get great results.

One prime way in which it does this is to discourage strategies based on formulas and most other memorized knowledge. Unlike even “advanced” high school math classes, AMC questions require more of *the skills needed in college and beyond*. Here’s an example:

How many positive integers less than 1000 are 6 times the sum of their digits?

Every high schooler understands what the question asks. Most begin by trying to undercover the formula that applies to this situation. But *there is no such formula*.

This question tests mathematical thinking, organized thought, attention to intuition, and skills at analysis and synthesis. *Not* memorization of formulas. In this way, the AMC is like college: it’s a place where *quality of thought* matters far more than quantity of memorized information.

Proper training gives students the skills they need to be successful here. Skills they will need for the rest of their lives.



Just being a whiz kid isn’t nearly enough for this exam. (Or for life.) Untrained whiz kids, while bright, are too often also *undirected*, even stagnant.

In many cases, it isn’t even clear what branch of high-school-level math an AMC problem comes from:

Each face of a cube is given a single narrow stripe painted from the center of one edge to the center of its opposite edge. The choice of the edge pairing is made at random and independently for each face. What is the probability that there is a continuous stripe encircling the cube?

And yet hundreds of trained competitors answer questions like this every year. Most of them go on to greater things than those *who never learn* how to grapple with such *unstructured challenges*.

To get good at this test you need to actually get extremely good at math and at problem-solving under pressure. And I don’t mean just best-in-your-school good. I mean nationally-ranked good.

The key to success here is the same as for nationally-ranked athletics: **high-quality coaching**. Just as with any sport, it doesn’t matter how many classes you attend or how many competitions you watch or read about. What matters is training with someone with a deep understanding of how to shape a high-potential student into a champion.

$$N = \frac{A}{t}$$
$$E = mc^2$$
$$Q(t) = b \cdot e^{-\delta(1-a)} \cdot L(t)^\alpha \cdot J(t)^{1-\alpha}$$

Hand-drawn diagrams including a triangle with forces F_1 and F_2 , and a small square with a downward arrow.



Where this path leads

Students scoring in the top 5% on the AMC 12 in November are invited to participate in the AIME, an invitation-only exam given early in the following calendar year. Being invited to take the AIME is a college-application-worthy honor. For context: MIT's and Caltech's applications explicitly ask whether you have earned this honor or not.

Some students who make it this far stop here, and find themselves well-rewarded for their efforts.

Others go on to study for the AIME with equal vigor. Of these, some will be selected to participate in the USA Math Olympiad (USAMO).

USAMO is one of the most prestigious honors for a United States student. Therefore admissions will pick you out if you get there.

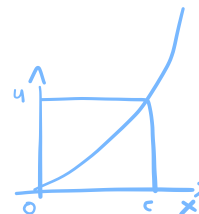
$$P = \frac{F}{S}$$

$$F = \frac{Gm_1m_2}{r^2}$$



$$Q(t) = b \cdot e^{-\delta(1-a)} \cdot L(t)^{\alpha} \cdot J(t)^{1-\alpha}$$

$$\text{tg } \alpha = 0$$



How we work together

Every year, my team trains a small number of hopefuls. Our AIME acceptance rate is over seven times the national average.

- It begins with a short conversation between our founder Wes Carroll and one or both parents.
- A single diagnostic meeting often follows.
- Students who remain on our roster after these two rounds typically begin a six-week program combining 1-1 tutoring and short but highly-focused homework, totalling a commitment of around four to six hours per week. Some students reach their goals during this period.
- Those who show sufficient promise throughout this process are invited to continue to train with us on an ongoing basis, as needed, until the student either reaches his or her goals, or adjusts those goals (downward or upward) to better match his or her demonstrated capacity for improvement.





The bottom line.

When done correctly, *this work is transformative.*

Successful AMC students have the habits both of top students and of high-performing adults. They put those superior habits into play smoothly when things get truly difficult. **These are skills we all want our kids to carry with them for the rest of their lives.**

That's why we say that proper AMC coaching is about helping a student become the kind of person that everyone—their parents, the colleges, future employers, but most importantly they themselves—know they have the potential to be.

This work addresses a critical facet of learning that top students are routinely denied.

Students who learn these skills and habits now are positioning themselves to be outstanding.

“My kid is up for the challenge. What now?”

Your decision to help your child or teenager explore this now could be one of the singular great decisions you look back on later, and say *“that’s when we started to see our kid really take off.”* If you decide to take a first step into this realm, I’m right here with you both.

I’ve helped hundreds grow into achieving their desired outcomes, all while sparing them dozens-to-hundreds of precious hours of *well-intentioned but ineffective* work.

Let’s talk about your bright kid and their goals. Schedule a free consultation with me, and the journey will begin.

wescarroll.com/start

It is my honor to help every one of my students develop, excel, and even transform.

