

Your Guide to Mathematics Competitions

Why Study for Mathematics Competitions?

There are a myriad of activities and subjects constantly vying for your attention, why should you devote time and energy to math competitions? The quick reason is 'for your academic future'. Many universities are looking beyond SAT scores for applicants to STEM programs. They want to know if you have taken the American Mathematics Competitions (AMC) or qualified for the American Invitational Mathematics Exam (AIME). But this is not the only reason you should pursue this level of math. There are 5 main reasons to enter math competitions:

- Develop critical thinking and problem solving skills
- Exposure to problems in the area of Discrete Math, such as Number Theory or Combinatorics, which have many applications in today's world
- Build confidence through the rigor of solving elegant problems
- Connect with a close community of thinkers
- And, most importantly, because it's fun!

Our students are testament to the effectiveness of math competition training. From a high rate of acceptance to top schools and receiving gold medals at the International Mathematics Olympiad (IMO) to inventions that help the world to winning scholarships at prestigious science fairs such as Intel, AwesomeMath provides the critical thinking and problem solving that leads to tomorrow's great innovators and thinkers.

Mathematics Competitions

- **Purple Comet/ Math Meet:** Online, international, team based contest for middle and high school students. Answers are integers. Purplecomet.org
- **USA Mathematical Talent Search (USAMTS):** This high school level test gives students one month to solve problems and there are 3 rounds to the competition. Each problem requires proof articulation and high scorers can qualify for AIME (see below). USAMTS.org
- **American Mathematics Competitions (AMC):** There are 3 different AMC tests: the AMC 8, AMC 10, and AMC 12, designed for 8th, 10th, and 12th graders, respectively. These exams are multiple choice and the AMC 10/12 high scorers are invited to compete in the American Invitational Mathematics Exam. Maa.org
- **American Invitational Mathematics Exam (AIME):** This test is for students who excel at the AMC 10/12 level. This 15 question, 3-hour exam requires that each answer be an integer number from 0 to 999. Maa.org
- **USA Junior Mathematics Olympiad/USA Mathematics Olympiad (USAJMO/USAMO):** These contests are for students who have excelled at both the AMC 10/12 and AIME. Selection to the USAMO is based on the USAMO index (AMC 12 Score + 10 * AIME Score). Selection to the USAJMO is based on the USAJMO index (AMC 10 Score + 10 * AIME Score). These contests require proof articulation. Maa.org
- **International Mathematics Olympiad (IMO):** High school students who excel at the USAMO are well on their way to be selected as one of 6 students to represent their country at the IMO. Maa.org
- **Putnam:** This competition is for undergraduate college students and is proof based. Maa.org

