

AMC Competition Course Introduction:

1. CourseObjective

This one-year course aims to help students prepare for the high school math competitions AMC and AIME. It also provides an opportunity for the students to enhance concepts and skills that were learned in regular school classes.

AMC and AIME competitions will be described in a later section.

2. PerspectiveStudents

The course targets high school students who are serious on participating in AMC 12 and hope to qualify and do well in AIME. Students are expected to actively participate in discussions and spend at least one and half hours every week on homework. Failure to do this would seriously limit their benefits from the course.

This course requires math knowledge at pre-calculus level, including algebra, geometry, trigonometry, and combinatorics. We may also reference to knowledge in calculus from time to time.

The classroom activities rely heavily on student participation. The coach guides and facilitates discussions instead of giving lectures most of the time. Therefore, only students with strong passion and motivation in math will benefit from this class.

3. AMC andAIME

AMC 12 (American Mathematics Contest 12) is a math competition open to all high school students. Most Howard County high schools sponsor AMC 12. Testing dates are usually in February. You should check with your high school math teacher or people in your school's math club.

The AMC 12 is a 25 question, 75 minute multiple choice examination in secondary school mathematics containing problems which can be understood and solved with pre-calculus concepts. Calculators are not allowed since 2008.

For more information about AMC 12, see <http://amc.maa.org/e-exams/e6-amc12/amc12.shtml>.

Students who score high in AMC 12 are qualified to AIME (American Invitational Mathematics Examination). Arrangements for AIME are made through high schools. AIME testing dates are usually in April.

The AIME is intended to provide further challenge and recognition, beyond that provided by the AMC 10 or AMC 12, to the many high school students in North America who have exceptional mathematical ability. The top scoring U. S. citizens and students legally residing in the United States and Canada (with qualifying scores, based on a weighted average) are invited to take the USAMO (United States of America Mathematical Olympiad).

The AIME is a 15 question, 3 hour examination in which each answer is an integer number from 0 to 999.

For more information on AIME, see here: <http://amc.maa.org/e-exams/e7-aime/aime.shtml>