

AMC 10/12 Problem Series

Course Instructors: Shreyas Shrivastava and Aaryan Chandna

Weekly Classes on Mondays and Wednesdays, 5-6 PM from 12/14-1/6(8 classes)

Description: In this course we will look at several challenging topics that appear frequently on the AMC 10/12. Students will gain a solid understanding on how to solve difficult AMC 10/12 problems coming from topics such as Algebra, Geometry, Combinatorics, and Number Theory. This class is intended for students aiming to qualify for AIME or to score high on the AMC tests.

Weekly Agenda:

12/14: Circles, Tangency, PoP (Aaryan)

- Will be solving problems involving circles, tangency, and the use of Power of a Point(PoP), a technique that involves using the relationships between lines intersecting circles in order to solve problems.

12/16: Series(Shreyas)

- Will be solving problems revolving around the idea of series. Multiple problems using the different techniques of series will be provided.

12/21: Recursion(Aaryan)

- Will be solving problems involving the technique of recursion, defining terms of a sequence in terms of previous values in order to solve combinatorial problems.

12/23: Modular Arithmetic(Shreyas)

- Will be solving problems that use the technique of modular arithmetic, which involves using remainders in division in order to solve number theory problems.

12/28: 3D Geometry(Aaryan)

- Will be solving problems involving using different tools and techniques on 3D geometry, including various polyhedra and solids.

12/30: Polynomials(Shreyas)

- Will be solving problems that require the different skills in polynomials and discuss the theorems that can be used to make solving polynomial problems easier.

1/4: Probability(Aaryan)

- Will be solving problems involving the calculation of probability in various different scenarios.

1/6: Primes and Divisibility(Shreyas)

- Will be solving problems that require the knowledge of divisibility and primes. A variety of techniques to approach these problems will also be discussed.