

## 2026 AMC10 Preparation: Basics

**Instructor:** Dr. Shi WeChat: shike\_1983. Email: info@davincimath.com

**Class time:** June 26 - July 31, 15 lectures 6:00 - 7:30pm EST (Meeting dates are listed below).

**General Information:** This summer camp is designed for students who completed intro courses (Algebra, Geometry, Number Theory and Counting) recently. We will review and enrich various tools in these subjects to build a solid foundation to participate in the AMC 10 competitions.

**Prerequisite courses:** AoPS Introduction to Algebra I, Intro to Geometry, Intro to Number theory and Counting.

**Difficulty level:** We are targeting basic to medium AMC 10 problems (Question 1-17) in this camp. Students scored around 15 or above in AMC 8 should receive most benefit from this camp.

June 23	Basic Algebra Review
June 25	Ratio and Speed/Time
June 27	Factoring Tricks
June 30	Sequences and Series
July 2	Prime Factorization, GCD/LCM
July 7	Modulus Arithmetic, Base Numbers
July 9	Pythagorean Theorem
July 11	Similar Triangles and Ratio with area
July 14	Tangent lines and Incircles
July 16	3D shapes
July 18	Coordinates Geometry
July 21	Permutation, Combination
July 23	Alphabetical ordering, Casework
July 25	Stars and Bars, Balls and Bins
July 28	Counting Shapes and factors

Table 1: Course Schedule

### Format of the Camp:

- A detailed study plan is provided for the Spring 2026. Students are highly recommended to follow the study plan to review topics from Intro courses before the camp starts.

- Each lecture will focus on key concepts and tools around one or two topics (listed below) with examples.
- Each lecture comes with a set of assignment problems to give students sufficient practice on the tools. All assignment problems have solutions recordings with detailed explanation.
- Students are encouraged to submit their assignments, Dr Shi will briefly grade their work with necessary comments.
- All lectures are recorded and students have access to the entire course until the end of the year.
- In the case of time conflict, self-paced option is available with 20 % discount.

**Biosketch and track record in Math competition education:**

- Dr Shi is an associate professor at a research university (R1) in US. Dr. Shi's passion for mathematics started early in life, when he began participating in math competitions at the age of 10. He was recruited to receive specialized training in mathematics at a top high school in China that has produced nearly 20 international gold and silver medalists in math competitions. His outstanding performance in these competitions earned him numerous awards, including a Silver Medal in the Chinese Mathematics Olympiad (CMO), which is considered analogous to the USAMO, and a Silver Medal in the Bulgarian International Mathematics Olympiad. Dr. Shi was also invited to attend the prestigious Chinese Mathematical Olympiad Program (MOP). Dr. Shi's exceptional talent in mathematics earned him admission waiver to Peking University, a rare achievement that further demonstrates his outstanding math abilities.
- Thanks to his expertise and passion in this field, his AMC 8, AMC 10, and AIME courses are widely recognized and highly regarded by both students and parents. In the 2025-26 cycle, more than 20 students from our AMC 10 camps (Basic and Advanced, with a total of 40+ students) advanced to AIME. Additionally, several of his current students achieved Distinguished Honor Roll (DHR) last year.
- With his deep passion for mathematics and extensive experience in math competitions, Dr. Shi has developed a state-of-the-art training curriculum for AIME to USAJMO preparation. Over the past three years, this curriculum has proven to be both effective and efficient, with several students from our program qualifying for **the USAJMO and National Mathcounts**. Notably, a MOPer and a Team USA member of the EGMO were coached by Dr. Shi, benefiting from his expertise in building a strong foundation for advanced math competition.