

AMC 8/Chapter Mathcounts Preparation Course (Virtually via Zoom)

Instructor: Dr. Ke Shi

Time and location: Oct. 11, 2026 – Dec. 20, 2026; Sundays 2:00-3:30pm EST, 12 Lectures.

Location: Virtually via Zoom

Course schedule (tentative)

Lesson	Date	Topic
1	10/11/26	Arithmetic rules
2	10/18/26	Number Theory Review
3	10/25/26	Sequences and Series
4	11/1/26	Counting tools Review
5	11/8/26	Probability Counting
6	11/15/26	Equations and Word Problems
7	11/22/26	Ratio and Rate Problems
8	12/6/26	Area and Perimeter
9	12/13/26	Ratios in Triangles
10	12/20/26	Logic and Statistics
11	1/10/27	Mock Test 1 Review
12	1/17/27	Mock Test 2 Review

Targeted Level:

The course is designed for students who wish to excel in the AMC8 competition. It aims to discuss essential concepts required for the AMC8, review key topics for the exam, and foster problem-solving skills.

General Information

Students need to be familiar with basic concepts and tools needed for AMC 8. Prerequisites include: AoPS Prealgebra; AoPS Intro to Algebra 1(Chapter 1-10); Intro to Number Theory; Intro to Counting (Chapter 1-8); Intro to Geometry Chapter 1-5 (Highly recommended).

Dr. Shi Background:

Dr. Shi's began participating in math competitions at the age of 10. He was recruited to receive specialized training 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. He earned his Bachelor's degree in Mathematics from Peking

University in China and PhD in Applied Mathematics in USA. Dr. Shi is currently an Associate Professor in Mathematics at a top-tier (R1) research university in the United States.

Dr. Shi's unique math program combines his own experience in numerous high-caliber competitions, the rigorous training from Peking University and the University of Minnesota, and years of teaching experience as a math professor in the United States. Dr. Shi's teaching approach is distinctive in its emphasis on integrating various topics coherently, which simplifies complex concepts and makes them easier to grasp. Dr. Shi is especially sharp at identifying the "key" to solving difficult problems and helping students see through complex problems with ease. He often connects the keys and offers students a bigger picture of the underlying connection of these concepts. This rare quality in math instructions can lead to significant improvement over time, as students themselves gain the ability to solve difficult problems with ease.