

Lesson Plans

AMC 8/10 Fall 2026

Grades: 6-8

Dates: October 2 - November 20

Time: 6-7 PM CST

Week 1 – Basic Foundations

1. Icebreaker - name, age, where you're from
2. Join google classroom
3. Go over lesson plans/schedule
4. All about the AMC 8
5. Do a gimkit to see where everyone is
6. Go over commonly missed questions on gimkit

Week 2 - Algebra

1. Review HW
2. Warm up questions
3. Basic algebra and systems of equations
 - a. Factoring
 - b. Word problems
4. BREAK
5. More complex factoring + systems of equations
6. Apply to amc questions
7. Mental math strategies

Week 3 – Algebra, Number Theory

1. Review homework
2. Rate vs time
3. Checking solutions
4. Creating equations from a problem
5. BREAK
 - a. Gimkit, zetamac, or gartic phone math version
6. Prime factorization
7. Lcm / gcd

Week 4 – Number Theory

1. Review homework
2. Warm up questions
3. Divisibility tricks

4. Number of factors
5. Remainders

Week 5 - Probability

1. Permutations vs combinations
2. Factorial
 - a. How to use factorial
3. 'Choose'
4. Counting with restrictions
5. BREAK
 - a. Gimkit, zetamac, or gartic phone math version
6. Stars and bars
 - a. Video

Week 6 – Probability, Geometry

1. Review homework
2. Warm up questions
3. Pigeonhole principle
4. Application questions
5. BREAK
6. Similar triangles
 - a. Lots of application
7. Pythagorean theorem

Week 7 - Geometry

1. Review homework
2. Warm up questions
3. Circle theorems
 - a. Power of a point
4. Relationships between triangles and circles
5. Coordinate geometry
6. Volume
7. Tons of practice
8. Review previous material

Week 8 - Mock Test

1. Mock amc 8
2. Review commonly missed questions

Curriculum

Algebra

- Factoring
- Systems of Equations
- Distance, Rate, and Time
- Creating Equations from a Word Problem

Number Theory

- Prime Factorization
- LCM and GCD
- Divisibility Rules (up to 12)
- Number of Factors
- Modular Arithmetic (basic)

Counting/Probability

- Factorial
- 'Choose'
- Stars and Bars
- Pigeonhole Principle

Geometry

- Similar Triangles
- Pythagorean Theorem and Properties of Right Triangles
- Circle Theorems e.g. Power of a Point
- Volume
- Coordinate Geometry