



# Cheenta

Passion for Mathematical Science

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## AMC - Book List

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*If you are starting with the course, then you may buy the books in the Miscellaneous Section only. Later, your faculty will prescribe other books in class.*

### Miscellaneous

- Mathematics can be Fun by Yakov Perelman
- Mathematical Circles Russian Experience by Fomin
- Algebra can be Fun by Yakov Perelman
- Excursion in Mathematics
- Challenges and Thrills of Pre-College Mathematics

### Other Resources

1. Class Notes
2. Problem Lists (provided at the end of class)
3. One - problem - a - day Homework System
4. Monthly evaluation test
5. AMC past papers
6. PRMO past papers
7. SMO past papers



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# AMC - Curriculum

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AMC Curriculum consists of 4 modules, 42 competencies and 2 levels.

Level 1: AMC 8

Level 2: AMC 10, 12

It usually takes 1 year to complete each level of this curriculum.

*Many students take another year to review all the modules (with a fresh set of problems).*

## Module 1: Number Theory

1. Arithmetic of Remainders
2. Prime and Composite number
3. Fundamental Theorem of Arithmetic
4. GCD and LCM
5. Test of divisibility by 3, 7, 9, 11
6. Number of Divisors
7. Representation of positive integer
8. Largest or Smallest Value
9. Palindromes
10. Digit Problems

## Module 2: Combinatorics

1. Basic Counting Principles
2. Permutation formula
3. Combination formula
4. Dots and bars trick = Number of solutions



5. Pigeon Hole Principle
6. Elementary Probability
7. Principle of Inclusion and Exclusion and Venn Diagram
8. Recurrence Relation

### Module 3: Geometry

1. Symmetry of Figures
2. Straight Lines and Angles
3. Triangles and Mensuration
4. Polygons and Mensuration
5. Circle and Mensuration
6. 3D Geometry and Mensuration
7. Congruency
8. Similarity
9. Pythagoras Theorem
10. Coordinate Geometry
11. Circles and Tangents

### Module 4: Algebra, Statistics

1. Ratio, Proportion and Percentage
2. Fraction Arithmetic
3. Sequences and Series
4. Time and distance
5. Basic Arithmetic
6. Elementary Inequality
7. Basic Statistics and Data Representation
8. Basic Algebra
9. Algebra Word Problems
10. Quadratic Equations
11. Telescopic Calculations
12. Powers of Numbers
13. Linear Equation