Cheenta
Math Olympiad Program

Level 8

cheenta.com

since 2010

Passion for Mathematics

This program is useful for IOQM, AIME, SMO, BMO, USAJMO, USAMO and UKMT

Success Stories since 2010

Aryan Kalia

Top 1% globally in American Math Competition,

Attended Math Olympiad Program and School Research Program at cheenta

Attended Student internship program at cheenta

Going to Harvard University in 2022

Sambuddha Majumdar

Scotland Math Olympiad Awardee

Attended Math Olympiad Program at cheenta

Attended Student internship program at cheenta

University of Edinburgh

Anushka Aggarwal

Youngest Indian National Math Olympiad awardee, Europian Girls Math Olympiad awardee

Attended Math Olympiad Program at cheenta

Attended Student internship program at cheenta

Going to MIT (Massachusetts Institute of Technology) in 2022

Akshaj Kadaveru

American Math Competition, AIME and USAJMO awardee

Attended Math Olympiad Program at cheenta

MIT (Massachusetts Institute of Technology)

Curriculum
driven by problem solving

48 weeks program, 8 modules

Number Theory MO - θ
6 weeks

- Divisibility - Week 1
- Divisibility - Week 2
- Divisibility - Week 3
- Divisibility - Week 4
- Power of Integers
- Floor function and Fractional part

Number Theory MO - δ
6 weeks

- Digits of Numbers
- Basic Principles in Number Theory
- Arithmetic Functions -Week 1

- More on Divisibility - FLT, Euler's Theorem
- Diophantine Equations
- Special Problems in Number Theory

Combinatorics MO - θ
6 weeks

- Injection and Bijection Principle
- Arrangements and Selections with Repetitions
- Distribution Problems
- Chu - Shih - Chieh's Identity
- Shortest Route on a rectangular grid
- Some Properties of Binomial Theorem

Combinatorics MO - δ
6 weeks

- Pigeon Hole Principle
- Ramsay type problems
- Inclusion and Exclusion Principle
- Surjective mappings and Stirling Numbers of the second kind
- Derangements
- Integer Solutions and Shortest Routes

Curriculum **continues**

Geometry MO - θ
6 weeks

- Lines and Angles
- Properties of Parallel Lines
- Congruency of Triangles
- Similarity of Triangles
- Concurrence and Collinearity
- Points in Triangles

Geometry MO - δ
6 weeks

- Circles
- Tangents
- Cyclic Quadrilaterals
- Advanced Properties of Triangles in Geometry
- Constructions
- Geometric Configurations

Algebra MO - θ
6 weeks

- Polynomials - Division with Remainder, Roots of unity
- Polynomials - Reciprocal equation, Symmetric Polynomial
- Harder Polynomials
- Complex Numbers in Algebraic Form
- Complex Numbers in Trigonometric Form
- Complex Numbers and Geometry

Algebra MO - δ
6 weeks

- Inequalities - Week 1
- Inequalities - Week 2
- Inequalities - Week 3
- Inequalities - Week 4
- Functional Equation - Week 1
- Functional Equation I - Week 2

Taught by Olympians **and Researchers from leading universities**

Since 2010 Cheenta has evolved into a Gurukul. Our students have attended leading universities in India such as Indian Statistical Institute, Chennai Mathematical Institute, TIFR, IITs and universities abroad such as Harvard, MIT, Oxford, Edinburgh to name a few. Some of them returned as teachers for the next generation of learners. And the pursuit of excellence continues.

Cheenta Team has 40+ members. Here are some of the leaders.

Srijit Mukherjee
BStat and MStat from Indian Statistical Institute (India)
Director at Cheenta

Dr. Ashani Dasgupta
PhD from University of Wisconsin-Milwaukee (USA)
Founder - Director at Cheenta

Dr. Sankhadip Chakraborty
PhD from IMPA, BSc. Math from Chennai Mathematical Institute (India),
Director at Cheenta

Dr. Anirban Majumdar
PhD from ENS Paris-Saclay, France on Theoretical Computer Science, B.Sc.-M.Sc. from Chennai Mathematical Institute

Swarnabja Bhowmick
B.Tech from Calcutta University on Computer Science with multiple IEEE publications on Artificial Intelligence and Machine Learning

AR Sricharan
BSc. Math, M.Sc. Computer Science from Chennai Mathematical Institute (India). Pursuing PhD in University of Vienna

Contest Calendar
for beautiful problem solving

Cheenta students think of Math Olympiads as **milestones**. The end goal of the program is to fall in love with mathematics and develop great problem solving skills. Milestones help us to stay in track.

Not all math contests are equal. Here is a list of contests that are suitable and most effective at this level of learning.

Our success centre will keep you updated about registration deadlines of these contests and other opportunities

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AMC 10, AMC 12, AIME

NMTC Senior

Regional Math Olympiad (RMO), INMO

USAMO, USAJMO

UKMT (for UK)

SMO (for Singapore)

Refund policy

since trust is the cornerstoner of education

Within 1 week of admission, if you wish to withdraw from the course due to dissatisfaction with our offerings, we will start your **[full refund - service fee of ₹1000 (India) or US$20 (Rest of the World) - Transaction fee if any]** process provided **all four of these activities** are done on your part:

a. Attended live full length lecture session for full time (not video recording)
b. Attempted the assignments during that period
c. Attended at least one 1-on-1 session
d. Used the Cheenta Support forum for doubts
e. The Refund reason should be associated with the coursework, any personal reason won't be counted & hence the refund request will be nullified.

The refund process is usually completed within 8 weeks of the refund request. We will refund the [full refund - service fee of ₹1000 (India) or US$20 (Rest of the World) - Transaction fee if any], if you begin the refund process within 1 week (see the first point).

If a refund request is not placed within the first week, or if such a request is placed without completing steps a, b, c d, or e or if the refund request is made due to personal reasons, then we won't be able to process any refund.

Thank You

Passion for Mathematical Science

Let us know if you need more information.

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