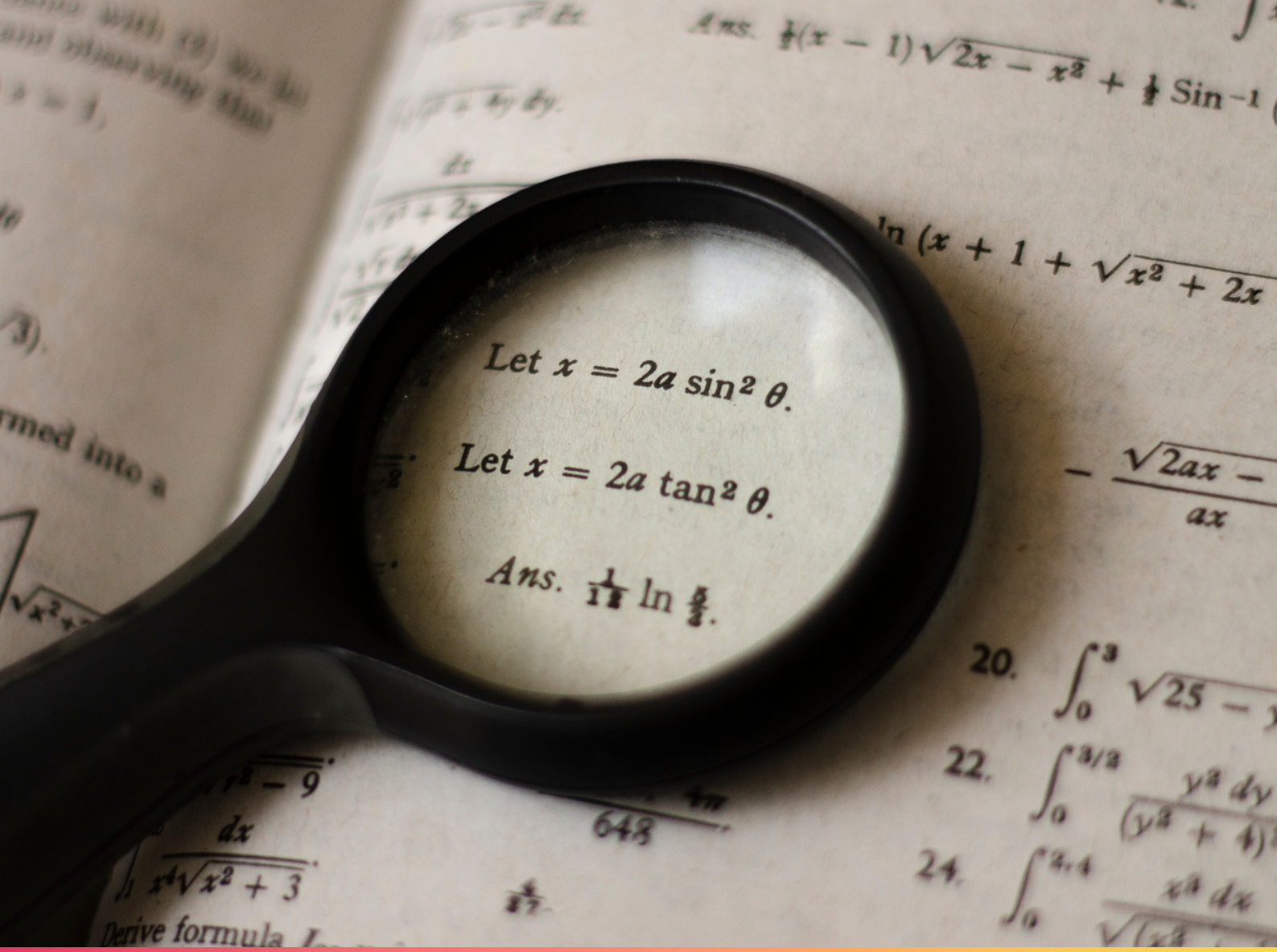


Cheenta
Math Olympiad Program

Level 6

cheenta.com

since 2010

Passion for Mathematics

This program is useful for AMC 10, **IOQM**, University of Waterloo Contests, UKMT, SMO

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)

Understand the 2-fold learning path that makes our students successful

PATH A - FAST, PROBLEM-DRIVEN

In this path, students attend 5-problem-solving sessions every week. The entire curriculum is covered using problems in 12 weeks.

Then the cycles repeats again with a different set of problems. Usually over a year students face about 1000 great problems in these sessions.

If you have limited time for preparation, this path might be helpful for you. However make sure to also attend the slow and deep modules to achieve a depth in understanding.

Nothing worth doing can be done in a hurry.

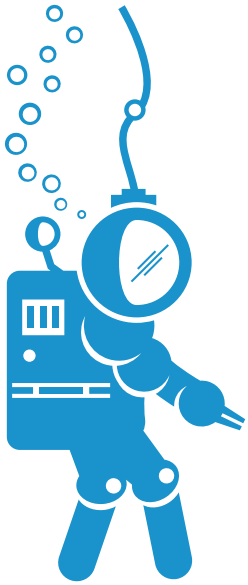
PATH B - SLOW AND DEEP

In this path students learn all the concepts over 12 months. The curriculum is spread over 8 modules.

There are three live classes every week: concept + homework + doubt-clearing.

This slow and deep process has homework problems, module wise tests and doubt clearing.

This also includes 1-on-1 monthly review class. If a student is lacking in certain areas, then they are assigned fall back sessions.



Curriculum Path A
fast and problem centric

4 cycles - each cycle is 12 weeks

Number Theory IOQM - θ
Week 1

- Theory of Congruence - Week 1
- Theory of Congruence - Week 2
- Decimal Representation
- Divisibility Test
- Arithmetic Functions

Number Theory IOQM - δ
Week 2

- Diophantine Equation - Week 1
- Diophantine Equation - Week 2
- Fermat's Little Theorem
- Problems on Integers
- Arithmetic Functions

Combinatorics IOQM
Week 3

- Binomial Theorem, Pascal's Identity
- Combinations with repetitions
- Bijection Principle, Balls and Walls
- Pigeon Hole Principle
- Mathematical Games
- Combinatorial Geometry

Trigonometry and Coordinates IOQM
Week 4, 5

- Trigonometry Ratios
- Associated Angles and Graphs
- Cartesian and Polar coordinates
- Coordinates and Straight Lines
- Coordinates and Circles

Curriculum Path A **continues**

Geometry IOQM - θ
Week 6, 7

- Triangular Inequality
- Advanced notion of angle
- Congruence relations in Triangles
- Problems on Parallel Lines
- Properties of Triangles in Geometry
- Similar Triangles

Geometry IOQM - δ
Week 8, 9

- Rigid Motions of Plane
- Problems on Area
- Geometric Inequalities
- Miscellaneous problems
- Circles
- Tangents
- Cyclic Quadrilaterals

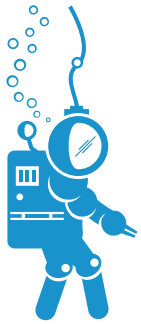
Algebra IOQM - θ
Week 10

- Induction - Day 1
- Induction - Day 2
- Inequalities - Day 1
- Inequalities - Day 2
- Inequalities - Day 3

Algebra IOQM - δ
Week 11, 12

- Polynomials - Week 1
- Polynomials - Week 2
- Polynomials - Week 1
- Polynomials - Week 2
- System of Linear Equations
- Finite Series - Week 1
- Finite Series - Week 2

Curriculum Path B
slow and deep



8 slow and deep modules

Number Theory IOQM - θ
5 weeks

- Theory of Congruence - Week 1
- Theory of Congruence - Week 2
- Decimal Representation
- Divisibility Test
- Arithmetic Functions

Number Theory IOQM - δ
7 weeks

- Diophantine Equation - Week 1
- Diophantine Equation - Week 2
- Fermat's Little Theorem
- Problems on Integers
- Arithmetic Functions

Combinatorics IOQM
6 weeks

- Binomial Theorem, Pascal's Identity
- Combinations with repetitions
- Bijection Principle, Balls and Walls
- Pigeon Hole Principle
- Mathematical Games
- Combinatorial Geometry

Trigonometry and Coordinates IOQM
5 weeks

- Trigonometry Ratios
- Associated Angles and Graphs
- Cartesian and Polar coordinates
- Coordinates and Straight Lines
- Coordinates and Circles

Curriculum Path B **continues**

Geometry IOQM - θ
6 weeks

- Triangular Inequality
- Advanced notion of angle
- Congruence relations in Triangles
- Problems on Parallel Lines
- Properties of Triangles in Geometry
- Similar Triangles

Geometry IOQM - δ
7 weeks

- Rigid Motions of Plane
- Problems on Area
- Geometric Inequalities
- Miscellaneous problems
- Circles
- Tangents
- Cyclic Quadrilaterals

Algebra IOQM - θ
5 weeks

- Induction - Day 1
- Induction - Day 2
- Inequalities - Day 1
- Inequalities - Day 2
- Inequalities - Day 3

Algebra IOQM - δ
7 weeks

- Polynomials - Week 1
- Polynomials - Week 2
- Polynomials - Week 1
- Polynomials - Week 2
- System of Linear Equations
- Finite Series - Week 1
- Finite Series - 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

---

American Math Competition 10 [AMC 10]

NMTC Subjunior and Junior

IOQM (First Level of Math Olympiads in India)

University of Waterloo Contests (for Canada)

UKMT (for UK)

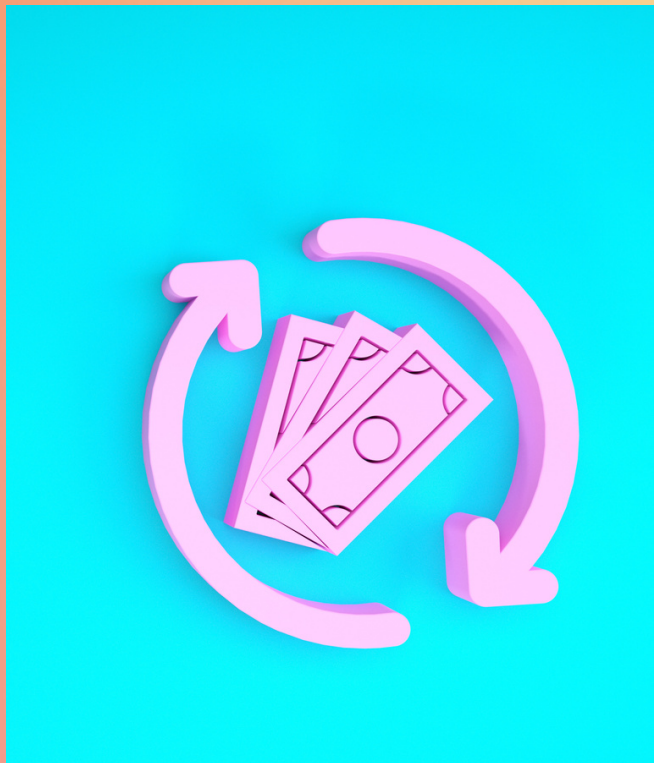
SMO (for Singapore)

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.

EMail

support@cheenta.com

Phone

+91 760 501 9990 / 91

+1 414 220 0191

Address

2nd Floor, 22, Lake Place Rd, Kolkata, West Bengal 700029, India

Website

www.cheenta.com