

# IOQM Year 1 - Level 5 (Advanced)

Cheenta Academy for  
Olympiad & Research

[cheenta.com](http://cheenta.com)

Since 2010

Passion for Mathematical Science & Research

Program for IOQM [Year 1]. Advanced level of  
Level 5

# Success Stories Since 2010

## IOQM Awardee 2024

- Aditya Punatar
- Saket Anand Gudadhe
- Vihaan Shah
- Kiaan Sawant
- Ritam Das
- Ambar Agarwal
- Saisha Ganjiwale
- Adhiraj Singh Anand
- Divij Gupta
- Soham Bharati
- Shamik Saraswati
- Krishiv Mohan
- Souradip Das
- Vismayah A. Mathew
- Raghav Pai
- Jayaditya Gupta
- Avigyan Chakraborty
- Alivia Roy
- Advitya R
- Nikhil Ganesh Chaudhury
- S. Ashwin
- Reyaansh Agrawal
- Ayaan Kalra
- Arnav Tayal
- Neel Avinash

[Click Here to know the Strategy for IOQM](#)



**Outstanding Performer in**  
IOQM, AMC, NMTC, LIMIT, & various other examinations  
~ Aryan Prakash

[Click Here](#)

[Watch how Aryan Prakash cracked IOQM and other Math Olympiad examinations](#)

# What is Included in the Program?



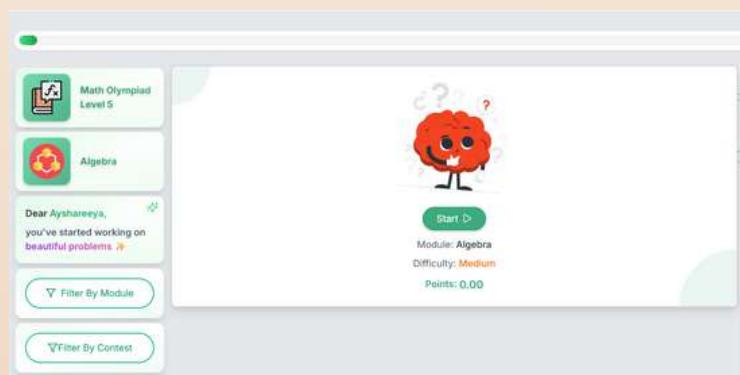
## 6 Live Interactive Classes... Every Week

- Concept Class
- Problem Solving Workshop 1
- Problem Solving Workshop 2
- Problem Solving Workshop 3
- Problem Solving Workshop 4
- Problem Solving Workshop 5



## Software Access

- Class Notes
- Class Recordings
- Practice Problems Daily
- Weekly Assignments
- Tests
- Mock Tests
- Student Progress Report



# Curriculum

## Module 1



### Geometry I9 0

7 Lessons



Triangular Inequality



Rigid Motion



Angles



Area



Angles in Polygons, Quadrilaterals



More on Quadrilaterals



Review and Evaluation

# Module 2



## Geometry 19 δ

7 Lessons

 Line and a Circle

 Two Circles

 Angles in a Circle

 Solid Shapes and Volumes

 Similarity of Triangles

 Introduction to Coordinate Geometry

 Review and Evaluation

# Module 3



## Combinatorics I 9 θ

6 Lessons



Combinations



Pascal's Triangle



Balls and Walls



Invariants, Remainders and Invariants



Colorings



Review and Evaluation

# Module 4



## Combinatorics I 9 8

7 Lessons



Isomorphism and Trees



Euler's Theorem



Oriented Graphs



Parity



Pigeon Hole Principle



Mathematical Games



Review and Evaluation

# Module 5



## Algebra I9 θ

5 Lessons



Algebraic Identities, and Binomial Theorem



Polynomials, Remainders



Vieta's Theorem



Progression



Review and Evaluation

# Module 6



## Algebra I9 8

6 Lessons



Quadratic Equation and its Graphs



Extremas : Maximum and Minimum



AM-GM Inequality



Symmetric Equations



Inequalities, Wavy Curve Method



Review and Evaluation

# Module 7



## Number Theory I9

6 Lessons



Number Bases



Divisibility Tests



Mathematical Induction, Concept of GCD



Division Algorithm, Euclidean Algorithm,  
Congruence



Diophantine Equations



Review and Evaluation

# Module 8



## Trigonometry I9

4 Lessons



Introduction to Trigonometry : Trigonometric Ratios (0 to 90)



Trigonometric Identities



Trigonometric Ratios of Sum of Two Angles, and Multiples Angles



Sub-multiple angles, Sine and Cosine Rule

# Taught by Olympians and Researchers from leading universities

Since 2010 Cheenta has evolved into a Gurukul. Our students are in 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.

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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



**Sanu Shaw**  
B.Sc. in Mathematics Honours  
from the University of  
Calcutta  
Secured an All India Rank of  
15 in the ISI Entrance Exam  
(2023)



**Raghunath J.V.**  
B.Tech and M.Tech from IIT Chennai.  
Math Olympiad Coach at Cheenta.  
INMO and IMO Trainer.



**Deepan Dutta**  
Bachelor of Science from the  
University of Calcutta

# Cheenta Academy for Olympiad & Research

Outstanding Mathematical Scinece Programs. Since 2010.

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