



# Cheenta Math Olympiad Program

Level 1



**cheenta.com**

since 2010

**Passion for Mathematics**

This program is useful for Math Kangaroo,  
Australian Math Competition, MOEMS

# 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, European 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, 7 modules**



## **Spatial Patterns I-θ**

7 weeks

- Polygons (2D)
- Making polygons in GeoGebra
- Knowing a Platonic solid (3D)
- Making a cube in GeoGebra, drawing points, line segments
- Paper Model of a Cube
- Making tetrahedrons and some other 3D figures in GeoGebra
- Review and Evaluation



## **Spatial Patterns I-δ**

7 weeks

- Basic Idea about edges, Vertices in Different Shapes in GeoGebra
- Knowing angles with the help of Rotation, GeoGebra
- Missing shapes in a pattern list
- Coloring paper cubes and tetrahedron, counting edges, vertices and faces
- Lines of Symmetry in Different Shapes
- Reflection, demonstration in GeoGebra
- Review and Evaluation



## **Numerical Pattern I - θ**

7 weeks

- Number sequences, guessing the next number I
- Number sequences, guessing the next number II
- Counting paths in grids
- Sieve of Eratosthenes I
- Sieve of Eratosthenes II
- Counting paths in platonic solids using GeoGebra
- Review and Evaluation

# Curriculum continues



## Numerical Pattern I - $\delta$

7 weeks

- Properties of Number line
- Representation of Fractions in Number line
- Folding papers to understand fractions -  $1/2, 1/4$
- Breaking the numbers using factors
- Multiplication using Tree Diagram
- Division using Tree Diagram
- Review and Evaluation



## Mathematical Imagination I

6 weeks

- Compass - pencil construction of circle
- String - pencil construction of circle
- Circle in GeoGebra
- Measuring chords using GeoGebra
- Concept of angle
- Review and Evaluation



## Arithmetry I - $\theta$

7 weeks

- Cryptarithmic
- Caesar Cipher
- Substitution Cipher
- Addition using geometry
- Subtraction using geometry
- Multiplication using geometry
- Review and Evaluation



## Arithmetry I - $\delta$

7 weeks

- Geometry of fraction
- Ratio of numbers
- Understanding fractions as division
- Understanding fractions as Comparison
- Concept of Odd and Even numbers
- Parity
- Review and Evaluation

# 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



**Namrata Dutta**  
BSc. in Physics and MSc in  
Electronics from University of  
Calcutta.

# 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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**Math Kangaroo**



**Australian Math  
Competition**



**MOEMS**



# 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

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## Passion for Mathematical Science

Let us know if you need more information.



### Email

[support@cheenta.com](mailto:support@cheenta.com)

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### Phone



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