

# ROOTS NATIONAL ONLINE MATH CONTEST & ROOTS CAMP

## REPORT 2024



NATIONAL ONLINE  
MATH CONTEST

PRAVAHA




STEMS  
Scholastic Test of Excellence in Mathematical Sciences

*Inspiring to Innovate*



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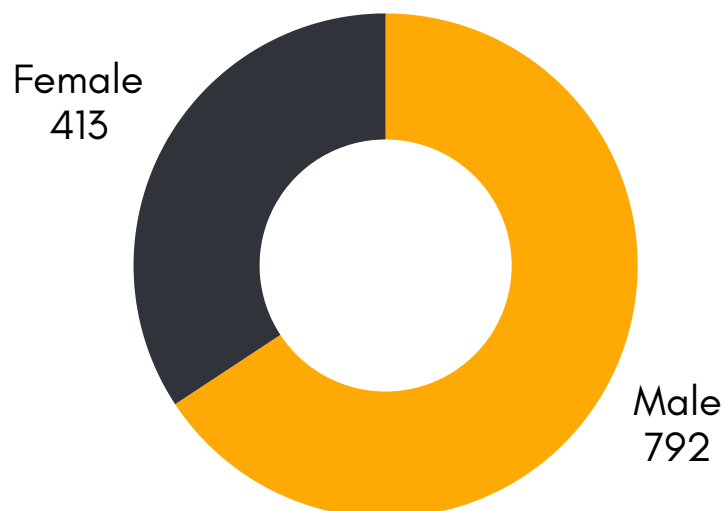
# Key Highlights

of ROOTS National Online Contest and ROOTS Camp 2024

## Group-wise participation

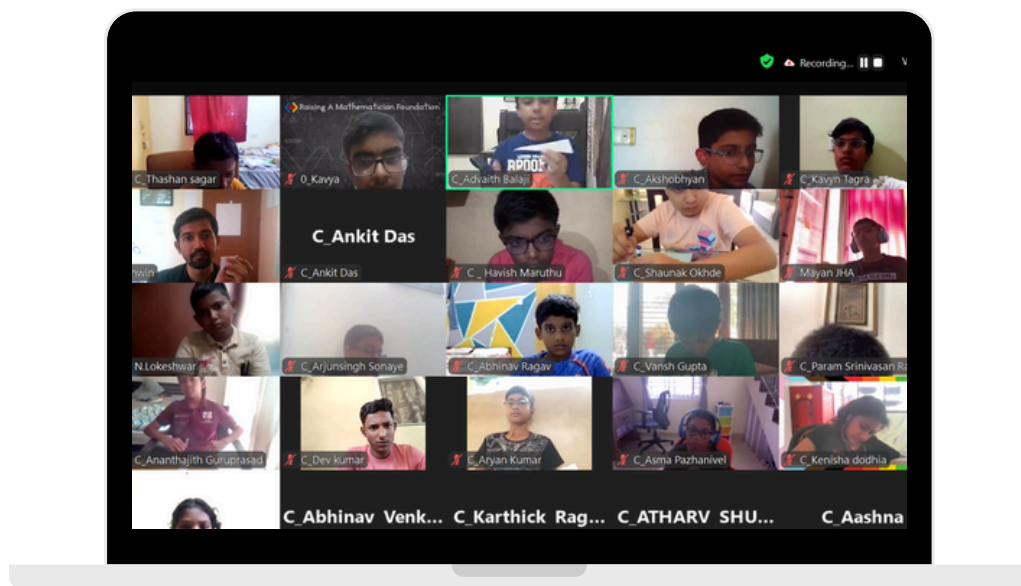


## Gender Bifurcation



# Objective

To assess strategic thinking and problem-solving skills that students in grades 5 to 8 possess, required when facing mathematical challenges that involve logic and reasoning.



## Student Participation Details:

**1417 students** across the country applied for the online contest.

# Rewards and Recognition



Medals and merit certificates were given to top three positions in each category.

Camp completion certificates were awarded to the participants who got selected for the camp and successfully completed it.



Participation Certificates were awarded to all the students who participated in the contest.

# TOP 3 in contest

## Cube ROOTS

Name	School Name	City/Town	Rank
Ashwath Arunachalam	PSBB	Chennai	1
Reyaansh Venkat	DSB International School	Mumbai	2
Rudra Agarwal	Hiranandani Foundation School	Thane	2

## Square ROOTS

Name	School Name	City/Town	Rank
Pranjal Agrawal	Allen Kota School	Vadodra	1
Siddharth Laxmisha	The Study L'Ecole Internationale	Pondicherry	2
Arohan Dasgupta	Camberwell Grammar School	Melbourne	3
Kanak Kiran Rade	Euroschool	Mumbai	3

# TOP 15 Students from the camp

## (In both groups)

Name	School Name	Batch	City/Town
Abhinav Ragav	Padma Seshadri Bala Bhavan K.K.Nagar	Cube Roots	Chennai
Abhinav Venkatesh	P S Senior Secondary School, Mylapore	Cube Roots	Chennai
Advaith Balaji	D.A.V. Boys Senior Secondary School Gopalapuram	Cube Roots	Chennai
Atharv Shukla	Lp Savani Academy	Cube Roots	Surat
Kavyn Tagra	The Shriram Millennium School Faridabad	Cube Roots	Faridabad
Kenisha Bipin Dodhia	D.G. Khetan International School	Cube Roots	Mumbai
Param S Ramamurthy	Vruksha Montessori School (Abhiramapuram)	Cube Roots	Chennai
Ryan Bose	Basil Woods International School Bangalore	Cube Roots	Bangalore
Thashan Sagar	Dav School Pallikaranai	Cube Roots	Chennai
Akshatha Prsasanna	Dav Girls Senior Secondary School Gopalapuram	Square Roots	Chennai
Arohan Dasgupta	Camberwell Grammar School	Square Roots	Melbourne
Daksh Jeswani	Nalanda Public School	Square Roots	Thane
Maya Gala Malde	Neev Academy	Square Roots	Bangalore
Samyak Sharma	Obero International School	Square Roots	Mumbai
Vijay Venkatesh	P. S. Senior Secondary School	Square Roots	Chennai

# Selection and Scholarships

The top 60 students from both the groups, i.e., Cube ROOTS and Square ROOTS, were selected to take part in a 4-day Online Camp held from November 7 to 10, 2024. During this camp, they were introduced to various facets of mathematics and had the chance to engage with accomplished mentors in the field.

15 selected students from the camp were given a merit scholarship worth INR 10,000 for highly sought-after Math programs - Epsilon India and Math Olympiad Training Programs (MOTP).

# Contest Structure and Topics

**ROOTS Online National Math Contest was held on September 22, 2024.**

**The Contest was divided into two groups:**

- Cube ROOTS group: Grade 5 and 6
- Square ROOTS group: Grade 7 and 8

Cube ROOTS group was allotted a time span of 1.5 hours to attempt 20 questions, while the Square ROOTS group had a 2 hour time frame to complete 30 questions.

**Topics covered in the ROOTS 2024 Camp:**

The various topics covered during the camp were:

- Centers of triangle
- Art of paper folding
- Banks and their Free Lunches
- Geometry
- A talk on Cryptography
- Role of Probability in Market Making
- Wallpaper group and Escher's paintings
- Mathematical Exploration via Wiring Diagrams
- Probability
- Games
- Archimedean solids
- Joy of making and breaking toys
- Algorithmic Game Theory
- Thinking Mathematically
- A layman's introduction to algorithmic thinking

# Speakers Line Up

## Eminent Faculty



**Ashwin Guha**

Math Educator and Author. PhD in Computer Science from Indian Institute of Science, Bengaluru. He took sessions on center of triangles and archimedean solids.



**Siddhant Shah**

Bachelor of Science (Hons) in Mathematics and Computer Science from Chennai Mathematical Institute. He discussed the role of probability in market making and banks and their free lunches.

## Neal Apte Pineda



B.Sc. in Mathematics from Azim Premji University. He took an interactive session on Art of paper folding.

## Krishna Menon



He is a PhD from Chennai Mathematical Institute. He took a very interactive session on mathematical exploration via wiring diagrams.

## Saee Patil



She is a Math and theoretical science enthusiast. She has won medals for India in European Girls Math Olympiad and is an RAM alumni as well as faculty for RAM' Informatics Olympiad Training Program. She took sessions on games and geometry.



**Kavita Deshpande**

Freelancer and Visiting faculty at Chennai Mathematical Institute, introduced Wallpaper group and Escher's paintings and Cryptography.



**Aniruddhan Ganesaraman**

Ph.D. student in the Department of Statistics and Operations Research at The University of North Carolina, took a session on probability.



**R Hariharan**

Asst. Prof. of Managerial Accounting at the Frankfurt School of Finance and Management, a PhD in Accounting, Hariharan initiated a session on a layman's introduction to algorithmic thinking.



**Jay Thakkar**

Post-graduate, IIT Gandhinagar, currently in CCL, took an interactive session on the joy of making and breaking toys.



**Aadityan Ganesh**

PhD student at Princeton University and an alumni of RAM, Aadityan led a session on algorithmic game theory.



**Rushil Mathur**

Rushil was a gold medalist in International Mathematical Olympiad 2024 where he represented India. He is currently a first year UG student at Oxford and led a session on mathematical thinking.

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