



# Raising a Mathematician Foundation

Regn. No. E/8816 Thane Region  
Registered under Bombay Trust Act, 1950

## 4<sup>th</sup> Annual National-level Mathematics Training Program for High School Students

**Objective:** To guide young and bright Mathematical talent (age 13-15) to take up a career in Mathematics and encourage them to pursue research either in pure or applied Mathematics.

Mathematics is an important subject which helps in logical thinking and improves the reasoning-ability of a student. The current global scenario demands individuals to analyze all the possibilities in solving a problem and derive a decision based on the same. Mathematics similarly, enables students to approach situations from different angles and dig out the best possible solution. Globally, 13-15 is the age group in which talented students are groomed and provided the necessary guidance and direction to excel in their area of interests. In academics, Mathematics is a subject which plays a pivotal role in the performance of a student in any area he or she explores later.

The present structure of spotting young mathematical talent is by conducting examinations. And the guidance provided to the many talented students lasts only till the examination hall and does not facilitate a continuous learning. Therefore the learning process remains incomplete, scraping only through the surface of their real potential.

With *Raising a Mathematician Training program* (RAM TP), we aim at providing a holistic and complete guidance to talented young teenagers. Our program covers two major aspects of learning - the **convergent thinking** and the **divergent thinking**. In convergent thinking we help students understand different scenarios and logically come to a unified conclusion. Whereas in divergent thinking we help them explore different directions and find creative solutions. Using Mathematics a student is trained to develop logical thinking thereby improving his convergent thinking.

The unique and the best aspect of this program is that it works independent of any grading systems and hence the students will be encouraged to take intellectual risks. The program stresses on

questioning and looking at the proofs of various mathematical concepts so as to understand the thought process behind its origin and encourage the students to develop a research attitude. The program also tries to knit together various topics of algebra and geometry, and encourage students to think about its applications in the real-life scenarios. We believe in inter-disciplinary approach and not compartmentalize Mathematics into Algebra, Geometry, Arithmetic, etc. This division is for convenience and connecting these different areas should be encouraged and highlighted.

### Highlights of the program:

1. Conceptual understanding of secondary/higher secondary level Mathematics along with reasoning.
2. Proving theorems so as to understand the thought process behind the same.
3. Learning Mathematical concepts beyond the curriculum and its application in daily life.
4. Group discussions on various Mathematical topics to improve the skills of communication.
5. Creating a pool of like-minded students who can share their knowledge base, encourage, motivate and get motivated by the fellow students.
6. Guest lectures by eminent professors of Mathematics, industry experts and IITians who are actively involved in research and practice of Mathematics in pure or applied areas.

### Target of the program

At the end of the program, the student will be able to understand higher secondary level Mathematics and correlate different topics, thereby getting a holistic view of the subject. The student will be able to appreciate the application of mathematical concepts in allied areas and hence understand those subjects better. Students will be encouraged to work on mathematical topics and present papers and display exhibits in National Conferences.



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social service award from ICAI in August 2015.

## Areas covered under the program

- Euclidean and non-Euclidean geometry, number theory, indeterminate equations, financial mathematics, introduction to calculus, introduction to statistics, correlation and regression, permutations and combinations, non-routine problems, mathematical logic, trigonometry.
- Discussions on some eminent mathematicians and their work.
- A brief overview on history of ancient Indian Mathematics.

## Course Designing Committee

1. Prof. Mandar Bhanushe (M.Sc. M.Phil. in Mathematics from University of Mumbai) – Asst. Professor in Institute of Distance and Open Learning in University of Mumbai. He has conducted workshops on Free Open Source Software like Geogebra and Latex, and on Learning Management Systems like Moodle. He was the receiver of the prestigious National Award for Best Education Webinar Series at Indian Education Congress in May 2013.
2. R Hariharan (CA, NET, M.Com) – Currently pursuing research in Managerial Accounting at Michigan State University. Prof. Hariharan has also completed five papers in Actuarial Science and was the receiver of the esteemed *Chandramouli Award* from the Institute of Chartered Accountants of India (ICAI) for best paper in Mathematics in PE-I. He also secured *All India Rank* in CA PE-I and PE-II. Inside the classroom, he brings to his students' attention the application of Mathematics & Statistics in Finance and Economics. For his contribution to the field of education through *Raising a Mathematician Foundation*, he received the

3. Vinay Nair (M.Com) – Head of *School of Vedic Maths*, he conducts workshops, courses, camps, online classes and seminars on Vedic Mathematics and ancient Indian Mathematics in different parts of the country. He has authored an online course material on Vedic Mathematics for *Chinmaya International Foundation*, and also published books - *The Teacher Who Taught Us to Think, Journey to the Himalayas*. His articles feature in newspapers, Mathematics journals International magazines and e-magazines.

4. Vijay Sonaje (BE, MBA, NET) – Asst. Professor at *MM's Institute of Management Education Research and Training, Pune*, he teaches business school students Corporate Finance, Financial Management and Desk Research (Industry and Enterprise Analysis). He has handled projects for companies like FIAT India. He has participated and presented in National Conferences and published a paper in *MAE Business Review*.
5. Pradeep Jain (B.Com, CA) – has a rich industry experience in the field of Accounts and Finance. He is passionate about Mathematics and teaches college students & CA aspirants Mathematics and Accounts.

## Duration and Fees

The program is a 6-day residential program at Ram Ratna Vidya Mandir, Keshav Srushti, Uttan, Bhayander West, Mumbai from 9<sup>th</sup> to 14<sup>th</sup> May 2017. The program is offered free of cost to the students and is supported by generous donors.

## Registration link

<http://www.raisingamathematician.com/RAMTP.php>