How to prepare for
International Mathematical Olympiad

THE Mathematical Olympiad is organized every year, on an international scale to encourage students with mathematical aptitude. It not only increases love for mathematics among the participants but also helps them to learn about new developments in the subject through exchange of views.

The popularity of the olympiad in advanced countries can be gauged from the fact that 40 per cent of students in Australia and 25 per cent of that from America, take part in this competition. The percentage of the students frrom Russia and other European countries, taking part, is also considerable. However, not even one per cent of the students from our country take part in this competition. Within India, the participation from Bihar, is even lower than that from other states. Lack of information about the procedures for taking part in the olympiad is one of the main reasons for the poor participation from our state. It may be therefore useful for the students of Bihar to know the modalities for taking part in the Mathemetical Olympiad.

Procedure: First of all, one has to take part in the state level compe tition. This competition is organized in almost all the states. The Bihar Mathematical Society organizes this competion in December, every year, for the students of Bihar. The application form can be obtained in September, by sending a postal order worth rupees thirty, in the name of Secretary, **Bihar Mathematical Society,** Mathematics Department, Sundervati Mahila College, Bhagalpur.

One has to **solve eight mathematical problems in three hours.** Thirty successful candidates from this competition are selected for the participating in the **Indian National Mathematical Olympiad** which is usually organized in **February,** by the **National Board for Higher Mathematics.** Further information in this regard may be obtained through correspondence with Prof. Izhar Hussain, Mathematics Department, Aligarh Muslim University, or Prof. Phulan Prasad, The Indian Institute of Science, Bangalore.

The 30 successful competitors or the national olympiad are again trained for participation in the International Mathematical Olympiad. They are provided with sets of mathematical questions for practice. Those among them who wish to do higher studies in mathematics are provided with a special monthly scholarship of Rs. 700 as well as an annual grant of Rs. 1,000 for purchasing books. Out of these 30 six are selected and sent abroad for participating in the International Mathematical Olympiad. Here certain standards are set by the organizers. Those who attain that standard or exceed it, are honoured by gold, silver and bronze medals. According to this system, several competitors may bag the gold, silver or the bronze medals, simultaneously.

India has been participating in this competition since 1989. Though most students are still unaware of the details of this competition yet, our performance so far has been quite encouraging. Last year, India got four silver and one bronze medals, and it stood fifteenth among the seventy two countries which took part. In 1990, we got a gold medal, too. Rina Panigrahi, who a student of IIT won it.

Eligibility: Only those students of class X and XI, who have mathematics as an optional subject, can participate in this competition. The syllabus of the competition conforms with that of class X, but the standard of questions is, of course, very high.

Now, **how to prepare** for this competition? First, one should have a sound knowledge of school-level mathematics. One should also have a basic understanding about mathematical facts. If one has some acquaintance with mathematics upto the Intermediate-level, it would be good. Books relating to the olympiad unfortunately are mostly published abroad and are neither available in the local market nor in any library. Some indigenious and foreign books are, however, available. **Selected Problem and Theorem in Elementary Mathematics, Arithemetic and Algebra** published by Mir Publication, Moscow, is one such useful book.

Mathematical Trust Society gives a lot of useful information regarding the olympiad and also publishes some books relating to it. Its **address:** Mathematical Trust Society, C-766, New Friends Colony, New Delhi-110065.

In Bihar, **Ramanujam School of Mathematics** provides such competitors with free-education and also organises seminars relating to this subject from time to time. Its address: Ramanujam School of Mathematics, Swami Vevekanand Sevashrama, 'B' Area, Mithapur, Patna-1.

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