Mathematical Instruction and Olympiads

Mathematical Instruction

The Program for Improvement of High School Teachers of Mathematics is an activity of the Institute of the Millenium, with the support of IMPA and RNP (National Research and Education Network). The Program started in 2002 and happens twice a year, in January and July (school vacations period). The first session, held in January 2002, included 6 Brazilian states. Little by little, this number increased so that the last one, held in July 2004, counted with 20 states, some of them with more than one city participating. The attendance included over 1400 teachers. The interest shown by the participants is remarkable, with an increasing number of them taking part at the successive events, totaling about five thousand teachers since the beginning of the project. For the next meeting, planned to be held in January 2005, we expect more states to take part. Each stage of the program lasts one week (5 days) with daily activities during 8 hours. The team of instructors consists of E. L. Lima (coordinator), P. C. P. Carvalho, E. Wagner and A. C. Morgado. We believe that this initiative of the Millenium Institute is of great importance for the improvement of the Mathematics teaching, causing upgrading and homogenization all over the country. It is also to be noted that the publications it generates, as well as its presence at the Internet add an important aspect of permanence to its effect. We are certain of the importance of the project and we hope to be able to count with funds to increase the reach and expansion of this program, attaining a larger and larger number of participants. For this purpose, it is essential to continue to count on the invaluable contribution the Millenium Institute, IMPA and RNP, as well as the enthusiasm and the never failing collaboration of J. Palis, a friend and believer in promoting good level mathematical instruction since the first day.

Olympiads

Olympiads in mathematics are under way in approximately 85 countries, and they occur on national, regional and international scales. If properly structured, Olympiads may serve as major instruments for promoting sciences to young students. They are vehicles for improvement of science teachers' skills, and they aid in the detection of young scientific talents. To achieve these three goals, the Olympiads should be large-scale events in each country, at several grade levels and in three different stages at each level. The first test is very friendly to students and their teachers, with many winners and simple prizes. The second stage involves those who performed well in the first stage. Finally, a third stage determines the best talents, who then compete internationally and are awarded fellowships for further science training. This is precisely the structure of the Brazilian National Mathematics Olympiads promoted by the Brazilian Mathematical Society and the National Council for Scientific and Technological Development – CNPq. IM-AGIMB has been a new partner in this important activity with two goals: to promote regional or state Olympiads within Brazil and to expand the Brazilian participation in international competitions, specially the International Mathematics Competition for University Students. IM-AGIMG´s contribution led to a participation of more than 130,000 students in the Regional Olympiads in different States of Brazil, as well as to excellent performances at the International Mathematics Competition for University Students, including the award of a golden medal in 2004.