

Promotion of the interest for mathematics among high school students in France



Association Animath
www.animath.fr

Preparation to International Olympiads

Our preparation of high school students to mathematic olympiads relies on two parts :

- correspondence courses : in October, almost a hundred students are selected with a test and each month they receive exercises and lessons about an olympic field. Their answers to the exercises are corrected and sent back so they can progress. They also take several tests during the year, to get used to olympiads conditions.
- training camps : three training camps are organized during the year : ten days in August for the winners of the Animath Cup, five days in October for Juniors, one week in February for a last preparation to competitions.



All of this preparation is operated by volunteers, most often former participants to the preparation.

TFJM

TFJM (French Tournament of Young Mathematicians) is a team competition.

In contrast to olympiads, the problems for the TFJM are published several months in advance and some of the questions are still unsolved. During the tournaments the participating students present their results in a kind of research debate involving Reporter, Opponent and Reviewer, in front of a Jury made up of researchers, professors, undergraduate or PhD students.



There is a first round of regional tournaments in six French towns (Toulouse, Lyon, Paris, Rennes, Strasbourg, Lille) and the best teams of each regional tournament are invited to the finals, at Palaiseau (Ecole Polytechnique). The winners of the finals usually participate to ITYM (International Tournament of Young Mathematicians).

Actions toward girls

Several actions are directed explicitly towards girls, in order to try to reduce the imbalance in the ratio of girls who choose to study mathematics.

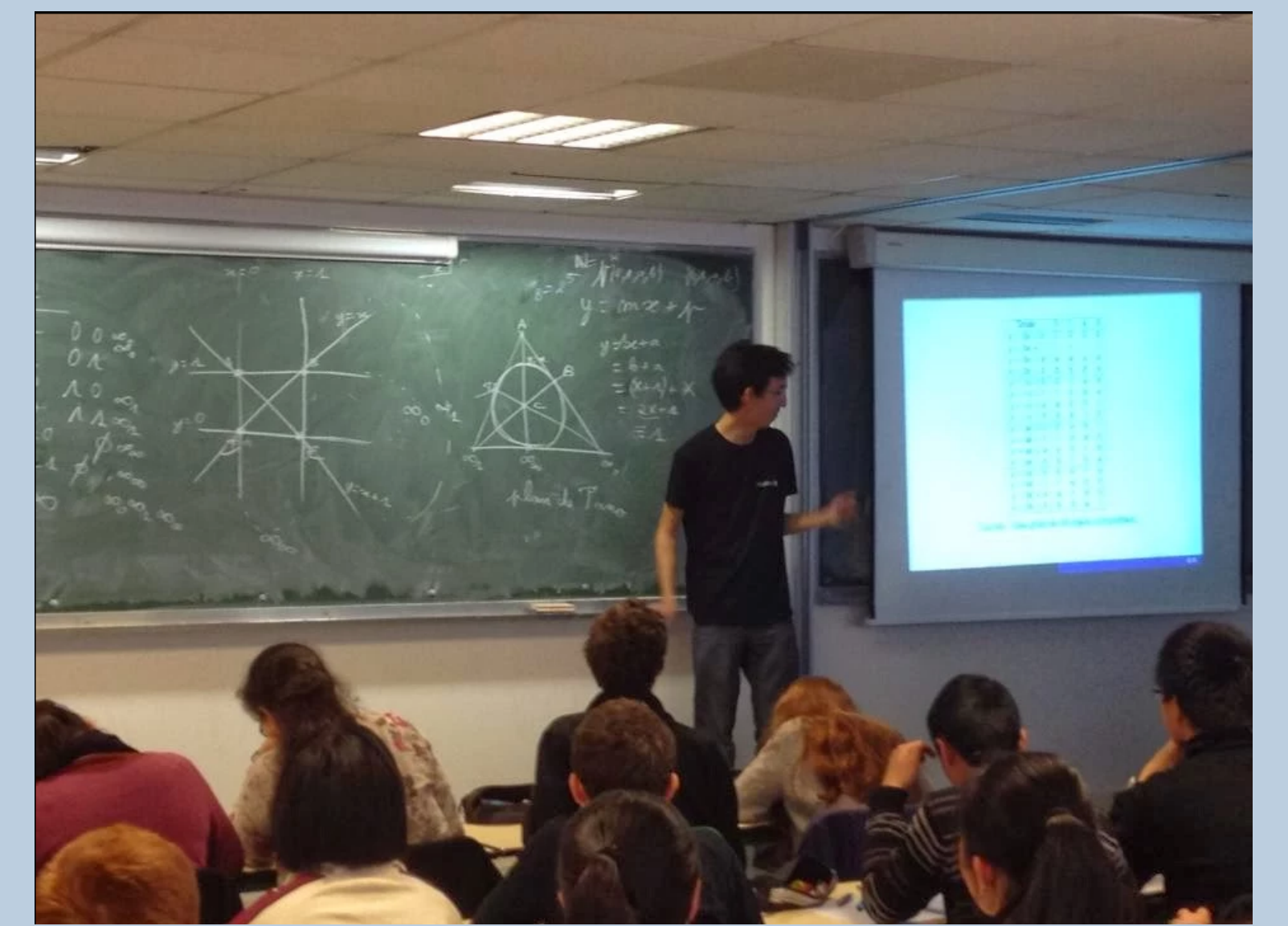
During the "Filles et maths : une équation lumineuse" days, all around France, girls are invited to attend lectures and meet women scientists.

In November 2016 we also tried a new project : 24 girls were selected to spend three days in Paris doing more intensive maths with lectures, research projects, courses.



Local clubs

Many local clubs offer mathematic activities to high school students, including preparation to Olympiads : Lyon, Strasbourg, Toulouse, Paris, ...



Mathmosphere

Mathmosphere is a virtual mathematical club aiming at presenting students from 13 to 15 years old nice subjects of mathematics with fun and interactive contents.



Every two weeks, a MOOC and its exercises are suggested online. Pupils can interact on forums and are encouraged to work collectively to solve the exercises. The correction is released a week later.

During the holidays, more intensive train camps will also be proposed.

Alkindi

Alkindi is a cryptography competition aimed at pupils from 13 to 15 years old. There are three rounds online where pupils have to decipher encrypted messages in a team of 1 to 4 persons, at home or in their classroom. Finally, a finals take place in Paris : a written test of two hours.



Because it is easy for teachers to make their pupils participate, this competition has a huge success : in 2016-2017 there were 17 000 participants.