



# MATH.en.JEANS

In a MATH.en.JEANS workshop, a group of **volunteer students**, regardless of their grades in math in school, works for a full academic year on a subject set by **a researcher**, under the guidance of **a teacher**. The results of the research are presented in **a national conference** in the form of posters and talks. **Written articles** (produced after the conference) will be published the following year. They become researchers in mathematics with the help of professional mathematicians. Through this experiment, they learn **collaborative work** and discover that mathematics is a **living science**.

## How a workshop is organized



A MATH.en.JEANS workshop involves **twinned schools** a few teachers and an academic researcher. All students are volunteers. There is **no selection**, the only requirement is regular participation.

In each school, students meet for **one session per week**. They work in groups of three or four, each group dealing with the same topic, introduced by the researcher.

The teacher enables **debates** between students (inside a group or between groups). He helps to formulate questions, to experiment and to state the results; he encourages, but **without providing any solutions**. He asks for proofs, he gives resources when students need. He finally gives advices for debate, organization and presentation of result.

Four «**seminars**» bring the teams of both schools together, to **exchange** in the presence of the teachers and of the researcher, who validates the results and gives some hints for further research if necessary.

### Annual Conference

The young mathematicians present their work and results during **a 3-day conference** in the form of **posters** and **20-minute talks** in front of hundreds of other young participants, mathematicians and general public. This conference is the **strong point** of the MATH.en.JEANS year. It is **very popular** among students: it is essential that all of them participate in this conference.



### Production

After the conference they present their **work and results** through an article, or a video, or through any other media: this part of the work is **hard to achieve**, as students feel less motivated. These productions can be seen on the web site.



## An improved method

MATH.en.JEANS, founded in 1989, began with one teacher one researcher and 25 students; today it brings together more than **200 workshops** in France and outside France, more than **3000 students**, **400 teachers** and **150 researchers**.



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