

## **Competition 2012 of mathematics jointly organized by the Ile-de-France section of the APMEP and the IREM Paris Diderot.**

The theme for this competition is *Mathematics and Architecture*

As was the case for the previous competitions, it is open to primary and secondary students, and both to individuals, small groups and classrooms.

### **Description of the theme**

The word architecture must be understood in a wide sense and several orientations are possible, among with the followings :

- the study of decorative patterns such as frieze and tessellations ;
- the modelling of building and architectural structures ;
- plane representations (perspectives and developments) ;
- optimisation problems in architecture (military architecture...).

This list of course is not exhaustive, and you can extend it according to your wishes or those of your students.

### **Production**

What is expected is a Newspaper of 4 pages in the A3 format. As any newspaper, it must include a title, a main news (la « Une » du journal), illustrations, short news, and articles, one at least reporting the mathematical study carried out.

The Newspapers will be developed on the computer. Don't hesitate to consult the persons in charge of documentation in your school, they are used to create such documents.

You can work directly in the A3 format as word processing software gives this possibility, or work in A4 format and enlarge then with a copying machine.

If you wish to produce physical models or other objects, you can join these to your production for exhibition during the award ceremony.

### **Framework**

In order to organize this competition, you can use classroom hours but also other opportunities such as the after school time periods organized in schools for students in middle schools, the optional course *Methods and scientific practices* in grade 10 whose theme « Mathematics and art objects » is especially adapted to this competition. In grade 11, in general education it can be proposed as a theme for the project work called TPE, and in the technological stream STI2D this competition can be the place for developing the joint work between teachers of technology and mathematics which is asked for.

### **Deadline**

The newspapers must be send by the March 12 , 2012 to the following address :

Université Paris Diderot  
IREM de Paris 7 – Case 7018

Concours APMEP – Martine Lamy  
Bâtiment Chevakleret  
75205 Paris Cedex 13

Please send also a pdf version to [concoursapmep.idf@gmail.com](mailto:concoursapmep.idf@gmail.com)  
This will help us to print the newspapers produced for all participants.  
At this mail address, you can also ask complementary information about the competition.

Prizes will be awarded during a ceremony organized on April 14, 2012. More information about it will be provided later.

You can also access the documents related to the competition of the website of the APMEP Association : [www.apmep.asso.fr](http://www.apmep.asso.fr), on the page of the Ile de France section.

We hope that you will be many to participate in this competition. Do not hesitate to advertise it in your school, andv especially inform new colleagues about it.