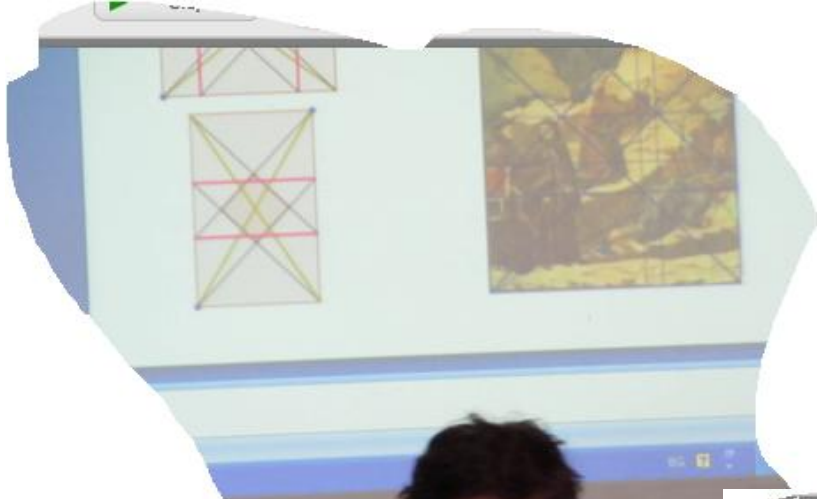


Courses

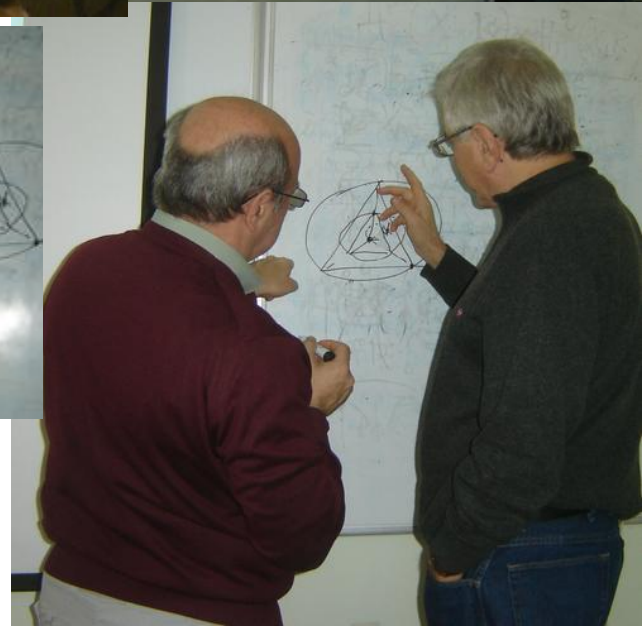
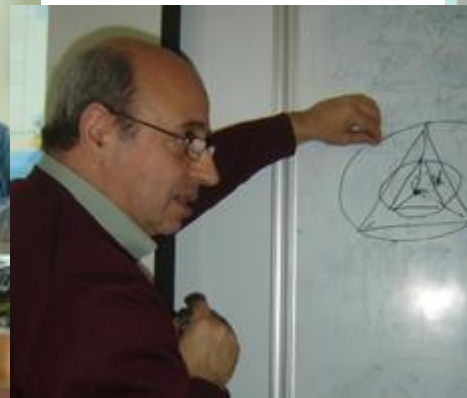
Dynamising the Mathematics Classes

The BG team:
Oleg, Neli, Toni, Jenny
Aarhus, June 2012





The meeting at IMI

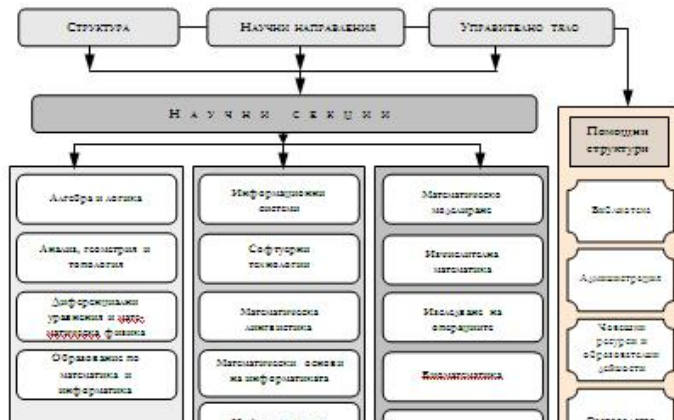


In the IMI-booklet

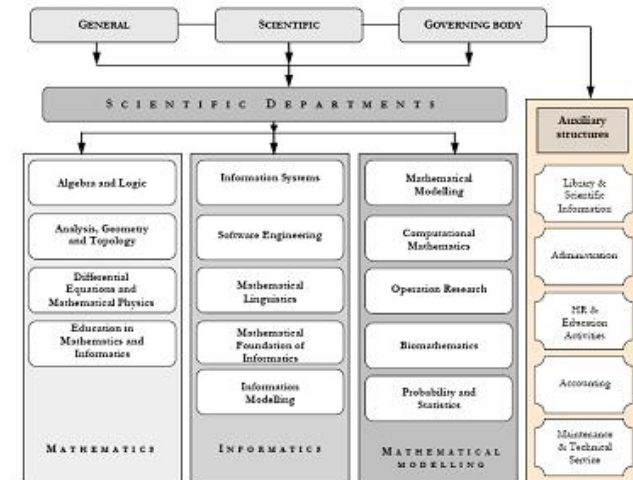
Структура на ИМИ



Творческата атмосфера е осигурена и в семинарните зали, и в кабинетите.



IMI Structure



A creative atmosphere is maintained in the seminar rooms and the offices.

In the IMI-booklet



DynaMat materials within various courses and seminars

- In the frames of the Fibonacci project
 - With primary school teachers
 - With secondary school teachers
 - Mixed groups
 - International workshops
- National seminar on math education
- Seminars in IMI (experimenting new technology)
- UBM spring conference

Teachers in primary school

- Recent 2-day course on inquiry-based learning of mathematics in the primary school based on GG – June 2012
- They made the Napoleon problem construction for 10 min. and they spent 10 more min. to make an appropriate design

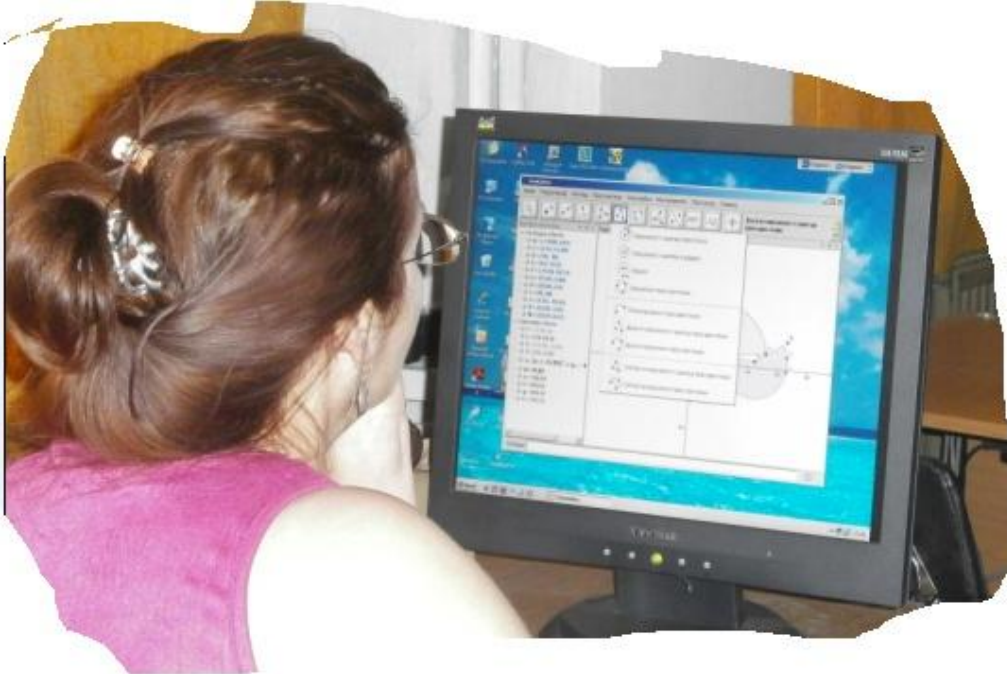
Some comments:

- They paid attention to the orientation of the triangle when built by the polygon button (the half-plane in which the triangle is depends on the order of selecting the vertices). In some cases they generalized the original condition and let the triangle be inside instead.

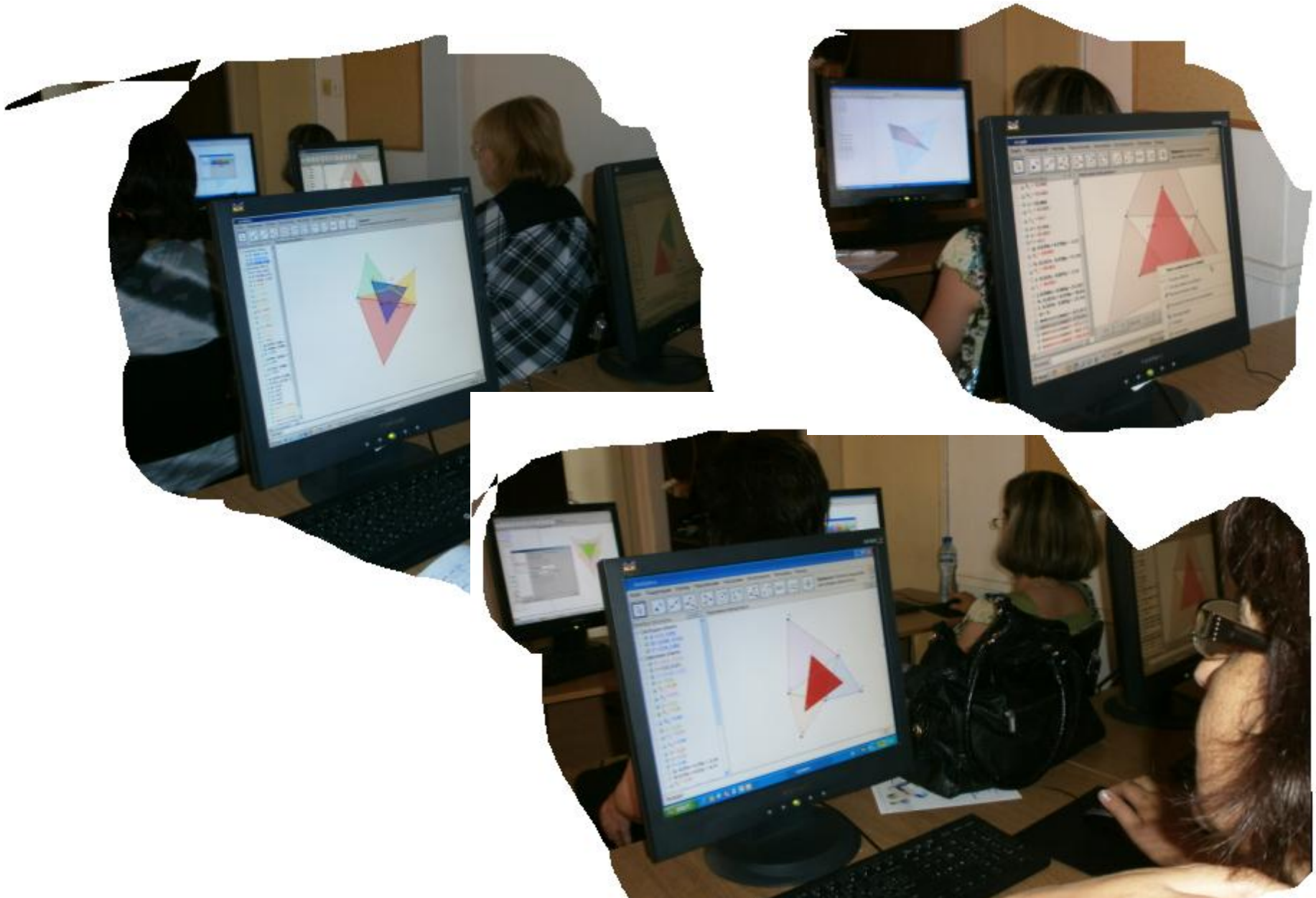
The exploration they did was related to the length of the sides only – no suggestions for exploring the areas or the angles...

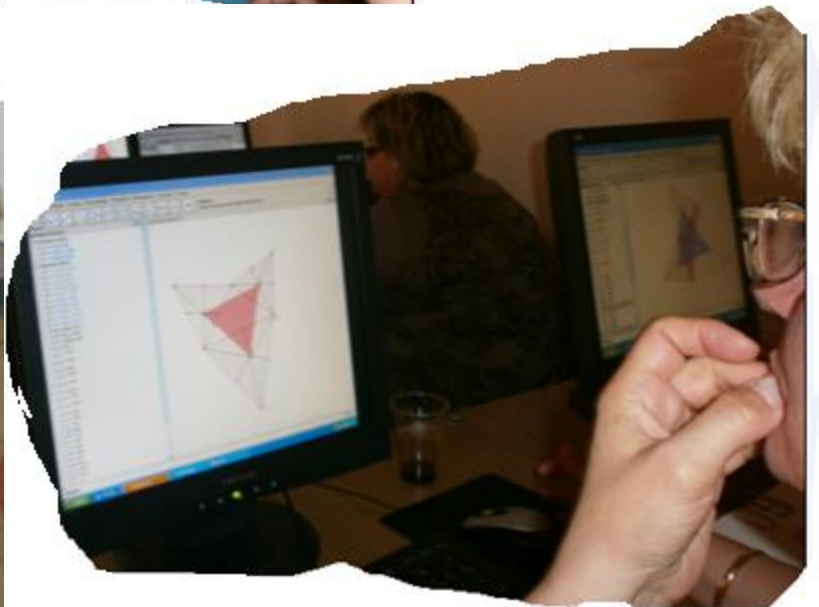
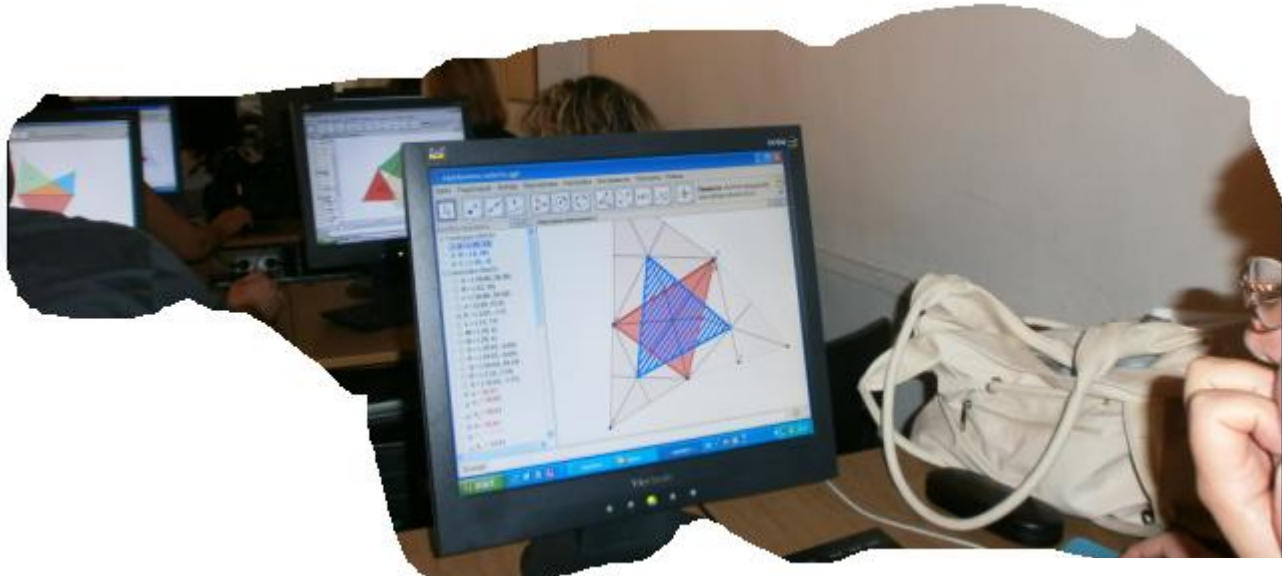
- Various ideas for constructing the centers of the triangles were discussed, including a command from the command center
- The orientation was discussed also when working with circles and arcs. The eggs were shown as ready made files to be explored.

The primary teachers

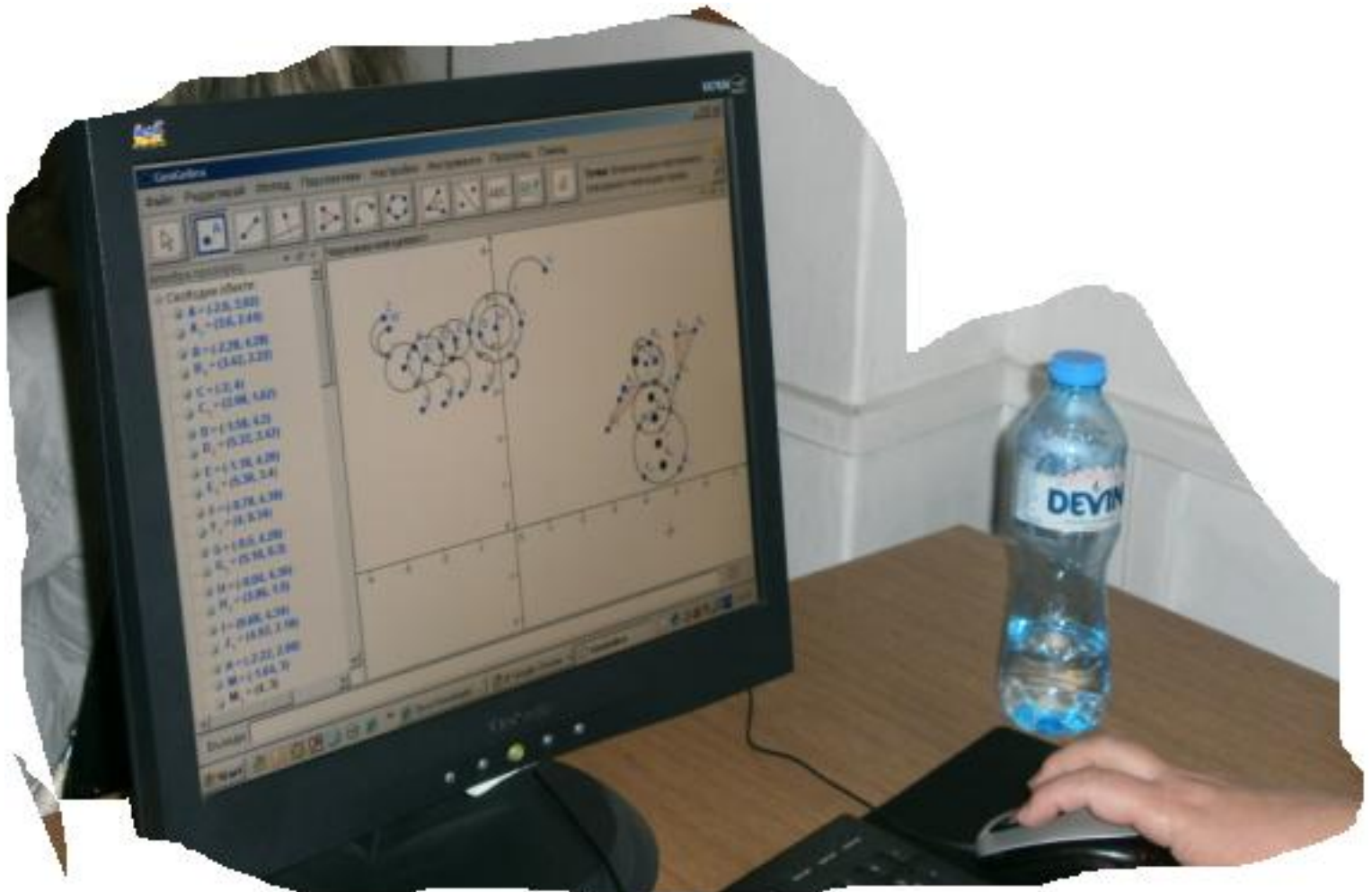


Unity and variety





Creativity



Enjoyment



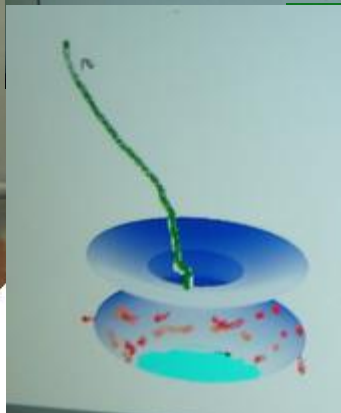
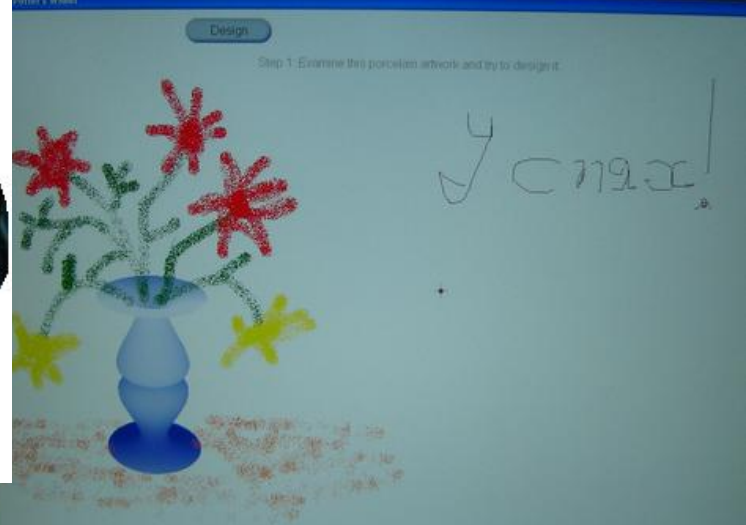
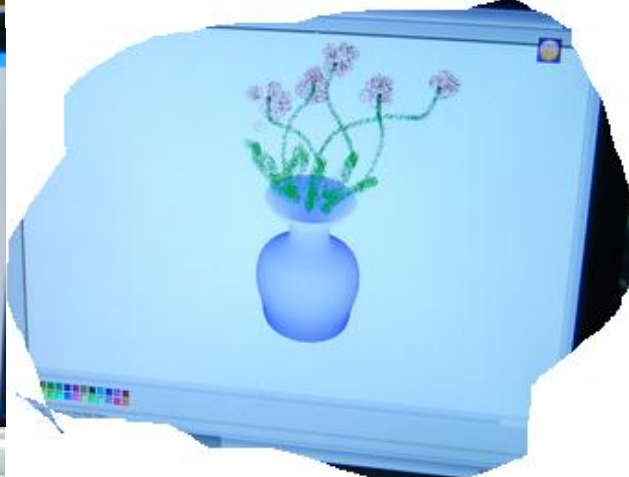
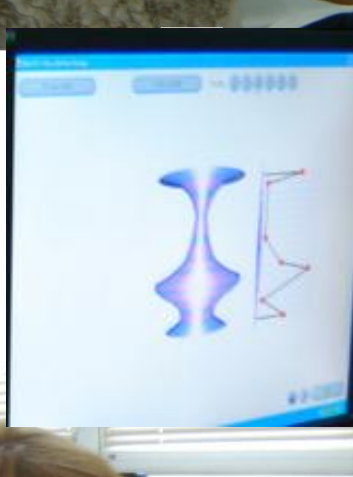
The group in Blagoevgrad (September 2011)



Blagoevgrad

- Primary -8
- Mathematics 3
- Art -2
- History and geography – 1
- IT - 1
- 4-34 years as teachers

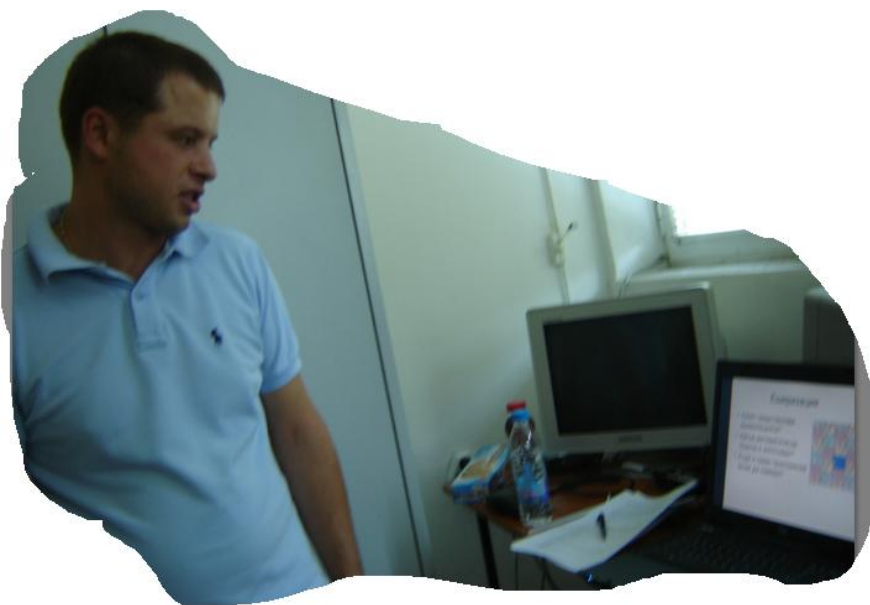




Паркетиране

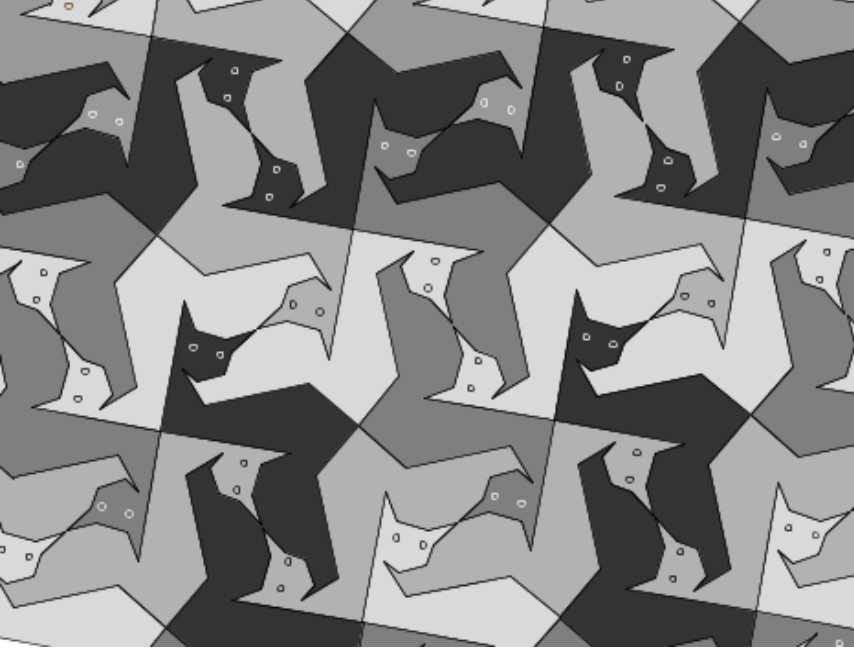
- Запълване на пространството с единични фигури

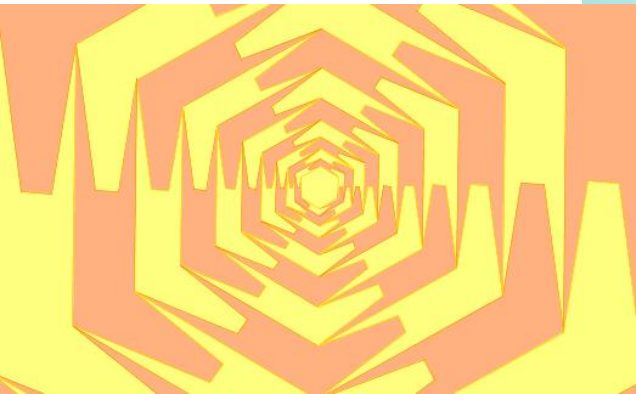
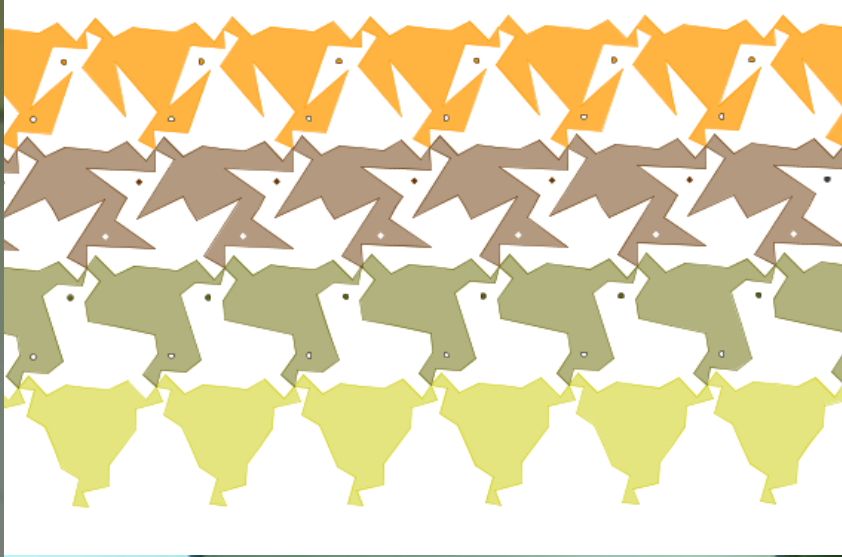
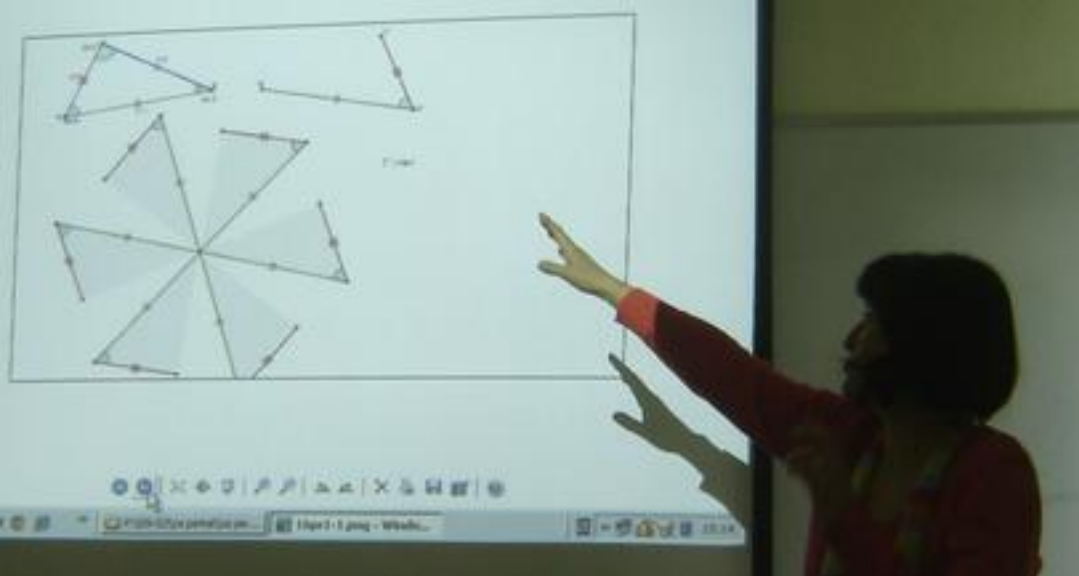




National seminar: *The inquiry-based approach in math education* – December 2011

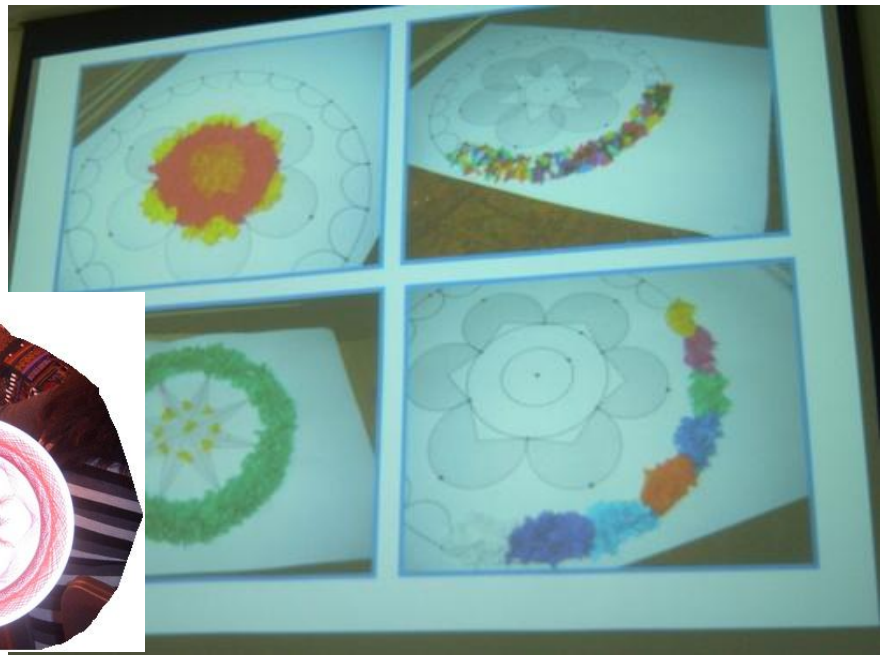
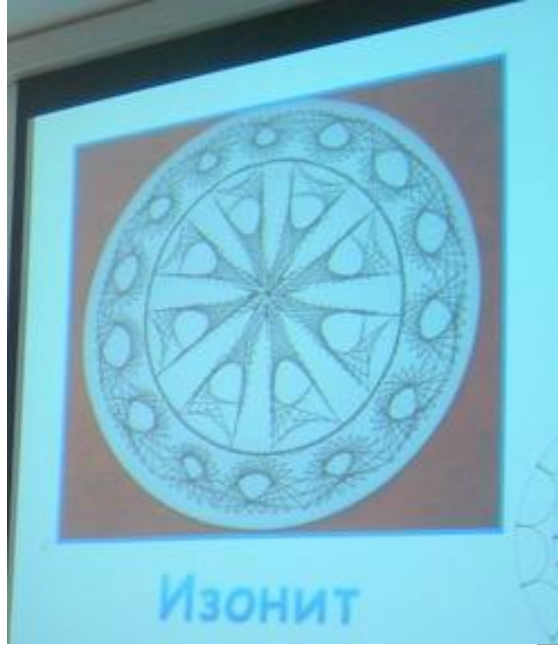






Seminars with teachers at IMI







Comenius Logo, Imagine спирали, фрактали, паркетиране

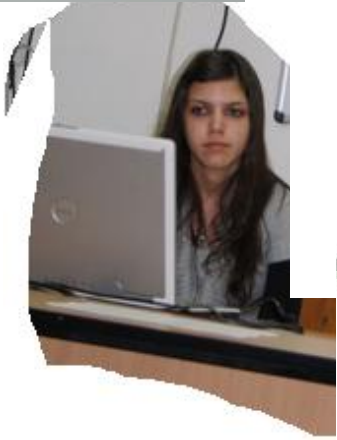
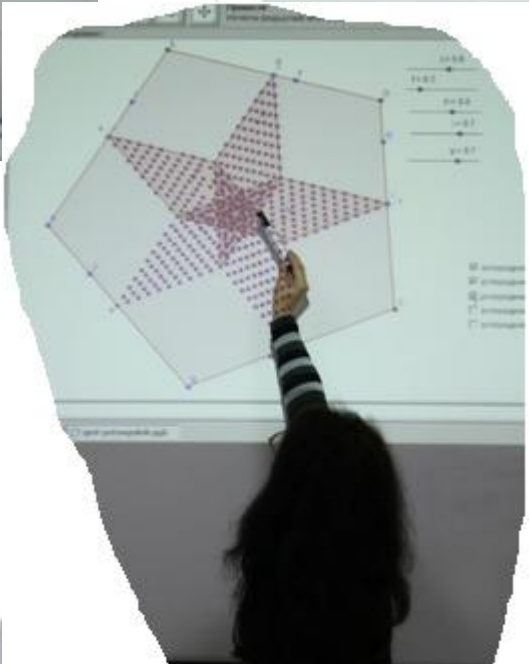
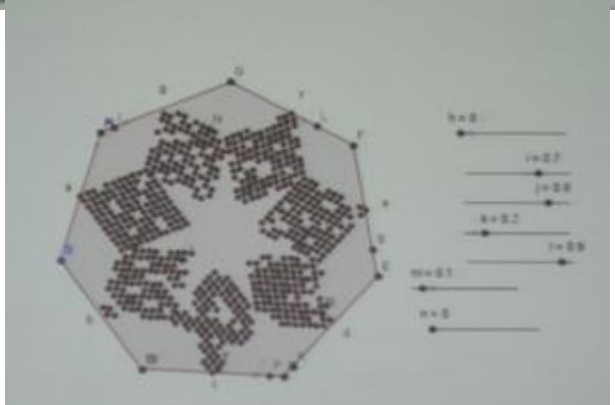
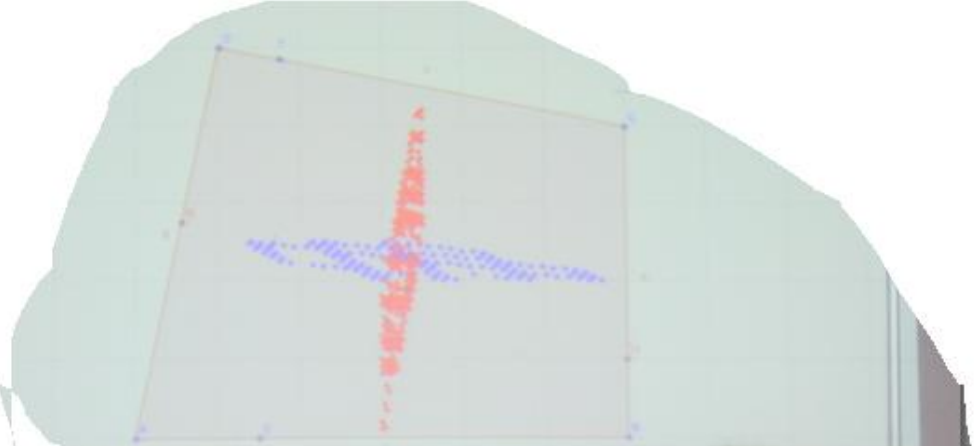
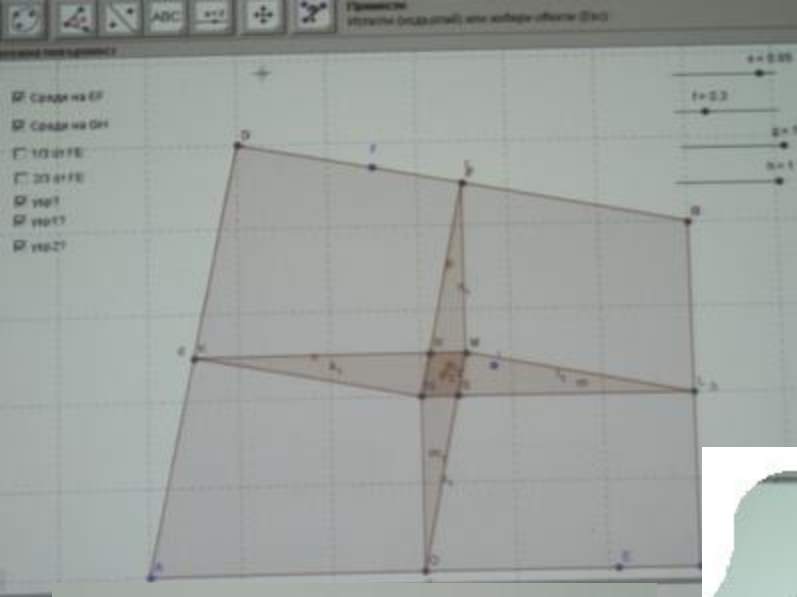
Фракталът се генерира от повтаряща се схема, обикновено рекурсивен или итерационен процес. Това му придава множество интересни характеристики, най-важните от които са **самоподобността** и безкрайната подробност независимо от увеличението.



Фрактали – приложение / Павел



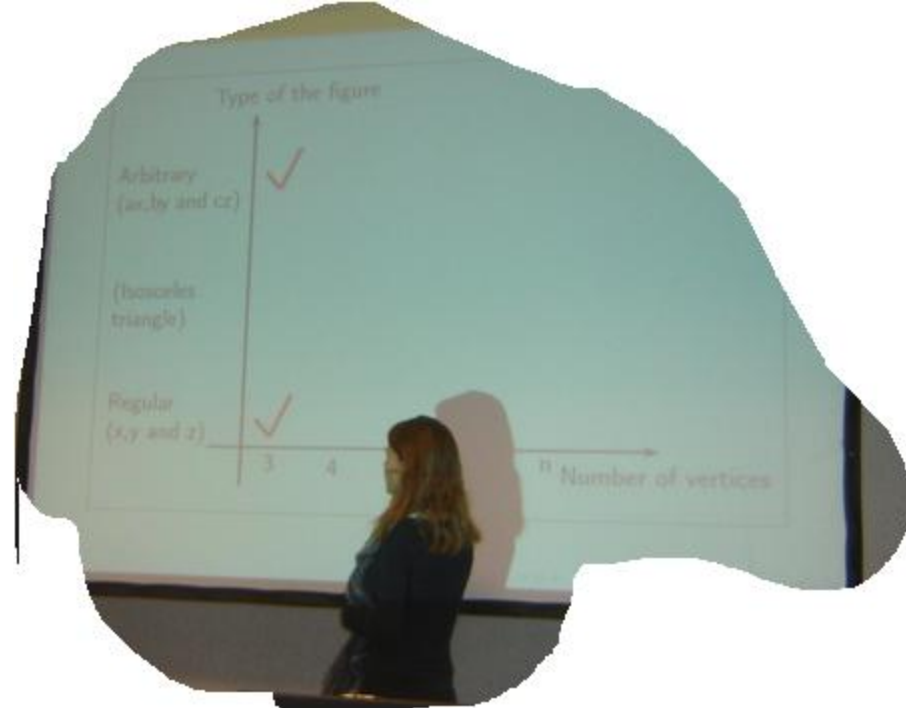
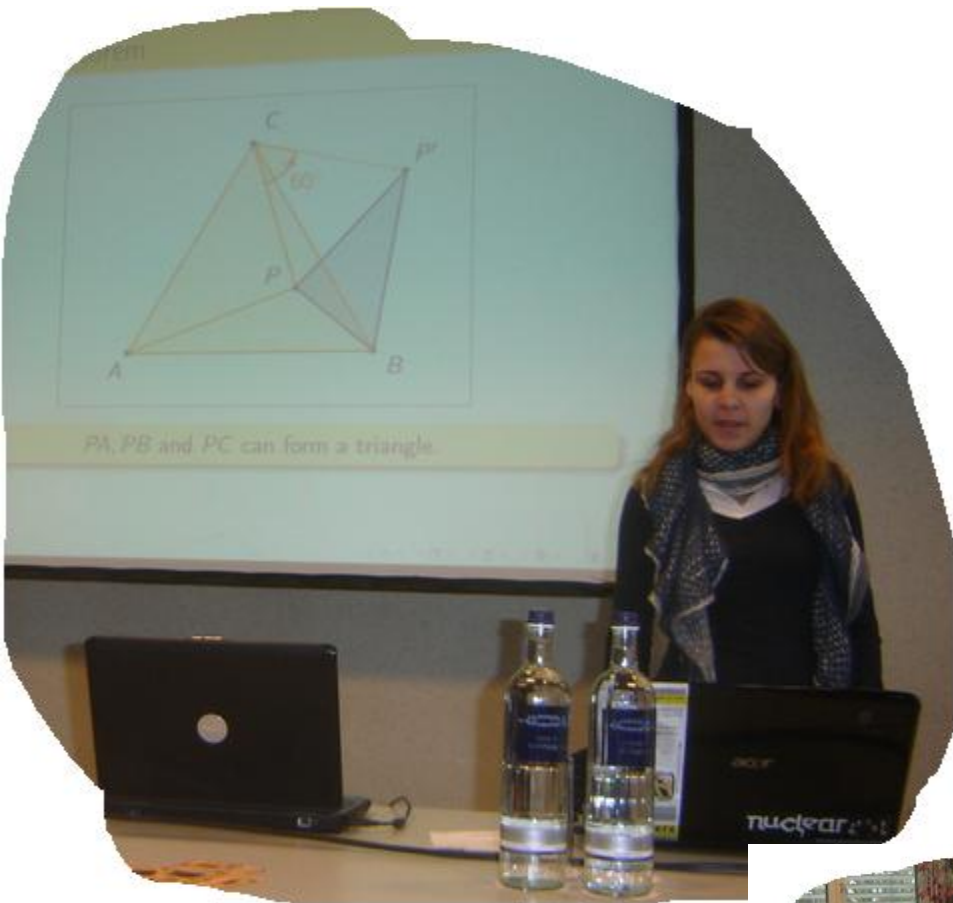
This slide features a collage of fractal images and diagrams. It includes a red spiral fractal, a colorful circular fractal, a fractal pattern resembling a face, and a fractal pattern resembling a clock face. Each image is accompanied by a small grid of color swatches and a brief text description.



The national seminar

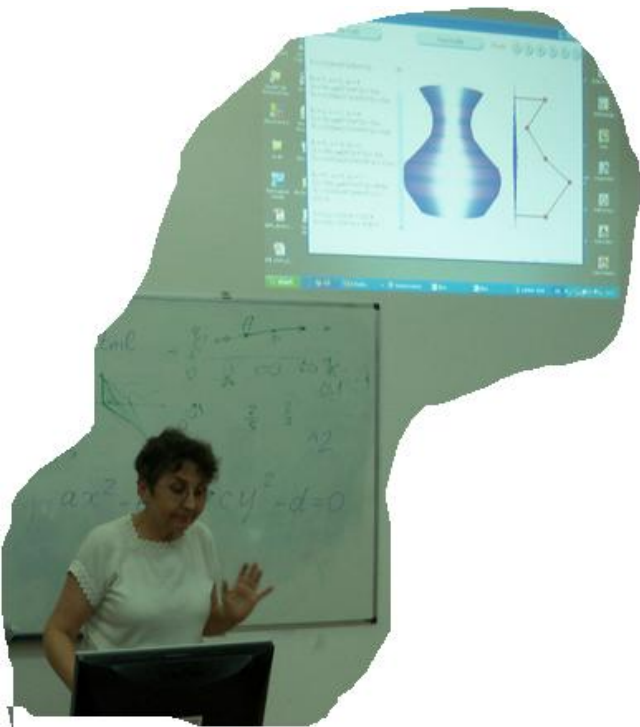


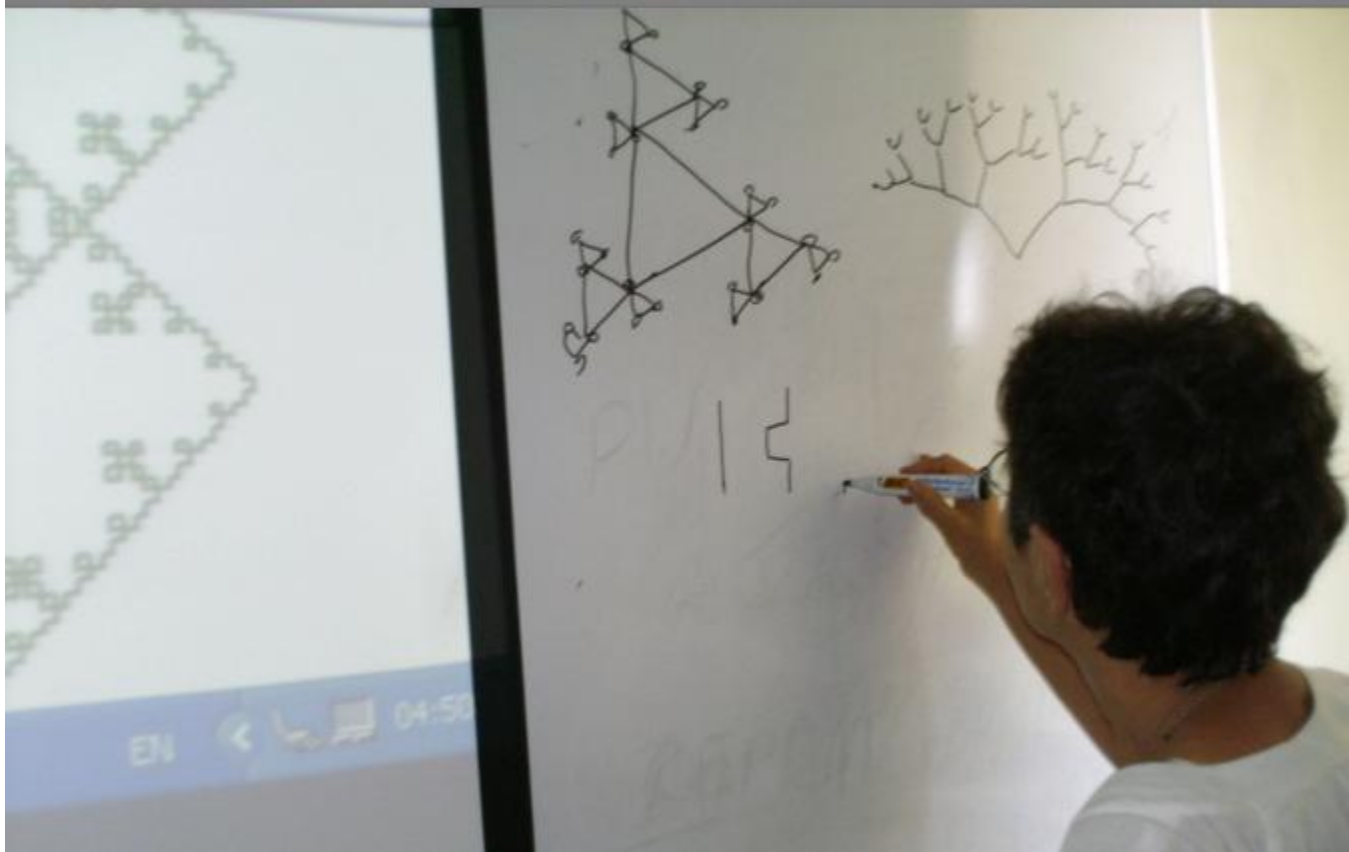
In Bayreuth



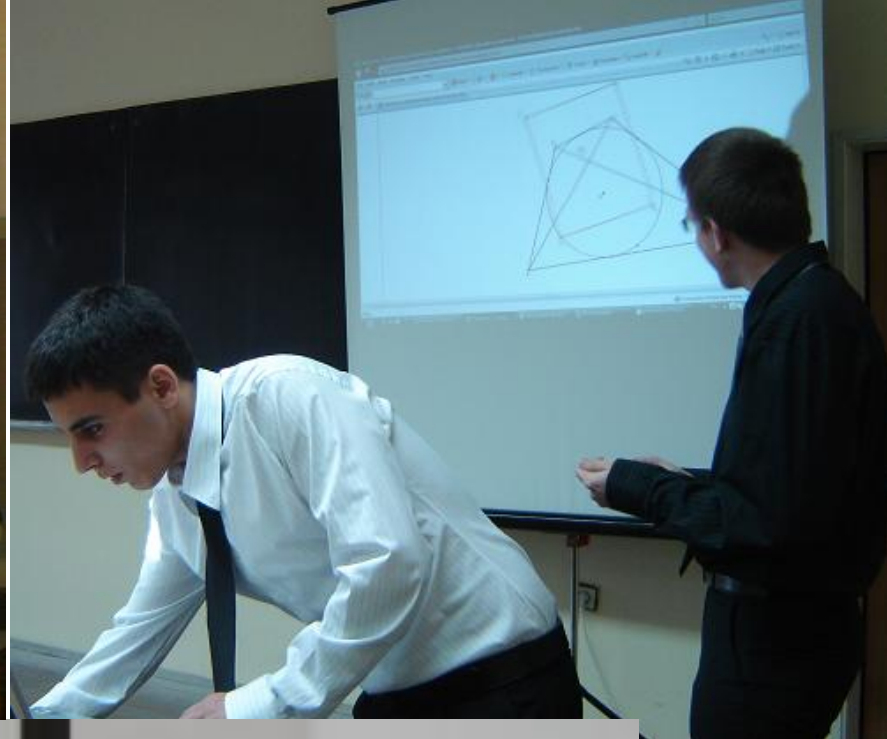
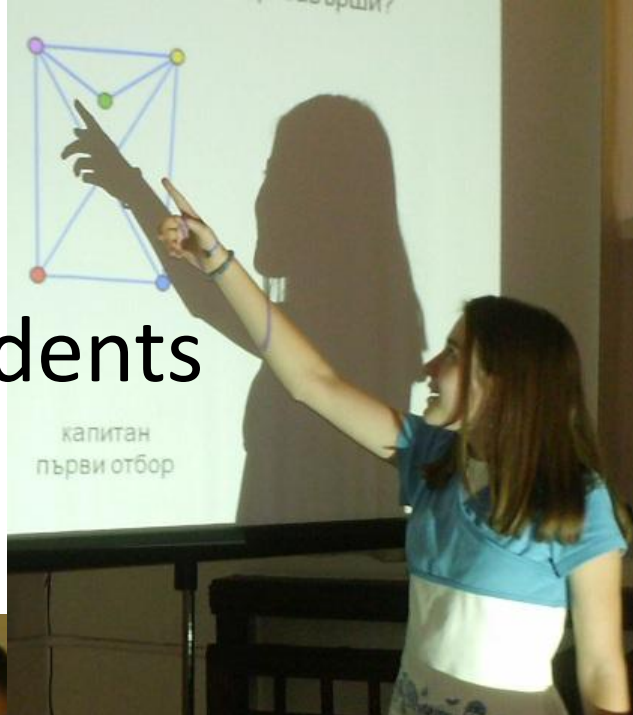


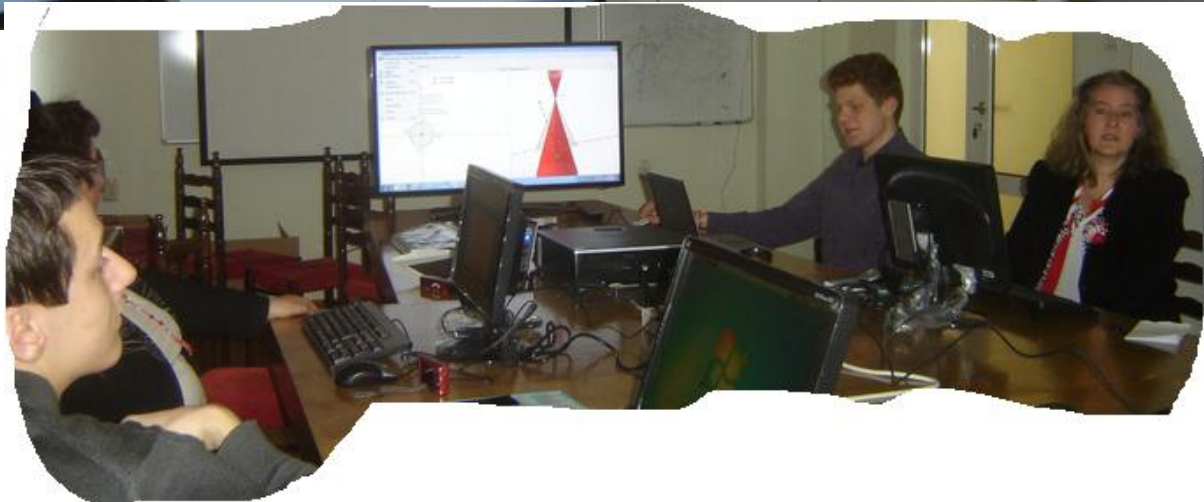
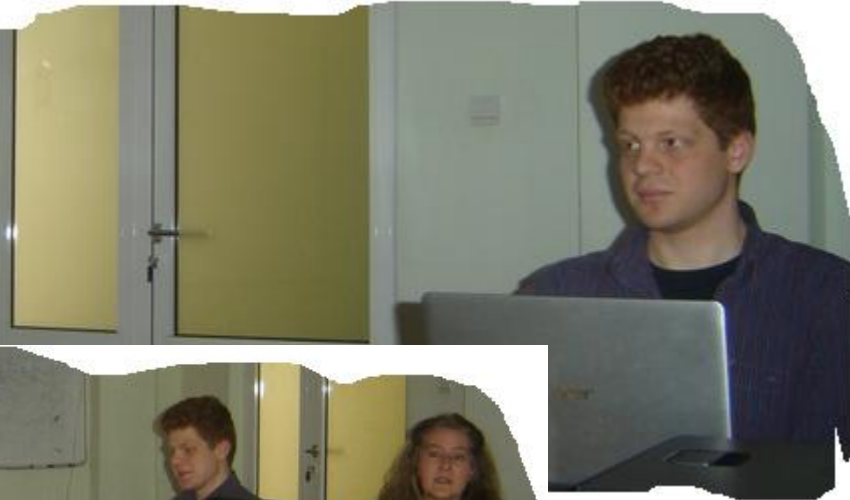
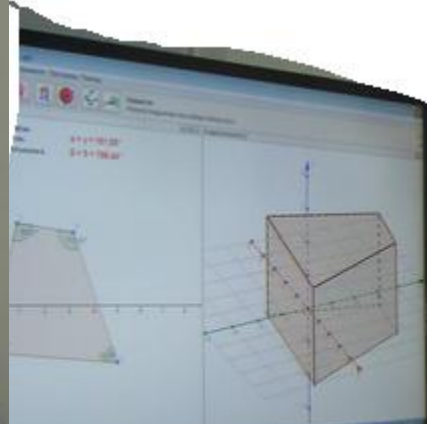
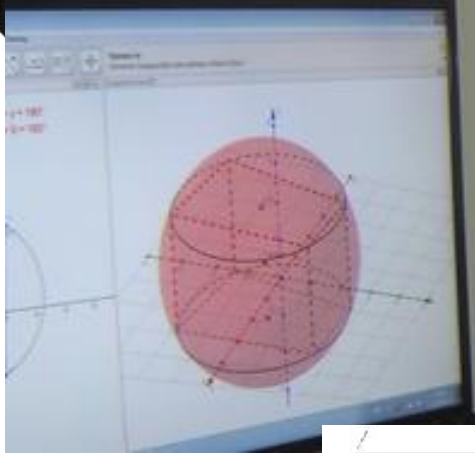




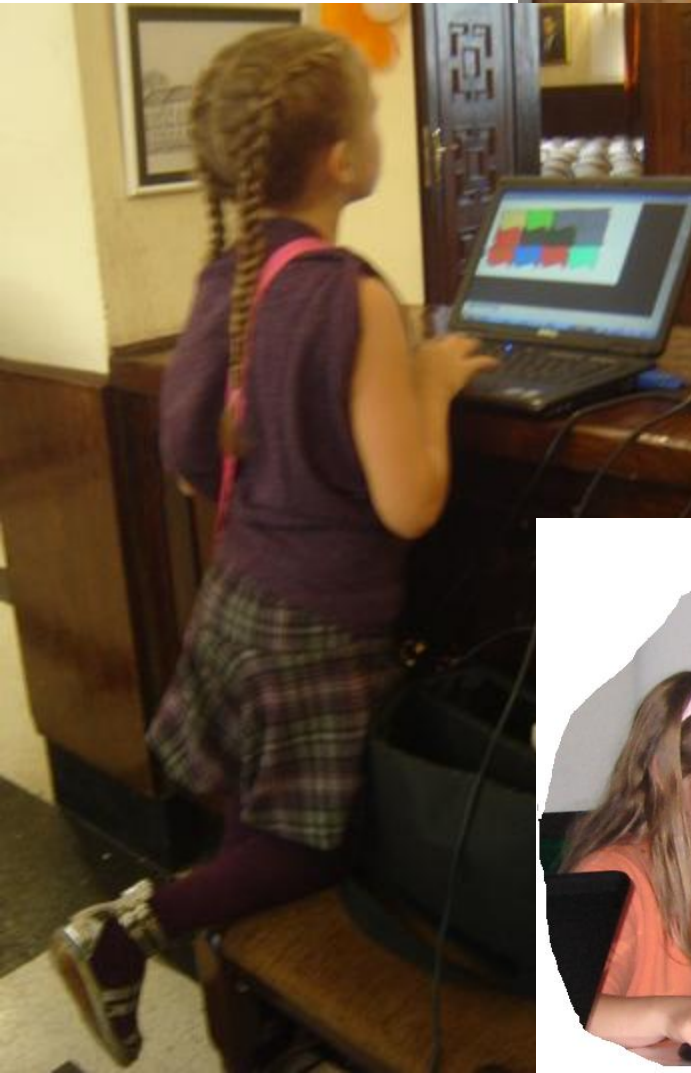


The students





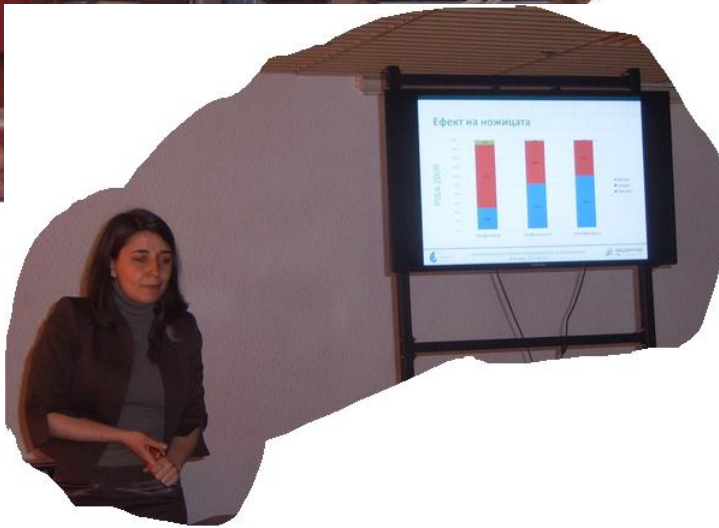
European night of scientists – September 2011



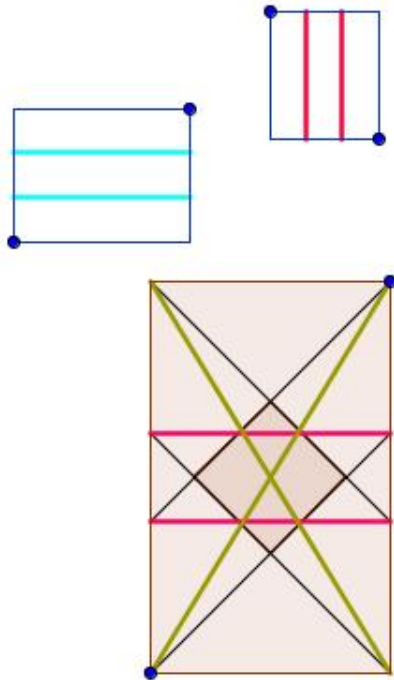
Visits to Stara Zagora



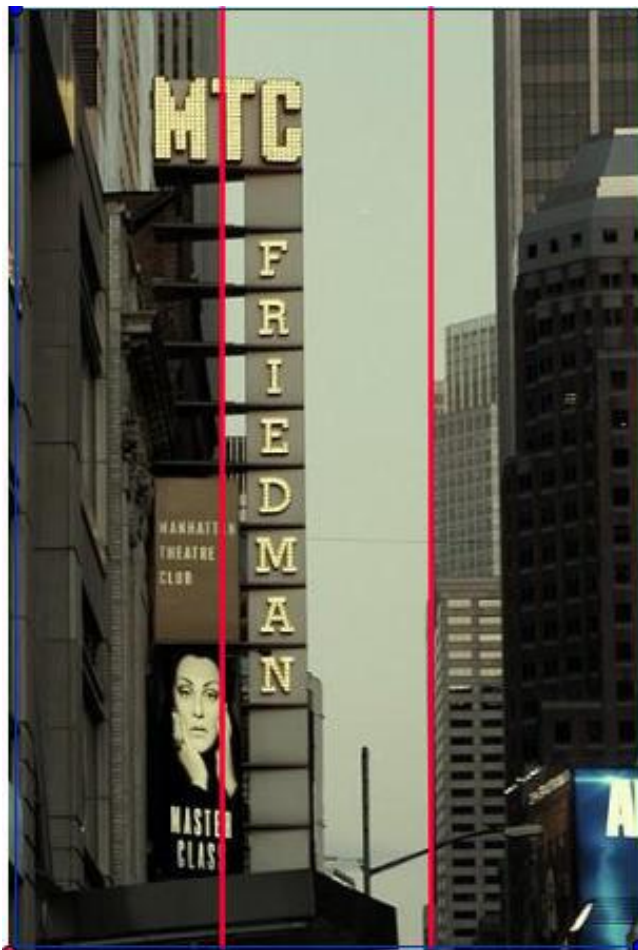
The UBM Spring conference – April 2012



Teachers in art in 10th school in Sofia



In photography



There are no recipes for good teaching,
but
good teaching is not just recipes!

