

M I T E

Methodology and Information Technologies in Education

Bulgarian-Russian Project



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MITE

(Methodology & Information Technologies in Education)



- **Faculty for Pedagogical Education
Moscow State University "M. V. Lomonosov", Moscow**
Prof. Nicolay Khristovich ROZOV
Corresponding Member of RAO
- **Academy of Social Control, Moscow District, Moscow**
Prof. Tatjana Federovna SERGEEVA
- **Institute of Mathematics and Informatics
Bulgarian Academy of Sciences, Sofia**
- **"DARYN" Centre for Talented Students, Astana, Kazakhstan**

The Beginning



2006



- Development of IT technologies and corresponding Methodology to support teaching and learning of school disciplines
- Organization of lecture courses, competitions, scientific conferences and other activities for the development and the experimentation of the already developed IT technologies and Methodology

Conference in Varna, Bulgaria

June, 2006



- Presentations of concrete applications of Informatics in teaching of various school disciplines
- A lecture course for teachers from Bulgaria, Kazakhstan and Russia on basic methodological, pedagogical and practical requirements to IT technology creation and applications in Education

The Varna Conference

June, 2006





Conference in Orjahovitsa, Bulgaria



October, 2006

- Lecture course for teachers “How to use GEONExT in the elaboration of Computer aided lessons”
- Creation of 3 concrete lessons

The Orjahovitsa Conference

October, 2006



MITE menu index

Теорема Фалеса


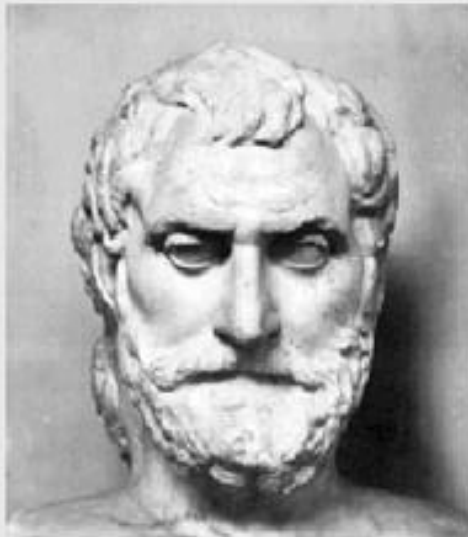
Урок 1

- [Основные понятия](#)
- [Гипотеза](#)
- [Задачи](#)

[Урок 2 - Обратная теорема Фалеса](#)

Урок 3 - Решения задач

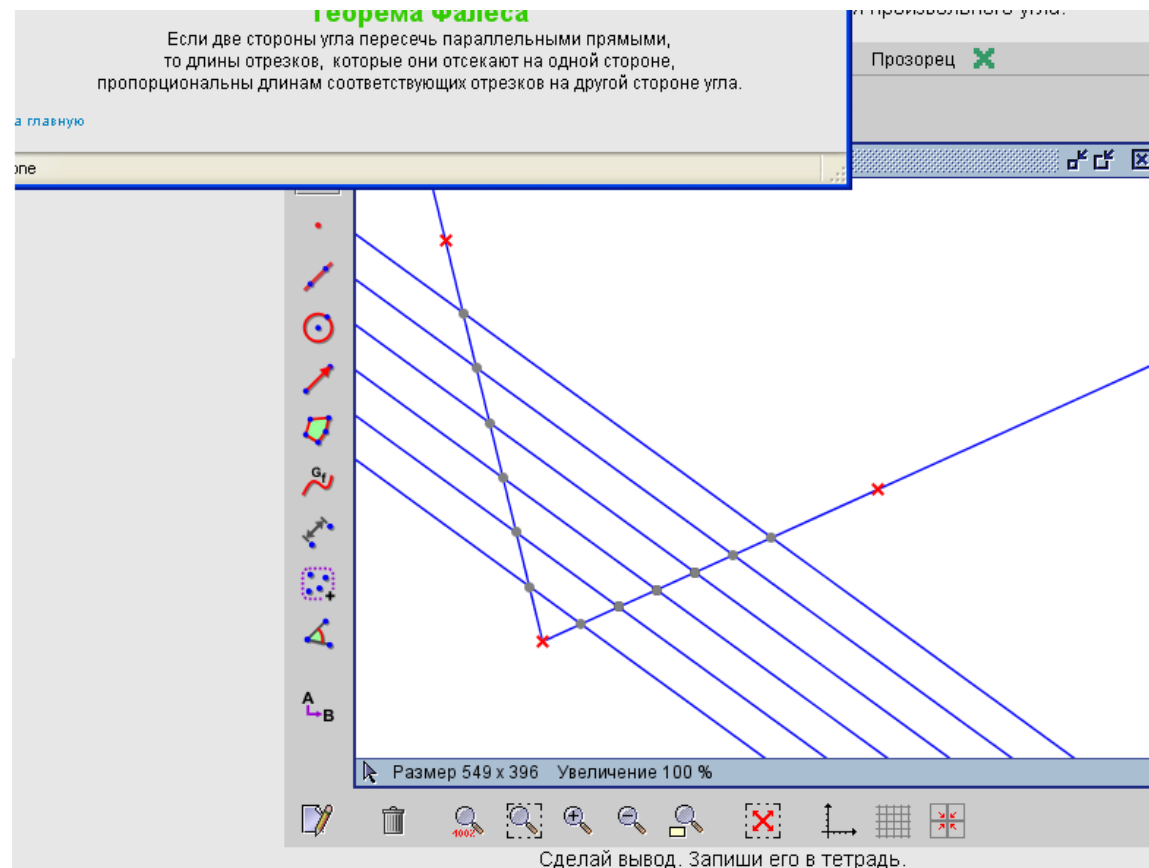
- [Задача 1](#)
- [Задача 2](#)
- [Задача 3](#)
- [Задача 4](#)
- [Задача 5](#)



s. Orjahovitsa, Bulgaria - October 2006

The Orjahovitsa Conference

October, 2006



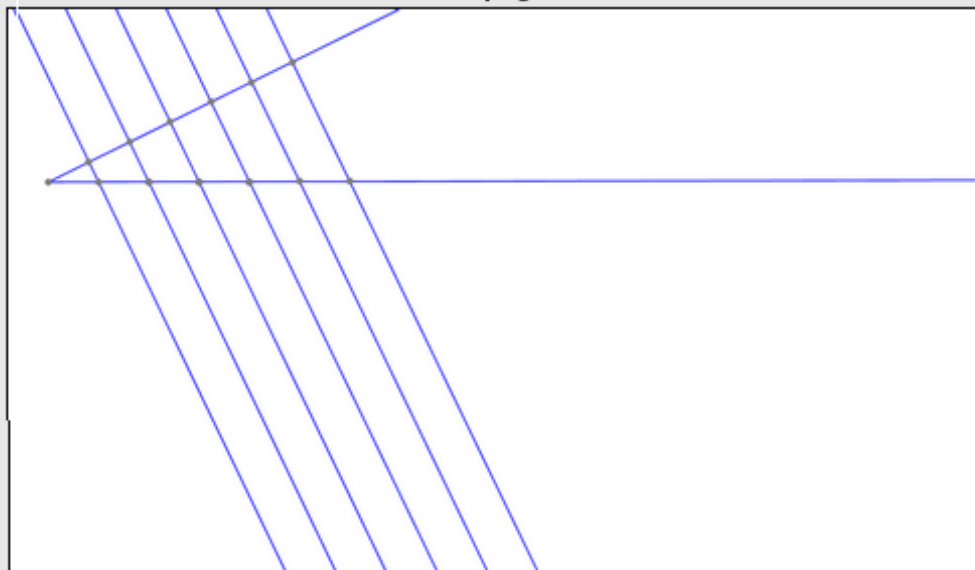
The Orjahovitsa Conference

October, 2006



Гипотеза

© 2000 - <http://geonext.de>



Создадим изображение угла

Отметим на одной стороне угла равные отрезки

Проведем через концы отрезков параллельные прямые

Сравни длины отрезков на другой стороне угла

Далее



FURTHER RESULTS



1. Several scientific publications
2. All Geometry lessons from the Bulgarian and Russian Curriculum for 8th and 9th grades (CD-ies and a methodological guide)



Dynamic Software as Heuristic Tools

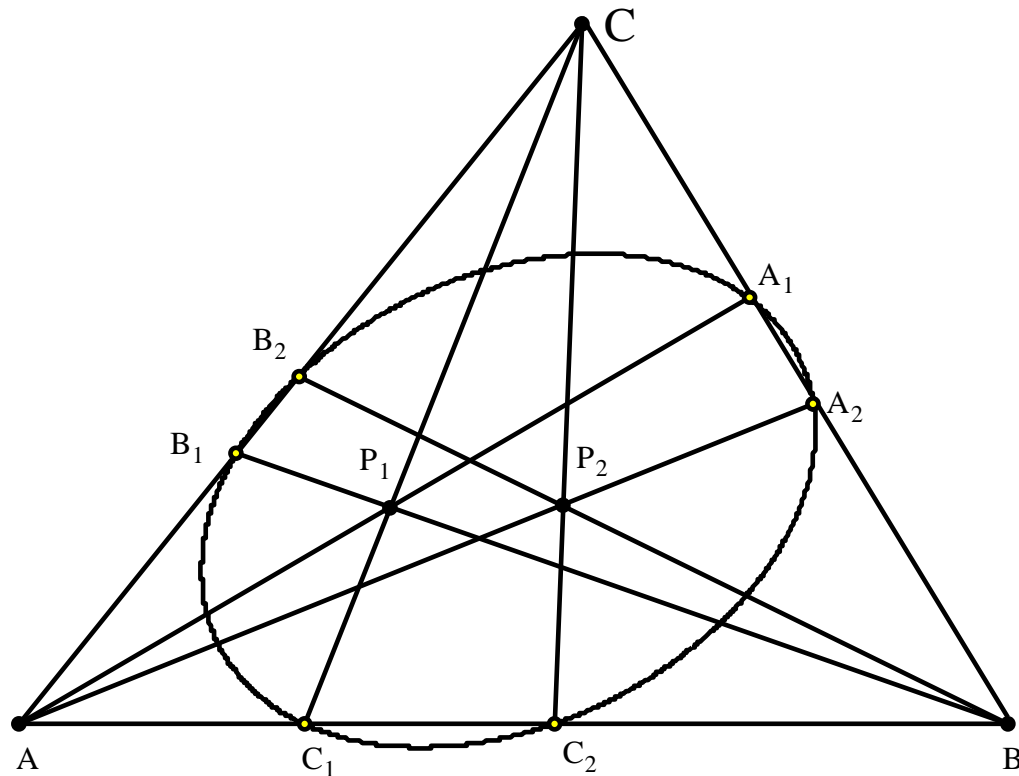


■ THE GEOMETER'S SKETCHPAD

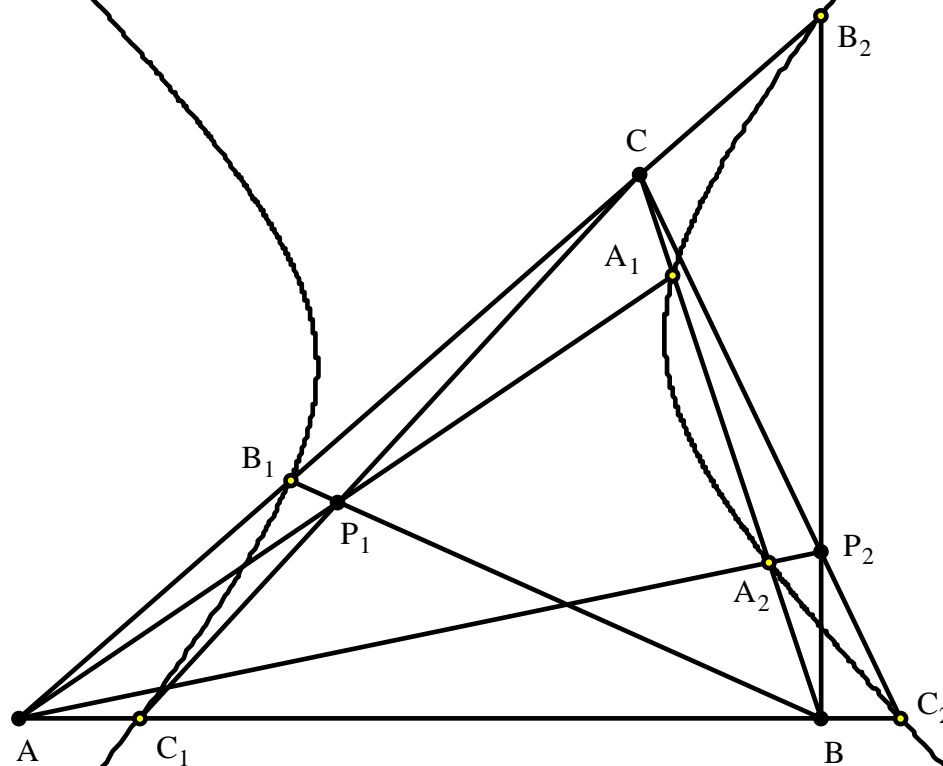
Euler's theorem:

*The mid-points of the sides of the triangle
and the feet of the heights lie on a
circle (Euler's circle).*

Given are points P_1 and P_2 in the plane of the triangle ABC not incident with the lines AB , AC and BC . Then, the intersection points of the lines AP_i , BP_i and CP_i ($i = 1, 2$) with the sides of the triangle lie on a conic (a curve of second degree).



Dynamic Software as Heuristic Tool



DIALOGUE PROGRAMMES

file:///C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/Rar\$EX00.828/proekt/index.htm eBay

ДЕЙСТВИЯ

ДОБАВЯНЕ, ОТСТРАНЯВАНЕ, ПРЕМЕСТВАНЕ, РАЗМЯНА, ЗАМЯНА В ЗАДАЧИ

13) Какъв е минималният брой единични кубчета, които трябва да се добавят в конструкцията, за да се получи:



а) правоъгълен паралелепипед:

Провери Решение Помощ

б) куб:

Решение Помощ

Затвори

От сайта www.elica.net, Download можете да инсталирате Elica Cubix Editor.

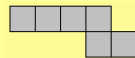
Постройте дадената фигура с един цвят и я допълнете до правоъгълен паралелепипед (куб) с друг цвят.

file:///C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/Rar\$EX00.828/proekt/index.htm eBay

ДЕЙСТВИЯ

ДОБАВЯНЕ, ОТСТРАНЯВАНЕ, ПРЕМЕСТВАНЕ, РАЗМЯНА, ЗАМЯНА В ЗАДАЧИ

10) С преместване на едно квадратче от фигурата трябва да се получи развивка на куб. По колко начина може да бъде направено това?

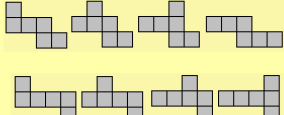


1 2 4 8 10

Провери Решение

file:/// - Решение - Mozilla Firefox

Могат да се преместват две квадратчета - квадратчето най-вляво и квадратчето най-вдясно. Във всеки от двата случая има по четири възможности.



DIALOGUE PROGRAMMES for Numerical Inequalities



Числови неравенства - Mozilla Firefox

File Edit View History Bookmarks Tools Help

file:///C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/Rar\$EX00.391/index.htm

Getting Started Latest Headlines

ЧИСЛОВИ НЕРАВЕНСТВА

4. клас

5. клас

6. клас

7. клас

Начало

Зад. 9 Между кои две последователни естествени числа се намира числото:

а) < 6,5 <

Провери Решение

file:/// - Решение - Mozilla Firefox

6,5 > 6; 6,5 < 7; следователно $6 < 6,5 < 7$.

Затвори

Done

Провери Отговор

start neravenstva st_nauchni_20... stranica(3).rar ... Числови нера... file:/// - Решен... EN 21:14

International Summer School Primorsko, Bulgaria



July, 2007

Experimental lessons
Lecture course for students
from Kazakhstan





FURTHER ACTIVITIES



- Conference in Moscow, Russia
May, 2007
- Conference in Moscow, Russia
May, 2008
- Conference in Moscow, Russia
May, 2009



International Competition “Mathematics and Projects”



Sections:

- Modelling of real processes in Nature and Society
- Geometric miniatures
- Mathematics and Art
- History of Mathematics and Informatics
- Mathematics as a science
- Organization of project and research activities of students (for teachers)

International Competition "Mathematics and Projects"



2 stages of the Competition

- National
- International

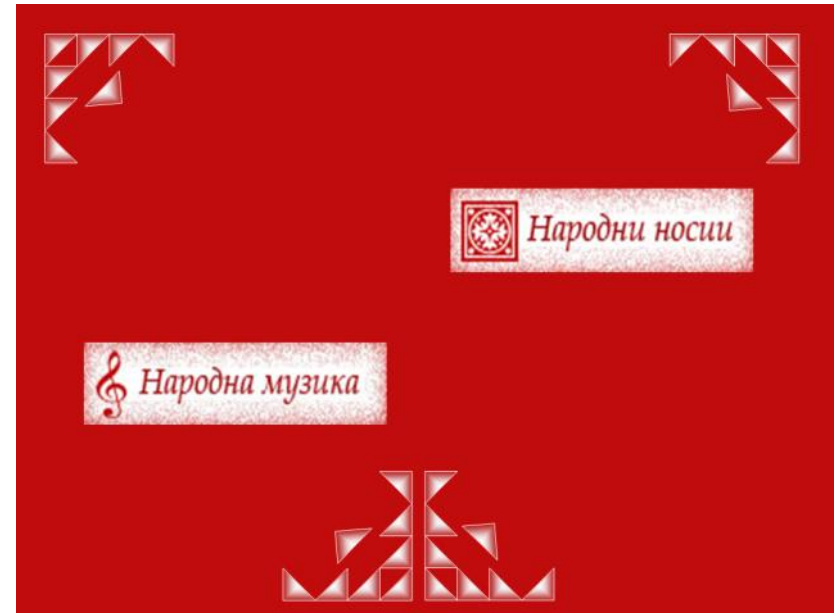


International Competition “Mathematics and Projects”



Some of the awarded projects:

- Modelling of Bulgarian folk embroidery works
- Modelling of Bulgarian folk music pieces
- Software for Natural gas discovery
- Educational websites



International Competition "Mathematics and Projects"



www.math.bas.bg/~albena/MITE/

albena@math.bas.bg



MITE - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.math.bas.bg/~albena/MITE/index.htm

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MITE
Methodics and Information Technologies in Education

**Международен конкурс
МАТЕМАТИКА И ПРОЕКТИРАНЕ 2
2007/2008**

Резултати

На 27.03.2008 г., в рамките на Националния преглед за млади изследователи "Енергетика и математическо моделиране" организиран от фондация "Млада България", в Художествената галерия в гр. Ямбол бяха представени [допуснати проекти](#) във Втори кръг на конкурса.

След представянето на проектите, журито [класира следните проекти за участие в международния кръг на конкурса](#) Москва:

	Заглавие	Град	Автор(и)	Направление
1	Математиката в българското народно творчество За изтегляне (zip, 36 MB)	Пирдоп	Борислава Бодурова, Габриела Павлова	Мат. и изкуство
2	Правилни пирамиди За изтегляне (zip, 18 MB)	Хаджи-димово	Васил Петрелийски, Петър Петрелийски, Борислав Шопов	Геом. миниатюри

Последна промяна:
10.04.2008

start MITE - Mozilla Firefox BG 18:06

THANK YOU FOR YOUR ATTENTION!