

# Informatics in Ukrainian Schools and *Bebras* Contest

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# Informatics in Ukrainian schools

- **2- 11 classes**
  - Optional study of various sections of Informatics (OS, basics of Internet, text and graphics editors, presentations, algorithmic languages)  
approximately 30% of pupils.
- **9-11 classes**
  - **Mandatory study under approved state programs.**  
In recent years the share of the algorithmic and programming section decreased 3 times. It increases the share of modern custom office applications

# Structure of Ukrainian contest

- Age Groups
  - 5-7 classes (11-13 years)
  - 8-9 classes (14-15 years)
  - 10-11 classes (16-17 years)
- 3 sections of 10 tasks
  - Initial Computer Science (History of informatics, OS, Hard Ware, Internet)
  - commonly used office applications(text and graphics processor, computer presentations, spreadsheets...)
  - Algorithms and programming

- Competition running time – 90 minutes.
- No penalty points for wrong solution interactive tasks. Partial solution is estimated fewer points.
- 50% tasks are from Ukrainian authors, and 50% - of foreign authors.
- 2010 year - 26 000 participants
- Each student receives a CD with comments and solutions of problems after the contest. The tasks on the history of informatics are particular important. in the explanation to these tasks is underlined, that lot of famous inventions in informatics were done in the countries with high level of democracy. And there are many examples, when authorities of totalitarian countries blocked progress of ICT (intentionally or through lack of understanding).

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# Tasks by countries

## •Lithuania

- Twiddling
- Arrangements
- Mirror
- Taking pictures

## •Slovakia

- Resizing pictures
- Encoding pictures
- Beetle path

- **Austria**
  - E-Mail: Update your data
- **Czechia**
  - A pavement
- **Estonia**
  - First audio CD
  - Document format
  - Average spreadsheet
- **Finland**
  - Sorting game
- **Netherlands**
  - Running
  - Beaver in his canoe

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- **Germany**
  - Multiple sockets
  - OX
  - Mysterious picture
  - Water supply
  - Stack of Plates
- **Italy**
  - At the library
  - Calculus online
  - Writing online
  - Graphics and events
- **Romania**
  - Colors
  - Chart error

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- Analysis of results-2009 showed that transition from algorithm foundations to creating own programs by pupils going too fast in ukrainian schools. So last year we had a lot of interactive tasks for implementation of ready algorithms in the tasks of second and third level:

- Task OX (mandatory)

- While the cursor is not at an **X**  
write an **O**

While the cursor is not at the beginning of the line

write an **X** and move the cursor two places to the left

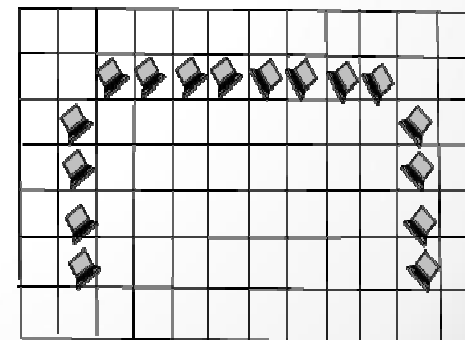
[OX.avi](#)

- Sorting game (mandatory)

[Sorting Game.avi](#)

- Computer Laboratory

[Computer laboratory.avi](#)

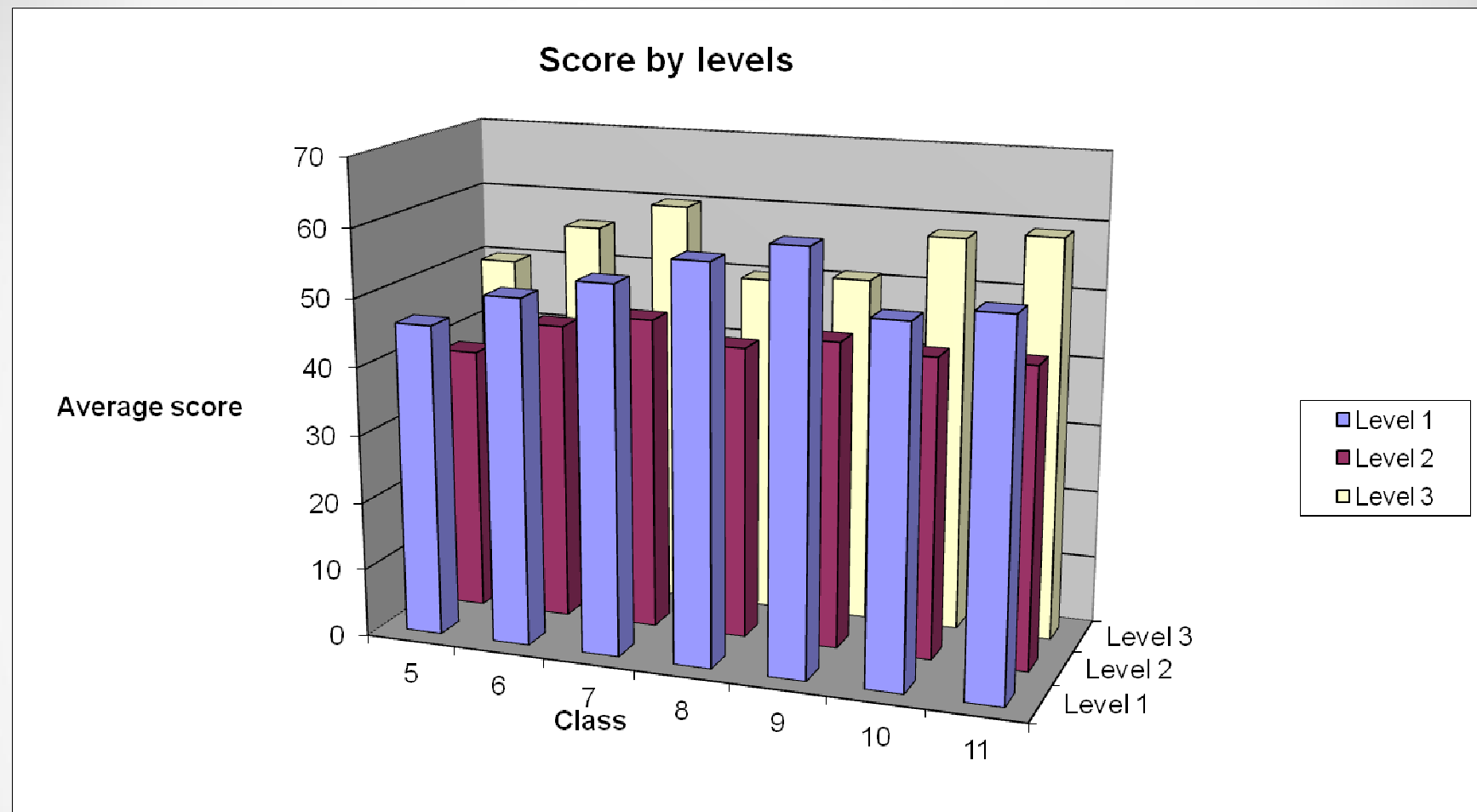




- Games against the computer
  - Rook (to set a rook in the top right corner)
    - [Rook.avi](#)
  - Candles (You can only put out less than half the lighted candles. Winner makes the last move)
    - [Candles.avi](#)
  - Matches (You may move from any level less than half the matches)
    - [Mathes.avi](#)

## Contest Results

After introduction of algorithmic ideas in the tasks of the second level (office programs), the results of the participants on the objectives of this level were unexpectedly lower than at other levels.



This problem we will try to solve in the new competition