

ODYSSEY OF THE MATHEMATICAL MIND

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We share with the audience a few reflections about our experiences in teaching mathematics for students of Humanities. Our course *Mathematical Puzzles* is attended mainly by the students of cognitive science, accidentally also by some students of linguistics. We are preparing a text *Odyssey of the Mathematical Mind* embracing the material covered by the course. Recently, it contains about 120 puzzles with solutions accompanied by commentaries. Puzzles are divided into more or less homogenous groups, including such topics as: the Infinite, numbers and magnitudes, movement and change, shape and space, orderings, patterns and structures, algorithms and computation, probability. We present also a bunch of logic puzzles, paradoxes and sophisms. The goal of this project is pretty obvious: attending the course may be viewed as a training in efficient problem solving. The students are encouraged to be creative in critical thinking, in free development of mathematical imagination, in formulating brave hypotheses which involve mathematical reasoning. The puzzles discussed during the course differ from standard mathematical exercises in many respects. They always contain an intriguing plot and the solution appears usually as a surprise contradicting common sense intuitions based on everyday experiences. More important than solutions themselves is the analysis of the ways to solution: the techniques, methods, heuristics, etc. used in attacking the problem.

So far the course appeared to be quite successful: the students are active and seem really to be interested in this enterprize. It is easier for them to acquire small chunks of dissipated knowledge rather than to listen to detailed expositions of whole theories (which they can get from textbooks anyway).

In the lecture we will give examples of puzzles from our course. We are going to select the most funny puzzles, hoping that the audience will share with us the joy of solving them.

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