

The Ability of Contemporary University Students to Solve 18th Century High School Word Problems

(Talk)

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During the last two centuries, sciences and mathematics established themselves as fundamental for the development of the modern society, and their impact of everyday life continuously increases. Accordingly, the corresponding subjects in elementary and secondary education were becoming more and more pronounced and nowadays students learn more advanced topics than even several decades ago. Therefore one should expect that the knowledge of a contemporary student includes all of the mathematical knowledge and his skills at problem solving outrank by far those of a student from several decades (even more so: several centuries!) ago. In this presentation, however, we will demonstrate that this is not necessarily the case.

A study was conducted on basis of word problems in elementary algebra taken from an 18th century algebra textbook intended for students of lower classes of grammar schools. A questionnaire containing two problems from that book was given to about 500 university students (mathematics, sciences, and technical) at three different universities in Croatia. The somewhat surprising results of the study, and the apparent inability of the majority of tested students to solve simple algebraic word problems (which require only knowledge of four basic arithmetic operations) will be the topic of this presentation.

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