

ABSTRACT

This diploma thesis investigates different approaches to solving word problems with systems of equations. The thesis aims to discover which strategies are used by senior students when solving these word problems and documents the processes involved.

The research presented in the thesis is based on an in-depth analysis of the database of student cut-outs from five word problems of the common part of the Maturita exam, specifically from the spring terms between the years 2016 and 2020.

The theoretical part involves an analysis of three textbooks for high school students in the Czech Republic which incorporate the named phenomena. Furthermore, this part includes a list of student strategies for solving word problems, moreover, the reader is provided with a description of the state Maturita exam in Mathematics.

The empirical part contains an overview of several possible procedures prepared during an a priori analysis. It also presents psychometric features of the chosen word problems by incorporating statistical outcomes. In addition, cut-outs of students' answers are divided into various groups based on the chosen solving strategies, thus demonstrating the possible techniques used by the students when solving this type of tasks.

The principal conclusions demonstrate immense omissions, supporting the theory of word problems being arduous for students.

KEYWORDS

mathematical word problem, system of equations, solving procedures