

ABSTRACT

This bachelor's thesis is a collection of solved problems from combinatorics on the topic of variations without repetition. The thesis consists of two main parts. The first part is theoretical and is further divided into four sections. The first section deals generally with the Concept Cartoons method, its use, and its significance. The second section covers the use of the Concept Cartoons method specifically in this thesis and the form of the problems included. The third theoretical section discusses the a priori analysis, its use in this thesis, and its structure. The last theoretical section deals with strategies for solving combinatorial problems, focusing on as many problem-solving strategies as possible.

The next part of the thesis is the collection of problems itself. Each problem is presented with a textual assignment and enriched with the Concept Cartoons method. The purpose of using the Concept Cartoons method is to encourage teaching in a discussion format and motivate students to engage in the discussion. Furthermore, each problem is analysed in detail using a priori analysis. The main aim of this analysis is to cover as many correct and incorrect solutions to the problem as possible, thus preparing the teacher for what they might encounter when using this problem.

KEYWORDS

Combinatorics, Variations, Mathematics, Problem Solving Strategies, Concept Cartoons,
A priori Analysis