

## Abstract

The bachelor thesis History of logic as an inspiration for mathematics education endeavors to integrate pieces of knowledge and examples taken from the history of logic into the entire mathematics, especially into mathematics education.

The introductory overview chapter illustrates the development of the process of logical inference, and simultaneously it indicates the position of logic in the pantheon of all branches of science in the particular periods of history. The second chapter deals with the different ways of formalizing logic. First I discuss Aristotle's construction of formal logic as a system of syllogisms. That system is analyzed from the point of view of a classification of syllogisms and the proof of their validity, as well as from the point of view of several medieval memorizing formulas and the different diagrammatic methods for representation syllogism.

The next two chapters describe the contribution of George Boole and Gottlob Frege. In the text I try to compare their approaches to logic and describe the most important principles and accents, present in their works. The third chapter is a purely practical one; it starts with a short overview of the situations, where logic is implicitly included in mathematics education without our being aware of it. Next three short sub-chapters deal with sophisms, tables of truth values and the phenomenon of self-reference. There are discussed several examples, which are related to these three problems. Further, these three sub-chapters are also related to passages in the second chapter, especially to Aristotle's syllogisms, to Boole's project of arithmetization of logic and to Frege's work, which is also affected by the self-reference paradoxes.