

ABSTRACT

This thesis didactically maps and describes new didactical mathematic environment and the possibilities of its application in teaching in the first grade of primary education. In this thesis I describe the process of an experiment conducted with pupils of the 1st – 5th year of elementary school, with whom I have tried and verified a series of new environment exercises. Based on the reflection of this experiment, and the analysis of pupils' solutions, I formulated a final version of these exercises. I led the process of the whole experiment in line with the constructivist educational style. In the theory part, I am mentioning the important terms of mathematics and its didactics, that are necessary for the purposes of this thesis, and that I refer to the relevant professional literature. This thesis also contains the analysis of chosen textbook collections that are related to its topic. The last part of this thesis is the final and complete series of exercises useful for teaching mathematics in the 1st grade of elementary school, especially if the teacher aims to purposefully develop the pupils' understanding of the terminology and relations from the mathematical areas of analytic geometry, functions and sequences.