

Abstract

This thesis deals with teaching the basics of calculus in secondary school. These are specifically those areas of mathematics (functions, derivatives, integrals) that are subsequently discussed in more depth at universities of science, technology, economics, and also other fields. Most university students will encounter these math problems at least to a small extent. Therefore, I am interested in the extent to which pupils are prepared to solve these problems after leaving high school. The second topic that I am interested in is how much the pupils encountered the topics and terms of calculus during their secondary school studies, how they understand them and whether or not they can use them.

The aim of this thesis is to describe the methods used in education of elementary school calculus in a specific seminar where this material is discussed and subsequently verify the ability of the pupils to independently solve problems from this field of mathematics by a set of didactic tests and their subsequent analysis.

The analysis showed that the subject of calculus is for the most part well understood by the pupils. The seminar therefore fulfills the prerequisites for a successful introduction to this subject, which can be successfully expanded on in further higher education.

Key words: teaching calculus, secondary school, calculus, derivation, integral, limits, function.