Abstract

The aim of my Bachelors thesis is to explicate students coming to the university the key problems in fundamentals of mathematical analysis. I focus on the most notable terms of continuity and limit, which these secondary students were acquainted with. However, majority of them just intuitively and informaly. I am trying to point out the fact, that the knowledge of many students is distortid and uncomplete. As a result it is necessary to practise and clarify this knowledge so that the intuitive imagination of these terms corresponds to the formal definition. I am trying to get this point by breaking of intuitive imaginations of students by counterexamples. Important is a chapter named The Construction of Functions, which contains instructions leading to the finding functions with specific features. Not only these features, described in this thesis, but also more complex such as derivation, primitive function or uniform convergence. It is a consequence of the fact, that the principle of examples to practise these terms is in many sights similar and repetitious. In chapters named Continuity and Limit, I am interpreting these terms using the special examples, which are in my opinion optimal for rehearsing. My intention is to help illustrate selected problematical sections of mathematical analysis.