

Title: Limit in the high school mathematics

Author: Bc. Ľuboš Podobník

Department: Department of Mathematics Education

Supervisor: Doc. RNDr. Oldřich Odvárko, DrSc., Department of Mathematics Education

Abstract: This work consists of 2 parts: analysis and synthesis. In the first part there are analysed various czech and slovak textbooks and one german textbook of mathematics for high schools from the point of view of approach to terms like limit of a sequence, limit of a function and derivative of a function. On the basis of this analysis there is developed a text for the high school level (in the second part of this work), which deals with propaedeutics of these terms, the methods of their launch and the clarification with specific examples.

We deal in particular with the propaedeutics of limit processes and their application in the introduction of the limit of a sequence and the limit of a function. The conception of interpretation is also important, including the sequence of the terms and creating links between the limit of a sequence and the limit of a function.

Keywords: Limit, sequence, function, derivative.