

Abstract

Title: Web application for teaching basic knowledge of mathematics at secondary school

Author: Vladimíra Pavlicová

Department: Department of Mathematics Education

Supervisor: RNDr. Jarmila Robová, CSc.

Supervisor's e-mail address: robova@karlin.mff.cuni.cz

Abstract: The presented work is intended to serve as a teaching material for pupils of the first year of secondary school, focusing on the basic knowledge of mathematics. Specifically, it deals with the subject matter of powers and polynomials. It is composed of two sub-sections – an educational text, in which the subject matter is clearly explained and illustrated through solved examples, and exercises to practice, which allow pupils to check, eventually improve, their knowledge. Owing to the fact that the work has a form of a web application, the emphasis is placed on interactive elements (for example, step-by-step solutions, multiple choice tests), which increase the attractiveness of the presented curriculum for pupils. Pupils are therefore able to learn and practice the curriculum by enjoyable way. The fact that the application is freely available on the Internet can also increase pupils' interest in it.

Keywords: basic knowledge of mathematics, powers, polynomials