

Abstract

Title: Web application for teaching of trigonometric functions, equations and inequalities

Author: Matúš Kepi

Department: Department of Mathematics Education

Supervisor: RNDr. Jarmila Robová, CSc.

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

Abstract: The thesis is devoted to trigonometric functions, equations and inequalities, the focus is on goniometrical equations and inequalities. This work serves as a teaching material for students and teachers of secondary schools. The work contains a theoretical part, which explains the basic knowledge of trigonometric, inverse trigonometric, hyperbolic and hyperbolometric functions and also of goniometrical equations and inequalities. The practical part contains the solved examples and tasks assigned to practicing. The work has a form of a web application, contains interactive elements (for example step-by-step solution, multiple choice tests, applets created by GeoGebra).

Keywords: trigonometric functions, goniometrical equations, inequalities goniometrical