Abstract

This master's thesis explores the possibility of including Taxicab metric as a subject matter into instruction at lower secondary level of education and it does so in several ways. Firstly, it looks into a curricular document of state level (Framework Educational Programme) and discusses instances at which the subject matter and the concept of lower secondary education are in agreement. Secondly, this thesis analyses a selected series of textbooks with respect to exercises that can be seen as linked to non-Euclidean metrics. Furthermore an experiment is described and evaluated, whose purpose, as a part of this thesis, was to find out if selected pupils can successfully solve problems in the context of the Taxicab metric and if related instruction influenced pupils' understanding of the concept of line segment and circle in a desired way. The teaching material which constituted an integral part of the experiment is presented as well.