Abstract

The aim of this work is to increase awareness about the existence of another geometries which are not taught at secondary and high schools in common. The work should be understandable to talented high school students and others, who are interested in geometry and mathematics. Specifically it is focused on hyperbolic geometry in the plane and theorems equivalent with the fifth Euclid´s axiom. The thesis tries to work with the imagination of readers to understand better the issue. The new knowledge are illustrated on selected models of hyperbolic geometry. This text can help to introduce students to the subject of non-euclidian geometry at universities.