

Title:

Curves of constant width

Author:

Miroslav Němec

Department:

Department of Mathematics Education

Supervisor:

RNDr. Antonín Slavík, Ph.D., Department of Mathematics Education

Abstract:

The aim of this thesis is to familiarize the reader with the notion of the width of a given plane curve, and with curves having the same width in all directions. We focus our attention especially on those curves that are constructible using straightedge and compass. The chapters presenting the definition and measurement of curve width, as well as the construction of curves from circular arcs, are accessible to high-school students. We also briefly mention other related topics, such as the solids of constant width.

Keywords:

Width of a curve, constant width, construction, properties