

TITLE:

Tools for 3D modelling in teaching solid geometry

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ABSTRACT:

The key topic of the thesis is the possibility of enhancement of the teaching of solid geometry through a 3D modelling program of choice. The theoretical part of the work defines solid geometry as a branch of mathematics. It furthermore investigates spatial visualization ability as a crucial one for understanding this particular area; and also explains the possibilities of computer program usage. The practical part starts with an inquiry into the use of ICT tools at secondary schools in the Czech Republic. Then there is an overview of the programs suitable for teaching, and methodology for a particular section of solid geometry curriculum. The suggestions mentioned in the methodology section have been used during class work (the 7th year students of an 8-year comprehensive grammar school), as specified in the last part of the work. Thus we have researched the actual practical use of our theoretical inferences.

KEY WORDS:

Tools for 3D modelling, ICT support for education, spatial visualization ability, solid geometry