

ABSTRACT

Bachelor thesis is focused on problems in which we encounter polyominoes. Its aim is to evaluate the potential of polyominoes for school mathematics, specifically for mathematics at lower secondary school. The bachelor thesis is divided into three main parts. The first of these parts focuses on general information about polyominoes. It includes the definition of the term polyominoes, the history of polyominoes, their classification and also the definition of polyforms as a generalization of polyominoes. The second part of the thesis describes what the tasks with polyominoes that appear in selected textbook series for lower secondary school are devoted to, and partly the number of tasks that appear in each textbook series. The last section is devoted to other types of tasks and activities with polyominoes that could be included to the education. The conclusion of this thesis is that polyominoes have a potential for lower secondary school mathematics, mainly because polynomials cover many topics, polynomials have an illustrative and simple form, and we can solve problems by manipulation with them. The most problems with polynomials can be found in the textbooks of the H-mat publishing house, the least in the Fraus, Prometheus and SPN textbooks. Given that pupils encounter polyominoes at least in the form of cube networks during their studies at lower secondary school, it is a pity not to introduce them to pupils earlier and to include them in other topics where they can help teachers to meet their educational goals.

KEYWORDS

polyomino, plain geometry, tiles