TITLE: Didactical situations in mathematics at lower secondary level.

The classification of quadrilaterals based on selected characteristics.

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ABSTRACT:

This thesis deals with the possible use of the Theory of didactical situations in mathematics at the lower secondary level of Czech school. It is specifically focused on the classification of quadrilaterals based on selected characteristics.

The thesis consists of two parts, theoretical and practical. The theoretical part deals mainly with the introduction of Theory of didactical situations, defining and explaining their basic concepts. The thesis also briefly introduces currently existing curricula in the Czech Republic, in which quadrilaterals were the author´s main focus. Furthermore, the topic is analyzed from educational materials (textbooks) used in Czech primary schools.

In the experimental part of the thesis the author presents a detailed script of educational unit. It is a practical demonstration of a particular theory of didactic situations in teaching mathematics at the Czech elementary school, which is developed and implemented according to the principles of the theory of didactic situations. The thesis also shows the process of evaluation within prepared educational unit. The aim of the experiment was to prepare different structure of a didactical situation in teaching quadrilaterals in the Czech school according to the Theory of didactical situations, what the pupils´ reactions will be and how successful they will be in relation to the desired outcomes of curriculum content.

KEY WORDS:

Didactical situations in mathematics, teaching mathematics at lower secondary level, constructivism, quadrilaterals in the plane, classification of quadrilaterals.