

MATHEMATICAL ABILITIES: IDENTIFICATION AND DEVELOPMENT

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Successful differentiation and individualization of teaching mathematics depends greatly on teacher's knowledge of mathematical abilities, their components and classification. The paper aims to present brief theoretical basis of mathematical abilities, to verify some of them in the results of experiments, and to suggest the modes of developing mathematical abilities.

The first part of the paper, discusses different definitions, nature and structure of mathematical abilities. It then gives a brief overview of similarities and differences in the main conceptions about mathematical abilities. The second part of the paper presents results of the research that intends to explore the relationship between the development of mathematical abilities in primary school students (10 – 11 years old) and their gender, intelligence, grades in mathematics, results on mathematics knowledge test, educational status of their parents. Comparison between nominations of parents, primary teachers and peers is made. The final part of the paper, discusses different ways of developing mathematical abilities in the classroom. It proposes the content that can be used for developing and fostering mathematical abilities in primary school children.

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