

## Developing creativity of schoolchildren through the course "developmental mathematics"

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### Abstract

© Authors. The relevance of the present study is due to the importance of developing creativity which can be achieved through a variety of school subjects including mathematics. In the article the potential of extended (supplementary) mathematical education (in primary and secondary schools) is highlighted. The main objective of this study is to examine and evaluate the contents, practices and methods that are currently employed in extended education. The main empirical method of this study is modeling of the modular system of lessons (the course) that offers a variety of assignments including non-standard tasks, puzzles and problems; tasks and topics from academic Olympiads and other mathematical competitions; creative tasks, practical assignments and experiments with mathematical materials ("empirical" mathematics); team and individual competitions and organization of home readings on a specific subject. The article describes the author's methodology. The main feature of the developed course is the inclusion of various organizational forms and diverse materials aimed at sustaining schoolchildren's interest towards mathematics, enabling them to deal with advanced level mathematical problems and developing their curiosity and creativity. The course "Developmental Mathematics" that is presented in this article has been empirically tested since 2008.

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### Keywords

Continuous creativity development, Extended mathematical education, Organization of extended mathematical education, Primary and secondary schoolchildren

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