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Mathematical problems for the gifted: the structure of problem sets.

Ubuz, Behiye (ed.) et al., CERME 8. Proceedings of the eighth congress of the European Society of Research in Mathematics Education, Antalya, Turkey, February 6–10, 2013. Ankara: Middle East Technical University (ISBN 978-975-429-315-9). 1185-1194 (2013).

Summary: This paper discusses the structures of problem sets from textbooks for the mathematically gifted and suggests ways to analyze these structures. It is argued that seemingly purely technical details, such as the presence and quantity of simple problems or the grouping of problems, reflect important aspects in the understanding of gifted education, and more broadly, of the education of all students. An analysis of existing textbooks along the lines proposed here, it is argued, is useful for working teachers and textbook authors. But it may also interest a wider circle of mathematics educators, making it possible to pose a series of questions that may lead to new research.

Classification: D50 C40 U20

Keywords: textbooks; gifted students; problems; problem sets; schools with an advanced course in mathematics