

DIAGNOSING STUDENTS' DIFFICULTIES IN LEARNING MATHEMATICS: THE CASE OF BINARY OPERATION

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ABSTRACT

The aim of this study is to diagnose students' difficulties in learning binary operation and its properties. A test consisting of 16 open-ended questions is applied to 74 students studying in the Department of primary school education of Agri Education Faculty at Ataturk University, Turkey. In addition to this, a semi-structured interview is applied to fifteen students to understand their learning difficulties clearly. The results indicate that the distributive and associative properties of binary operations have not been learned in the conceptual level and so students have more difficulty in these properties. It is also found that students have more difficulties in operations with the rules than those with the table.

Keywords: Abstract algebra; binary operation; learning difficulty; properties of binary operation.

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