CLASSIFICATION AS A TOOL FOR ACQUIRING KNOWLEDGE

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Abstract: The most substantial deficiency of mathematical knowledge in our students is the formalism of their knowledge. The students' memory stores knowledge as more or less isolated principles, precepts, formulas, algorithms, definitions and statements. Any interconnection or structure is missing. The worst problem is that the students feel no need to structure their knowledge and often disbelieve that they are able to do it. The basis of our research is to focus on these problems. The purpose of it is to identify and analyze cognitive and meta-cognitive functions which participate in building mathematical structures and to show the ways of diagnosing and re-educating misconceptions. The aim of this contribution is to provide concise information about one of these functions, which is classification. By classification, we mean: 1) a type of organizing a set of objects and phenomena; 2) a cognitive process which realizes such organization of objects and phenomena; 3) a cognitive function which a person uses during this process. In this contribution, we shall mainly focus on the latter two meanings of "classification".

Keywords: association, distribution, gallery, classification criterion, classification game, cognitive function "classification", class of partition, universe, ordering, outer classification.