

# New multiset operations

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## Abstract

According to several authors, the theory of multisets is far from being complete. They think the theory holds many new things for researchers to discover. The concept of a multiset itself can be interpreted in several ways. One approach is based on an equivalence relation interpreted on a set. Another interprets multisets as functions. The aim of this research is to bring the two approaches closer together. All this is based on the informatics approach to the concept of sorts. This approach can be paralleled with the concept of Pawlak's information system. Another theme of the presentation is the question of expanding operations that can be interpreted among multisets. Interpretation of operations between multisets and discrete elements has already arisen in earlier publications - at the beginning of the millennium. Expanding on this line of reasoning it is possible to interpret operations that require separate operations for each sorts. All of these can be introduced through simple examples that are close to the real-life problems.

*Keywords:* concept of multisets, sorts, Pawlak's information system, multiset operations