

Arithmetic by Manipulatives

A philosophical-didactic Analysis of selected historical Examples

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abstract

From psephoi and different geometric-graphical diagrams to a variety of manipulatives and visual aids have been omnipresent at least in the early history of arithmetic. Even if they gradually lost their proving function within strict mathematics, their importance for teaching and learning mathematics remains unbroken. In our talk, some manipulatives-using approaches from the history of mathematics education will be examined and classified with the help of philosophical resp. didactical categories of arithmetical intuition. On the one hand, this opens up a comparative view of educational approaches to the teaching of elementary arithmetics over the centuries and offers a framework to integrate further examples from history suggested by the audience. On the other hand, the historical approaches examined allow a classification of proposals for the use of (digital) manipulatives in the teaching of arithmetic in primary school, today.