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Analysis and synthesis in mathematics. History and philosophy.

Kluwer, Dordrecht (ISBN 0-7923-4570-3). 456 p. (1997).

Since Plato, there have been many interpretations of the ideas of analysis and synthesis, which are related to mathematical thought. Mathematicians have appealed to them to distinguish different forms and styles in their argumentations and expositions. Philosophers have referred to them for clarification of the specific character of mathematical knowledge. In the present volume various instances of the analytic-synthetic distinction are discussed in relation to the history and philosophy of mathematics, and some new perspectives about possible interpretations and consequences are suggested. Such an inquiry is motivated by two convictions. First, behind such a variety of interpretations, an invariant kernel seems to subsist. Second, the discussion of these interpretations seems to be a Königsweg for tackling one of the essential problems mathematics presents for historians and philosophers, the problem of objectivity as a form of knowledge. The articles of this book are reviewed individually in ZDM/MATHDI.

Classification: E20