

# Textbooks on High School Algebra in 18<sup>th</sup> Century Habsburg Empire (and Elsewhere)

(Talk)

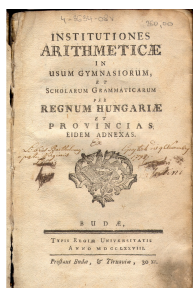
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About 1800, the industrial revolution in Europe called for a new public education systems and curricula that included mathematical topics needed in everyday business life. Consequently, at that time reckoning and elementary algebra were introduced as compulsory subjects into elementary and grammar schools. Because of the need for a re-ordering of existing methods for teaching arithmetics and basic algebra, textbooks had to be written "from scratch", although several older textbooks on the subject existed, *e.g.* the *Rechenbücher* of the German private teachers.



Title page of Steindl's *Institutiones Arithmeticae*, Budapest, 1778.

A widely used textbook on elementary algebra in the Hungarian part of the Habsburg Empire directly after reforms of the education system in the 1770-es was Franjo Steindl's textbook *Institutiones Arithmeticae in usum Gymnasiorum et Scholarum Grammaticarum per Regnum Hungariae et Provincias eodem adnexas* (first edition: Budapest, 1778; there were several later, 19<sup>th</sup> century, editions of this textbook). It includes a detailed and complicated description of reckoning methods and their practical applications, illustrated (as usual in that time and in sharp contrast to modern textbooks) exclusively by "problems in context". The book includes many instructions for the teacher, so it is one of early textbooks paying attention to methodology of teaching, but the matter is presented in an older, formal "question-and-answer" style with only occasional attempts of justification. In this presentation an overview of this textbook as well as its comparison to other textbooks of that time used in the Habsburg Empire and Germany shall be given.

MSC2010: 01A50, 97-03, 97H20, 97F90, 01-01.

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Section: 20. History of Mathematics.