

# Algebraic partitioning problems from Luca Pacioli’s Perugia manuscript (Vat. Lat. 3129)

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## I Introduction

### I.1 The manuscript

Given the importance attributed to Luca Pacioli’s *Summa* for over five centuries, it can only come as a surprise that so little attention has been paid to his earlier book on arithmetic and algebra, the until recently unpublished manuscript Vat.Lat. 3129. The book bears no title although several have been attributed. van Egmond [51] names it *Opera di mathematica*, others have used the title *Tractatus mathematicus ad discipulos perusinos* [10] [9] [11], or *Trattato d’arithmeticana* [31]. The first description of this work dates from 1879 by Baldassare Boncompagni in his *Bullettino* [7]. He included a transcription of the first three folio’s of the manuscript. Emmett Taylor wrote a comprehensive biography of Pacioli based on what Jayawardene has described as “secondary sources and, where these were found wanting, on the author’s imagination” ([31], 22). The biography includes a reliable description of the context in which the manuscript was produced ([47], 127-129). From the text itself it can be established that the manuscript was commenced on 12 December 1477 and completed on 29 April 1478 (*f.2<sup>r</sup>*). The writing took place at the beginning of a three-year period where Pacioli was teaching at the University of Perugia (1477-1480). The book is dedicated to his students at this location. Taylor includes a reproduction and transcription of one page.<sup>1</sup> A detailed paleographic description and provenance is included in Warren van Egmond’s *Catalogue* ([51], 219). With the fifth centennial of the publication of Pacioli’s *Summa*, a more detailed description has become available from a conference in Sansepolcro in 1994. Giovanna Derenzini [15] adds to van Egmond’s description with a complete foliation, a list of missing pages, the watermarks, a rough table of contents and some comments on its contents including the comparison of one problem with a corresponding one in the *Summa*. In 1996, Giuseppe Calzoni and Gianfranco Cavazzoni published a complete transcription of the manuscript [9], a considerable feat which went unnoticed by most scholars

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<sup>1</sup>Taken by Taylor from Boncompagni’s article without acknowledgment, insert between pp. 132-3.