

Relations between Arithmetic and Geometry in Piero della Francesca's *Libellus de quinque corporibus regularibus* (c.1412 - 1492)

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Abstract

This work aim to analyse relations between Arithmetic and Geometry indicated by Piero della Francesca (c.1412 - 1492) in his treatise *Libellus de quinque corporibus regularibus*. Piero della Francesca was a painter and scholar of perspective, geometry and arithmetic, in his time. He carried out investigations on pictorial, geometric and architectural issues. Of the treatises he wrote, only three are preserved, on perspective (*De Prospectiva Pingendi*), Geometry (*Libellus de Quinque Corporibus Regularibus*) and Arithmetic (*Trattado d'Abaco*). The central document selected for this research was the manuscript *Libellus de quinque corporibus regularibus*, deposited in the Vatican Apostolic Library in digitized copy. Throughout this work we have tried to understand the *Libellus de quinque corporibus regularibus* as a result of the work of an artist and scholar who proposed ways of relating Arithmetic and Geometry using both his practical knowledge and the works of authors of antiquity.

Keywords

History of Science; Piero della Francesca; Arithmetic and Geometry; Quantification of Geometry.

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