A reconstruction of
Maurolico’s tables
of sines, tangents and secants (1558)

Denis Roegel

2 September 2021
(last version: 2 September 2021)

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Introduction

This document gives exact (modern) reconstructions of Francesco Maurolico’s trigonometric tables published in 1558 [1] (figures 1, 2, and 3). There are three tables, and each gives the value of a function (sine, tangent, secant) for each degree of the quadrant, and with a radius $R = 100000$. The differences are given for each value, both in decimal and sexagesimal. For instance, the difference given for $\sin 51^\circ = R \sin 51^\circ$ is 1111, because $\sin 51^\circ - \sin 50^\circ = 1111$. And the sexagesimal corresponding value is 18.31, because $1111 = 18 \cdot 60 + 31$.

For the tangents and secants, Maurolico also gives their values for five or six more values at the bottom of the pages. In my survey [2], I describe the context of these tables and how their values have been computed.
Figure 1: Maurolico’s original table of sines [1] (source: Österreichische Nationalbibliothek).

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TABELLA SINVS RECTI.

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Figure 3: Maurolico’s original table of secants [1] (source: Österreichische Nationalbibliothek).
References


Maurolico’s sines, tangents and secants (1558) (reconstruction, D. Roegel, 2021)

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