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★ **Thomas Harriot's doctrine of triangular numbers: the 'Magisteria magna'.**

Edited by Janet Beery and Jacqueline Stedall.

Heritage of European Mathematics.

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Thomas Harriot (1560–1621) was one of the most gifted mathematicians of his generation but he was not given to blowing his own trumpet and he published very little during his lifetime. His “Magisteria magna (great doctrine) concerning triangular numbers” is contained in a manuscript treatise of 38 pages, which was never published but survived among the several hundred pages of mathematical work left behind after his death. These pages are presented here in facsimile, with a commentary to help the reader follow Harriot’s beautiful but almost completely non-verbal presentation. An introductory essay preceding the treatise gives an overview of the contents of the “Magisteria” and describes its influence on Harriot’s contemporaries and successors over the next 60 years. Harriot’s method was not superseded until Newton, apparently independently, made a similar discovery in the 1660s. Harriot worked out his method in considerable generality, and expressed the relevant formulae in something very close to modern algebraic notation, but the extent of his achievement has not been fully recognised. His new mathematical ideas were disseminated between small groups of friends, and later passed from one generation to another, without appearing in print texts. Communication was primarily through verbal explanation and discussion, accompanied by a few key manuscripts that circulated from hand to hand and were borrowed, copied, and talked about, in some cases over periods of up to 30 years. Apart from Harriot and Briggs, the people who wrote, read, or thought about these methods were not outstanding or innovative mathematicians, but all of them worked at the subject seriously and were a part of small and fluid communities that over the years contributed in a variety of ways to the vitality of mathematical studies in England.

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