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LETTER TO THE EDITOR

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The first written evidence of a knowledge of the relationship between the Fibonacci sequence and division in extreme and mean ratio (the "golden number") has been considered to be a letter written by Kepler in 1608. However, a recently discovered marginal note to theorem II,11 (the geometric construction of d.e.m.r.), in a copy of Paccioli's 1509 edition of the *Elements*, which includes the terms 89, 144, and 233 of the Fibonacci sequence shows that this relationship was already known in the early 16th century. Further, the appearance of the product terms 20736 and 20737 strongly suggests—although the text presents certain difficulties in interpretation—that the author of the note was aware of the result

$$(f_{n+1})^2 - f_n \cdot f_{n+2} = \pm 1.$$

A photograph of the note together with a transcription of the Latin and a translation appear in [1], which also examines existing evidence, and theories proposed in the literature, for a knowledge of the relationship in earlier periods. This text is also discussed in [2, section 31, J], which is entirely devoted to a history of division in extreme and mean ratio including its relationship to the Fibonacci numbers.

References

1. L. Curchin & R. Herz-Fischler. "De quand date le premier rapprochement entre la suite de Fibonacci et la division en extrême et moyenne raison?" *Centaurus 28* (1985):129–138.
2. R. Herz-Fischler. *A Mathematical History of Division in Extreme and Mean Ratio/Golden Number Studies I.* Waterloo, Ontario: Wilfred Laurier University Press, 1987.

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