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University of Maine, Orono, ME 04469. *Proving the Converse of Ptolemy's Theorem: A Case
Study of Geometrical Research in the First Half of the 19th Century*. Preliminary report.

In the course of the first few decades of the 19th century, quadrilaterals were the subject of numerous mathematical publications. The cyclic quadrilateral in particular received much attention. Many of the results on this special kind of quadrilateral were only minor variations of earlier findings or simplification of the proofs involved. One exception was the converse of Ptolemy's Theorem, which was a non-trivial extension of a classical result. In this note, I will outline the history of this converse and the context in which its various proofs were formulated. Specifically, I will discuss how this result went from its first rather cumbersome proofs to its inclusion in the standard high school geometry curriculum of the era. (Received September 12, 2020)