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Mathematical Practices: Synthesis

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Babylonian Shadow-Length Schemes: Between Mathematics and Astronomy

Abstract - Several cuneiform texts present schemes for the variation in the length of the shadow cast by a gnomon over the course of the day for the different months of the year (these texts are all discussed in J. M. Steele, “Shadow-Length Schemes in Babylonian Astronomy”, *SCIAMVS* 14 (2013), 3–39). These schemes combine aspects of traditional Babylonian astronomy such as a model for the variation in the length of daylight over the course of the year using a linear zigzag function with mathematical methods such as the use of reciprocal functions. Some of the texts presenting these schemes employ terminology which is mainly known from mathematical texts rather than astronomical texts and one tablet combines information on shadow lengths with a compilation of metrological material. In this paper I will discuss the place of the shadow-length schemes between mathematics and astronomy in Babylonia.