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1003-01-1005 Kim Plofker* (plofker@math.uu.nl), Department of Mathematics, University of Utrecht, PO Box 80,010, 3508 TA Utrecht, Netherlands. Transmission and impact of mathematical tables.

The pre-electronic practice of tabulating selected values of some mathematical function, and looking up values in such tables instead of calculating them directly, is rapidly dying out among mathematicians in the age of computing machines. But most mathematicians still take tables for granted as an inevitable and universal feature of pre-modern mathematical sciences. In fact, tables were probably originally a technical tool for specific applications, which spread throughout Eurasian mathematics by transmission rather than re-invention. In this discussion we investigate early Mesopotamian tables and the eventual adoption of their format into Greek, Islamic, and Indian exact sciences. Special attention is paid to the comparatively late introduction of tables in Indian mathematics and the impact they produced on a mature mathematical culture. (Received October 01, 2004)