

International Conference on History of Ancient Mathematics and Astronomy

In Memory of Professor Li Jimin (1938-1993)

Algorithms in the mathematical sciences in the ancient world

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Critical perspectives on texts of algorithms in the ancient world

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Steps without meaning in Old Babylonian mathematical procedures

Abstract – The mathematical cuneiform problems are generally composed of a statement followed by a procedure, which itself is composed of a succession of steps. The meaning of the whole procedure emerges from the meaning of each step. However, the problems rarely appear isolated, and, the most often, belong to sets of several problems gathered in one clay tablet. Sometime, the meaning of the procedure cannot be detected at the scale of one individual problem, but can be understood by considering the whole set of problems it belongs to. This presentation focuses on sets of problems dated to the Old Babylonian period (early second millennium BCE) and analyzes examples of procedures composed of steps without meaning, and whose meaning can be grasped only at the scale of the whole set of problems.