

FRACTIONS IN THE *SUÀN SHÙ SHŪ*  
(CHINA, BEGINNING OF THE 2<sup>ND</sup> CENTURY BCE)

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ABSTRACT

The *Suàn Shù Shū* contains 301 instances of regular expressions for fractions. They can be “mono-dimensional” (formed with one integer name only) for unit fractions, “bidimensional” (with two integer names) for both unit and non-unit fractions, or lexicalized only for 1/3, 1/2 and 2/3. The present paper gives a complete description of the diversity of these forms. Bidimensional expressions are predicative phrases: the name *n fēn* of a unit fraction 1/n acts as subject and the numerator’s name as predicate; according to the syntactic context, the morpheme *zhī* can be used as an optional marker of this predicative relation.

KEYWORDS

Chinese historical syntax Fractions Numerical expressions  
Separable semantic units Measure words *Suàn Shù Shū*

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**Abbreviations** DECL: declarative; MW: measure word; NMLZ: nominalizer; Num: numeral; OBJ: object of transitive verb; RECP: reciprocal; 3OBJ: third person object pronoun; 3SBJ: third person subject pronoun; [*n*] (with a number *n* written in Arabic numerals): the monomorphemic expression of the number *n* in a given language; A(B) and A(BC): the character A is a rendition of the original character encountered in the Chinese corpus, the character B or the sequence BC in parenthesis is a modern form of what is understood for A. For example: 有(又), 廿(二十), 卅(三十), 卌(四十), 卅七(七十), 泰(大).

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# 西汉出土文献《算数书》分数表达

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## 摘要

西汉出土文献《算数书》中表达分数的短语有 301 例。本文全面描述该书的那些短语。在文中, 我把它们定义为“一维短语(即包括唯一一个整数名)”和“二维短语(即包括两个整数名)”, 前者表达单位分数, 后者表达单位和非单位分数, 除此之外还有三个词汇化的短语专门用于表达  $1/3$ 、 $1/2$  和  $2/3$ 。在二维短语中, 单位分数  $1/n$  作为短语的主语表达分母, 而表达分子的那个数名作为短语的谓语, 根据语境, “之”字可作为短语标志放在主谓语之间。

## 关键词

中文语法历史 分数 表数短语 离合词组 量词 《算数书》