

1077-01-501

**Joseph W. Dauben\*** (jdauben@att.net). *The Evolution of Geometry in ancient China, from the newly discovered Shu and Suan shu shu bamboo texts to the Nine Chapters*. Preliminary report.

Ancient Chinese mathematicians developed a wide variety of techniques for computing the areas and volumes of various geometric figures, along with detailed justifications for the results they obtained. By carefully examining the earliest bamboo texts currently known, including the Yuelu Academy's *Shu* and the *Suan shu shu* from Zhangjiashan, it is possible to suggest how and why various advances were made in theory and practice as geometry underwent various developments from the Warring States Period until the end of the Han dynasty. Liu Hui's commentaries on the *Nine Chapters* provide especially illuminating testimony for a number of sophisticated and very successful techniques, some of his own devising, that will also be discussed. (Received September 05, 2011)