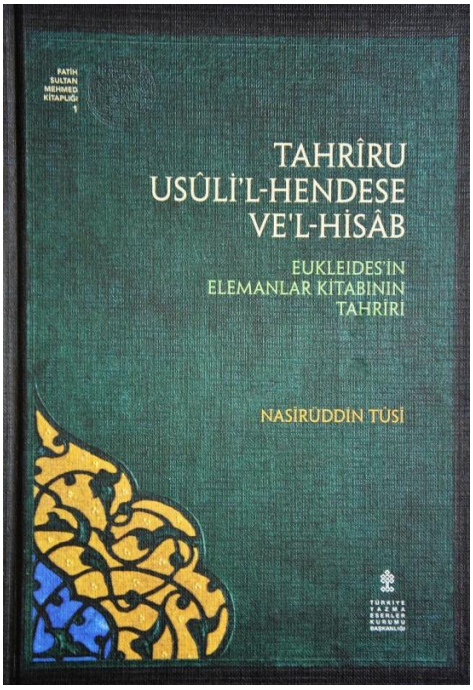
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# Naṣīr al-Dīn al-Ṭūsī, *Taḥrīr Uṣūl al-Handasa wa al-Ḥisāb*, ed. İhsan Fazlıoğlu (İstanbul: Türkiye Yazma Eserler Kurumu, 2012), 64+296 pp.

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Book Review
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This book is the commentary written on Euclid's *Elements* (*Stoikheia*) by Naṣīr al-Dīn al-Ṭūsī. It is the facsimile of the copy being in the periodical in Feyzullah Efendi, no 1359. The book consists of 23 lines. Dedication record is as follows: "Hādhā *Kitāb Taḥrīr Uqlīdis* ta'līf al-ḥakīm al-muḥaqqiq wa al-faylasūf al-mudaqqiq naṣīr al-milla wa al-dīn Muḥammad b. Muḥammad al-Ṭūsī raḥimallāh raḥmah wāsi'ah". Translation: "This *Book of Essay of Euclid* is writing of Muḥammad b. Muḥammad al-Ṭūsī, the investigator wise and explorer philosopher, the supporter of religion and faith, may God have mercy on him".




The titles of parts and geometric notation and symbols were written with gold water, and the shapes were drawn with red ink.

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In the postscript, the literal numbers given for the shapes, and geometric notation and symbols within the made corrections and additions were also written with gold water. It seems that red ink was used in some corrections on both the text and the postscript. There are abundantly corrections and additions in the postscript, but geometric shapes in the postscripts were drawn with black ink. In the folio 148a, it points out about the copy to be finished in 849, with a number.

Reasons for the translation movements and the place of mathematical sciences in Islamic civilization are a quite controversial issue. According to al-Bīrūnī, the first translation period in mathematical sciences in the Islamic world was from Pahlavi and Indian. The development of theoretical thought about theological discussions and linguistic inquiries has caused to change the direction of the translations. Because Greek mathematical sciences presented by Euclid had more theoretical construction with regard to Pahlavi and Indian mathematics devoted to practical and particular issues. This mental proximity was one of the most important reasons for turning back to Graeco-Hellenistic texts. The other reason for this turning was exact knowledge based upon an axiomatic method that included in Greek mathematical texts, notably *Elements* by Euclid. The given knowledge was universal because of compulsory and absolute.

*Taḥrīr* should be seen as a piece of the project *Taḥrīrāt*, so that al-Ṭūsī realized this project in order to annotate all the mathematical works. There are many author's works in this project such that Ptolemy, Archimed, Theodosius, Menelaus and Apollonius as well as Euclid. al-Ṭūsī follows a method in this work: When requires he reviewed and reconstructed the order of the work, correctsed the translation errors, removed some term mistakes in historical process caused by copiers, and updated language of the work. It consisted of the right and common terms in mathematical sciences owing to al-Ṭūsī's *Taḥrīrāt*. After al-Ṭūsī, it exactly be constituted a common language in the sciencetific and mathematical fields in the Islamic civilization.

In *Taḥrīr*, al-Ṭūsī considers all accumulation of Islamic world that he can reach. He, depending on his own mathematical formation, sometimes simplifies present proofs and sometimes improves, brings new evidence if needed, also mentions alternative proofs for present proofs. As a result of all these proofs, *Taḥrīr* would go beyond classical formation of Euclid's *Elements*. So, after al-Ṭūsī, it has eliminated the previous *Uṣūl* tradition and henceforth become a standard text all scientific studies.

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