

Deciphering Undecoded Books in Japanese Mathematics and its Analysis

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Research Topics

- Japanese mathematics
- Deciphering old books
- Math education

Research Seeds

Tohoku was once a lively land of mathematical research. Therefore, extremely valuable materials related to mathematics have been left in various places in Tohoku. In particular, Tohoku University Library has more than 12,000 mathematical materials. It is said to be the largest such repository in the country. Although cataloging by titles has been done, however, verification of their contents has been done only slightly: there are many undisplayed books. In addition, no concept existed of copyright in the publishing culture of the Edo period. Many similar books that imitated pirated copies and titles were issued for the propagation of books with excellent contents. Therefore, even if the title is the same, some books have different contents. Conversely, books with different titles exist even if the contents are the same. The actual quantity and contents of undecoded books on mathematics in Japan remain unknown.

When studying old Japanese mathematics, it is difficult for mathematicians to interpret the old books. For historians, mathematics is difficult. For this reason, the number of experts is in the country remains limited. Despite acknowledging their academic value, the current situation is that the decryption of new documents has not progressed much. Nevertheless, our school has teachers with expert knowledge related to the necessary subjects; moreover, Tohoku University Library is in the vicinity. This research is conducted in association with Associate Professor Akiko Tokutake and Associate Professor Madoka Nakayama of our school. Tokutake, who was working on interpreting old books of mathematics from the school days, is in charge of deciphering the old book. Nakayama and Tanigaki are in charge of deciphering and analyzing mathematics and verifying their academic and mathematical values.



Related Technology

- Elementary arithmetic
- Survey technology
- Science history of Miyagi prefecture