

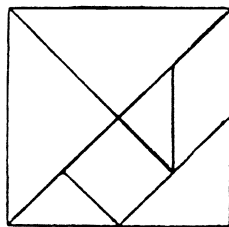
Japanese Tangram: The Sei Shonagon Pieces

Shigeo Takagi

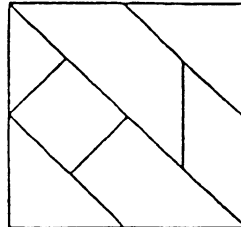
In 1974, I received a letter from Kobon Fujimura, a famous puzzlist in Japan. I heard that Martin Gardner had been planning to write about tangrams, so I sent a report about the Japanese tangram to him.

The tangram came to Japan from China in the early 19th century, and the Japanese edition of *Qiqiaotu Hebi (The Collected Volume of Patterns of Seven-Piece Puzzles)* (1813) was published in 1839.

In fact, Japan had a similar puzzle already. In 1742, a little book about Japanese seven-piece puzzles was published. The book was called *Sei Shonagon Chie-no-ita (The ingenious pieces of Sei Shonagon)*. Sei Shonagon, a court lady of the late 10th and early 11th centuries, was one of the most clever women in Japan. She was the author of a book entitled *Makura no Soshi (Pillow Book: A Collection of Essays)*.



(a) Tangram pieces.

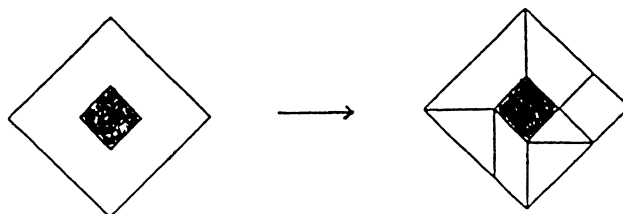


(b) The Sei Shonagon pieces.

Sei Shonagon Chie-no-ita is a 32-page book, 16 centimeters wide and 11 centimeters long. The introduction bears the pseudonym Ganreiken, but nobody knows its real author. There are 42 patterns with answers, but their

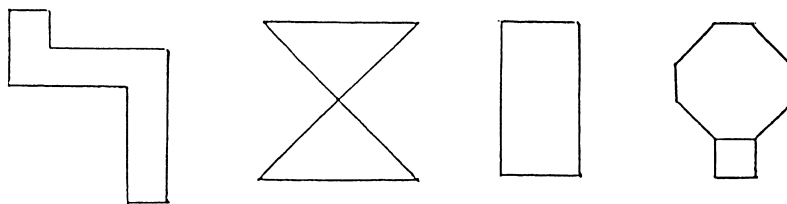
shapes are inaccurate. The puzzle was introduced to the world by Martin Gardner in his book *Time Travel*¹, and he elaborated as follows.

“Shigeo Takagi, a Tokyo magician, was kind enough to send me a photocopy of this rare book. Unlike the Chinese tans, the Shonagon pieces will form a square in two different ways. Can you find the second pattern? The pieces also will make a square with a central square hole in the same orientation. With the Chinese tans it is not possible to put a square hole anywhere inside a large square.”



A square with a center hole

I know of two other books that are collections of patterns of the Sei Shonagon pieces. In about 1780, Takahiro Nakada wrote a manuscript entitled “Narabemono 110 (110 Patterns of an Arrangement Pattern),” and *Edo Chie-kata (Ingenious Patterns in Edo)* was published in 1837. In addition, I possess a sheet with wood-block printing on which we can see patterns of the Sei Shonagon pieces, but its author and date of publication are unknown.



Some patterns formed from the Sei Shonagon pieces

¹1988, W.H. Freeman and Co., NY