

Construction and Analysis of Samurai Sudoku

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Abstract : Samurai Sudoku consists of five Sudoku square designs each having nine treatments in each row (column or sub-block) only once such the five Sudoku designs overlaps. Two or more Samurai designs can be joint together to give an extended Samurai design. In addition, two Samurai designs, each containing five Sudoku square designs, are mutually orthogonal (Graeco). If we superimpose two Samurai designs and obtained a pair of Latin and Greek letters in each row (column or sub-block) of the five Sudoku designs only once, then we have Graeco Samurai design. In this paper, simple method of constructing Samurai designs and mutually orthogonal Samurai design are proposed. In addition, linear models and methods of data analysis for the designs are proposed.

Keywords : samurai design, graeco samurai design, sudoku design, row or column swap

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