

1023-M1-1267 **Joyce Maxine Music*** (mmusic2@hotmail.com), P.O. Box 723, Prestonsburg, KY 41653, and
Robin Blankenship (mathrobin@alltel.net), 4020 KY 801 N, Morehead, KY 40351. *Book
Embeddings of Sudoku Graphs*. Preliminary report.

The popular logic puzzle Sudoku can be interpreted as a graph $S = (V, E)$ where each cell of the Sudoku puzzle is assigned a vertex in V , and if $\{v, w\} \in V$, then $(v, w) \in E$ if $\{v, w\}$ is in the same row, the same column, or the same block. A book embedding of a graph S consists of a linear ordering of the vertices in the spine (line) of the book and an assignment of edges to pages (half-planes) of the book such that no two edges cross in a page. The book thickness of S is the fewest number of pages needed to embed S in a book over all possible orderings of vertices in the spine. We prove that the book thickness of the 4 x 4 Sudoku graph is at most 6 pages. We will also discuss generalizations of this result to $n \times n$ Sudoku puzzles where n is a perfect square.

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