

Using singular values for comparing and classifying magical squares (natural magic and Latin)

Ian Cameron, Adam Rogers and Peter Loly

University of Manitoba, Winnipeg, Canada

Abstract

Developing the singular value part of an earlier study, published as part of an invited keynote talk at IWMS16 (Windsor, Canada) in 2007, we provide floating point and integer measures for comparing and classifying magical squares. Applications are made to Latin squares up to order 9, including Sudoku solutions, and natural magic squares over a wider range of orders, especially for those on a standard chessboard ($n=8$).

References

- [1] Loly, P., I. Cameron, W. Trump and D. Schindel (2009). Magic square spectra. *Linear Algebra Appl.* 430, 2659–2680.