

Review of: "Generalized N-metric Spaces"

Simon Davis

Potential competing interests: No potential competing interests to declare.

The selection of the spaces A and B is special and not immediately realizable in a general setting. The definition of the distance $d(x, y; N)$ in Eq.(3) introduces discontinuities. With the standard definition of the distance in the real plane, for example, the inequality $d(x, y; N) \leq \sum_{i=0}^{N-1} d(x_i, x_{i+1}; N)$ is valid since the straight line is a geodesic in Euclidean space. On the real line, it continues to be correct with a strict inequality when there is an overlap between intervals between the points. The hypothesis in the manuscript is unusual, because there is a projection of the N+1-metric distance to the N-metric distance with ϵ by setting one of the distances $d(x_i, x_{i+1})$ to be infinitesimal while preserving the distance $d(x, y)$ in one of the counterexamples to the inequality for the N-metric space.