Jan Brandts, Sergey Korotov, Michal Křížek: *Dissection of the path-simplex in $\mathbf{R}^n$ into n path-subsimplices*; Helsinki University of Technology, Institute of Mathematics, Research Reports A496 (2006).

Abstract: *We review properties of acute and non-obtuse simplices, and of ortho-simplices and path-simplices. Dissection of path-simplices is considered, which leads to a new result: generalization of Coxeter's trisection of a path-tetrahedron into three path-subtetrahedra to arbitrary spatial dimension n. Moreover, following earlier results by Korotov and Křížek, we show that applying this procedure recursively in the proper way leads to a self-similar path-simplicial refinement towards a chosen vertex of the original path-simplex.*

AMS subject classifications: 51M20, 65N30

Keywords: n-simplex, path-simplex, Coxeter's trisection, self-similarity

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