

On the structure of the Minkowski sum of standard simplices

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Abstract

We investigate the structure of the Minkowski sum of standard simplices in \mathbb{R}^r . In particular, we investigate the Minkowski sum of two simplices in some detail and present its f -polynomial in general. The structure of the Minkowski sum of three or more standard simplices becomes, in general, progressively more complicated. We will briefly discuss why that is the case. – This is joint work with Walter Morris.

Keywords: polytope, standard simplex, Minkowski sum.