

1065-05-95

Geir Agnarsson* (geir@math.gmu.edu), George Mason University, Department of Mathematics, 4400 University Drive, MS:3F2, Fairfax, VA 22030. *On Minkowski sum of simplices and their flags*. Preliminary report.

We consider a Minkowski sum of k standard simplices in \mathbb{R}^r and its chains of faces, for given $k, r \in \mathbb{N}$. We define its *flag polynomial* in a direct and canonical way in terms of the k -th master polytope $P(k)$. This polynomial is related to the well-known flag vector, and it has some nice algebraic properties that one can use to obtain explicit formulae for the number of chains of faces of fixed dimensions and height. (Received September 04, 2010)