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Chris Berg, Brant Jones and Monica Vazirani* (vazirani@math.ucdavis.edu), Math Department, One Shields Ave, Davis, CA 95616. *A bijection on cores.*

Combinatorially, an n -core is a partition from which no rim hooks, or ribbons of size n can be removed. They correspond to cosets of the finite symmetric group in the affine symmetric group, or equivalently to the root lattice, or to the extremal vectors in the basic representation of the affine Lie algebra $\widehat{\mathfrak{sl}}_n$.

We explore a bijection between n -cores and $n-1$ -cores, which has several lovely combinatorial descriptions. Representation-theoretically, it provides a natural link between \widehat{S}_{n-1} and \widehat{S}_n (correspondingly, $\widehat{\mathfrak{sl}}_{n-1}$ and $\widehat{\mathfrak{sl}}_n$) although the former is not a parabolic subgroup of the latter. (Received January 29, 2008)