

1038-13-250

Erik Stokes* (estokes@ms.uky.edu). *Some results on the h -vectors of matroids.* Preliminary report.

A simplicial complex is said to be a matroid if deleting any subset of the vertices leaves behind a pure complex. A long-standing open problem is to classify all possible h -vectors of such complexes. We will give a constructive procedure that allows us to do this if the complex has dimension 1 and to completely describe their Stanley-Reisner ideals. In higher dimensions, we give a partial result of the same sort for the case when the initial degree of the Stanley-Reisner ideal is large. (Received February 11, 2008)