

1035-05-1654 **Molly Maxwell*** (maxwellm@augsborg.edu), PO Box 13124, Minneapolis, MN 55414. *Higher Dimensional Spanning Trees.*

We describe a class of subcomplexes in regular cell complexes which generalize the notion of spanning trees of graphs to higher dimensions. We show that an enumerator for these higher dimensional trees is the square of a related enumerator for certain self-dual trees. This leads to a new proof of Tutte's theorem that the number of spanning trees of a central reflex is a perfect square, and it solved a problem posed by Kalai about higher dimensional spanning trees in simplicial complexes. (Received September 20, 2007)