

1096-05-752

Kirsti Wash* (kirstiw@clemons.edu). *Prime factorization in the generalized hierarchical product.*

In 2008, Barrière et al. introduced the generalized hierarchical product of graphs. This is a generalization of the Cartesian product of graphs in that we can represent a particular Cartesian product as a generalized hierarchical product. It is known that every connected graph has a unique prime factor decomposition with respect to the Cartesian product. In this talk, we generalize this result to show that connected graphs, indeed, have a unique prime factor decomposition with respect to the generalized hierarchical product. This is joint work with Sarah Anderson of Clemson University. (Received September 09, 2013)