

1056-20-274

Daniel Allen, Meghan Cream, Kate Finlay and Ranjan Rohatgi*

(ranjanrohatgi2007@u.northwestern.edu). *Complete Growth and Graph Products of Groups.*

The complete growth series of a finitely-generated group G is a formal power series, with coefficients in the group ring $\mathbb{Z}G$. In this talk we will explain what it means for such a power series to be *rational*. We then show that the property of being rational is preserved by graph products, a method of combining groups that is part way between free and direct products. This result generalizes a result of Chiswell from the 1990s. (Received August 24, 2009)