

1106-11-816

Olivia Beckwith* (olivia.dorothea.beckwith@emory.edu) and **Christine Bessenrodt**
(bessen@math.uni-hannover.de). *Multiplicative properties of the number of k -regular partitions.*

In a previous paper of the second author with K. Ono, surprising multiplicative properties of the partition function were presented. Here, we deal with k -regular partitions. Extending the generating function for k -regular partitions multiplicatively to a function on k -regular partitions, we show that it takes its maximum at an explicitly described small set of partitions, and can thus easily be computed. The basis for this is an extension of a classical result of Lehmer, from which an inequality for the generating function for k -regular partitions is deduced which seems not to have been noticed before. (Received September 07, 2014)