

1053-06-304

Teena Carroll* (teena.carroll@snc.edu), 100 Grant St., De Pere, WI 54115, and **Josh Cooper** and **Prasad Tetali**. *An Enumerative Perspective on the Chain Poset.*

The chain product poset $[t]^n$, is a generalization of the Boolean Lattice formed by looking at ordered n -tuples with the alphabet $\{0, \dots, t\}$. We form a partially order using the standard direct product of n chains of length t . The resulting poset has some desirable properties: it is a ranked sperner poset with unique minimal and maximal elements. However it also lacks some nice properties, in particular, elements of the same rank may have vastly different degrees. We give estimates for the Whitney numbers, the number of linear extensions, and number of antichains for this poset. (Received September 07, 2009)