

1121-05-137

Emily Barnard* (esbarnar@ncsu.edu), 728 A Grove Ave, Raleigh, NC 27606. *The canonical join complex*. Preliminary report.

Suppose that L is a lattice and $x \in L$. The canonical join representation of x , when it exists, is a certain minimal factorization of x in terms of the join operation, analogous to the prime factorization of an integer. In this case, the join-irreducible elements of L , $\text{Irr}(L)$, play the role of prime numbers. We study the the complex of subsets $A \subset \text{Irr}(L)$ such that $\bigvee A$ is a canonical join representation, and answer the question: When is this complex flag? (Received July 16, 2016)