

1077-20-123

Robert M Guralnick* (guralnic@usc.edu), Department of Mathematics, University of Southern California, Los Angeles, CA 90089-2532, and **Jason Fulman**. *Unipotent Classes in Disconnected Algebraic Groups*.

Let G be a normal subgroup of the finite group A with A/G cyclic. There is a variant of Burnside's Lemma about the average number of fixed points in a coset and orbits. We use this to show to count certain types of conjugacy classes of A in a generating coset for A/G . This allows us to give an easy proof of the fact that if A is an algebraic group with connected component G , then there are only finitely many conjugacy classes of unipotent elements in any coset of G given that G has only finitely many unipotent classes. (Received July 28, 2011)