

1116-22-743

**Robert W. Benim\*** (rbenim@gmail.com), Forest Grove, OR, and **Mark Hunnell** and  
**Amanda K. Sutherland.** *Isomorphism Classes of Finite Order Automorphisms of  $SL(2,k)$ .*

In this paper, we consider the order  $m$   $k$ -automorphisms of  $SL(2,k)$ . We first characterize the forms that order  $m$   $k$ -automorphisms of  $SL(2,k)$  take and then we find simple conditions on matrices  $A$  and  $B$ , involving eigenvalues and the field that the entries of  $A$  and  $B$  lie in, that are equivalent to isomorphism between the order  $m$   $k$ -automorphisms  $Inn_A$  and  $Inn_B$ . We examine the number of isomorphism classes and conclude with examples for selected fields. (Received September 11, 2015)