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**Martha Yip\*** ([myip@math.upenn.edu](mailto:myip@math.upenn.edu)), 209 South 33rd Street, Philadelphia, PA 19104. *Rook placements and nilpotent matrices over finite fields.*

The group of  $n$  by  $n$  upper-triangular nilpotent matrices with entries in the finite field with  $q$  elements have Jordan forms indexed by partitions  $\lambda \vdash n$ . Using a recursive formula for the number  $F_\lambda(q)$  of matrices of fixed Jordan type, we obtain a combinatorial formula for  $F_\lambda(q)$  as a sum over rook placements. (Received August 28, 2012)