

1145-11-1943      **Alexander Smith\***, adsmith@math.harvard.edu.  *$2^k$ -class groups of imaginary quadratic fields.*

For any  $n > 2$ , the Cohen-Lenstra heuristic predicts how the  $n$ -torsion of the class group of  $K$  is distributed as  $K$  varies in the family of imaginary quadratic fields. These predictions have been partially verified for 3-torsion and fully verified for 4-torsion but were previously unverified for all higher torsion groups. In this talk, we will give a new approach to verifying the heuristic for 4-torsion that allows us to also verify it for 8-torsion, 16-torsion, etc. (Received September 24, 2018)