Meeting: 1004, Bowling Green, Kentucky, SS 14A, Special Session on Geometric Topology and Group Theory

1004-20-153 **John Ratcliffe*** (ratclif@math.vanderbilt.edu), Vanderbilt University, Department of Mathematics, 1326 Stevenson Center, Nashville, TN 37240, and **Michael Mihalik** and **Steven Tschantz**. *On the Isomorphism Problem for Finitely Generated Coxeter Groups. I, Basic Matching.*

In this paper, we prove a matching theorem for maximal rank irreducible noncyclic spherical subgroups of isomorphic finitely generated Coxeter groups. We use this theorem to determine the maximal rank of a finitely generated Coxeter group over all possible sets of Coxeter generators. (Received January 23, 2005)