

1086-VD-478

Lori Koban*, lori.koban@maine.edu, and **Jordan LeGrand** and **Joshua Case**. *Counting Pitch Class Sets with Burnside's Lemma*. Preliminary report.

Mathematical tools from Combinatorics and Abstract Algebra have been used to study a variety of musical structures. One question asked by music theorists is: How many d -note diatonic pitch class sets exist in a c -note chromatic universe? In the music theory literature, this question is answered with the use of Pólya's Enumeration Theorem. We solve the problem using simpler techniques, including only Burnside's Lemma and basic results from Combinatorics and Abstract Algebra. We use intervals arrays that are associated with pitch class sets as a tool for counting. (Received September 04, 2012)