Arielle Fujiwara, Joseph Gibson, Matthew Jenssen, Daniel Montealegre and Vadim Ponomarenko* (vadim123@gmail.com), Department of Mathematics and Statistics, San Diego State University, 5500 Campanile Dr., San Diego, CA 92182-7720, and Ari Tenzer. Arithmetic of

Congruence Monoids.

A congruence monoid is a multiplicative submonoid of the naturals, whose elements happen to comprise one or more congruence classes modulo some integer. This generalizes arithmetic congruence monoids. We study the structure of nonunique factorization within these congruence monoids. (Received September 24, 2012)