

1048-13-93

Alfred Geroldinger* (alfred.geroldinger@uni-graz.at), Institute for Mathematics and Scientific, Computing, University Graz, Heinrichstr. 36, 8010 Graz, Austria. *On the arithmetic of Krull monoids with finite Davenport constant.*

Let H be a Krull monoid with class group G , $G_P \subset G$ the set of classes containing prime divisors and $D(G_P)$ the Davenport constant of G_P (this is, the supremum of the lengths of minimal zero-sum sequences over G_P). We show that the finiteness of the Davenport constant implies the Structure Theorem for Sets of Lengths. More precisely, if $D(G_P) < \infty$, then there exists a constant M - for which we derive an explicit upper bound in terms of $D(G_P)$ - such that the set of lengths of every element $a \in H$ is an almost arithmetical multiprogression with bound M .

(joint work with D.J. Gryniewicz). (Received January 28, 2009)