1158-20-305   **Scott Chapman*** (`scott.chapman@shsu.edu`), Department of Mathematics and Statistics, Huntsville, TX 77341, and **Felix Gotti** (`felixgotti@berkeley.edu`) and **Marly Gotti** (`marlycormar@ufl.edu`). *Factorization invariants of Puiseux monoids generated by geometric sequences.*

We study some of the factorization invariants of the class of Puiseux monoids generated by geometric sequences, and we compare and contrast them with the known results for numerical monoids generated by arithmetic sequences. The class we study here consists of all the atomic monoids of the form $S_r := \langle r^n \mid n \in \mathbb{N}_0 \rangle$, where r is a positive rational. As the atomic monoids S_r are nicely generated, we are able to give detailed descriptions of many of their factorization invariants. One distinguishing characteristic of S_r is that all its sets of lengths are arithmetic sequences of the same distance $|a - b|$, where $a, b \in \mathbb{N}$ are such that $r = a/b$ and $\gcd(a, b) = 1$. We prove this, and then use it to study the elasticity and tameness of S_r. (Received March 03, 2020)

1