

1083-13-34

Yuri Villanueva* (yvillanu@fau.edu) and **Lee Klingler**. *Rings of integer-valued polynomials and derivatives on finite sets.*

For D an integral domain with field of fractions K and E a subset of K , the ring $\text{Int}(E, D) = \{f \in K[X] \mid f(E) \subseteq D\}$ of integer-valued polynomials on E has been well studied. In particular, when E is a finite subset of D , Chapman, Loper, and Smith, as well as Boynton and Klingler, obtained a bound on the number of elements needed to generate a finitely generated ideal of $\text{Int}(E, D)$ in terms of the corresponding bound for D . We obtain analogous results for $\text{Int}^{(r)}(E, D) = \{f \in K[X] \mid f^{(k)}(E) \subseteq D \text{ for all } 0 \leq k \leq r\}$, for finite E and fixed integer $r \geq 1$. (Received July 27, 2012)