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Arithmetic Properties of Certain Generalizations of Stern Diatomic Sequence

Let k be a positive integer. We study arithmetic properties of the sequence $\{f_k(n)\}$ given by the recurrence relation:

$$f_k(kn+i) = f_k(n+i) \quad \text{for} \quad i = 0, 1, \ldots, k-2,$$

and

$$f_k(kn+k-1) = \sum_{i=0}^{k-1} f_k(n+i).$$

The sequence $f_k(n)$ for $k \geq 3$ is a natural generalization of Stern diatomic sequence $f_2(n)$.