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# Terms of lambda sequences over certain two element sets.

ABSTRACT. For $\mathcal{A}$ any finite set of positive integers greater than 1, and $a \in \mathcal{A}$ we define the set $A_a = \{\varepsilon_j(a) \cdot a^j : j = 0, 1, 2, ...\}$, where $\varepsilon_j(a) \in \{ 0, \pm 1, \pm 2, ..., \pm \lfloor a/2 \rfloor \}$. Nathanson studied the properties of the related $\lambda_{\mathcal{A}}(h)$ sequences that are important in Geometric Group Theory. In this setting positive integers are partitioned as sums of elements from the set $\mathcal{S}_{\mathcal{A}} = \bigcup_{a \in \mathcal{A}} A_a$. Nathanson posed the problem to compute $\lambda_{\mathcal{A}}(h)$, where $\lambda_{\mathcal{A}}(h)$ is defined as the smallest positive integer that can be represented as the sum of elements of $\mathcal{S}_{\mathcal{A}}$ with length $h$, but that cannot be represented as a sum with length less than $h$. In this presentation we will restrict our study to sets of the shape $\mathcal{A} = \{2, n\}$ and odd $n > 1$ and illustrate how to generate the values of $\lambda_{2,n}(h)$ for fixed $h \in \{1, 2, 3\}$.