Sajed Haque and Jeffrey Shallit
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Abstract

The discriminator of an integer sequence $\mathbf{s} = (s(i))_{i \geq 0}$ with distinct terms, introduced by Arnold, Benkoski, and McCabe in 1985, is the function $D_{\mathbf{s}}(n)$ that sends n to the least integer m such that the n values $s(0)$, $s(1)$, ..., $s(n-1)$ are pairwise incongruent modulo m. In this note, we compute the discriminators for a class of exponential sequences that have the special property that the discriminator is *shift-invariant*, i.e., that it does not depend on the particular index the sequence is chosen to start with.