Russell Jay Hendel

*Quasi-Periods for the Hofstadter Q Function*,


**Abstract**

The purpose of this paper is to answer, in the negative, an open question of Ruskey on whether all solutions of Hofstadter’s Q function have quasi-period 3. We solve this problem by presenting for each positive integer $e$ initial conditions for the $Q$ function such that the resulting sequence satisfying the recursion and initial conditions has quasi-period $e$. 