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Abstract

Second order linear homogeneous recurrence relations with coefficients in a finite field or in the integers modulo of an ideal have been the subject of much study (see for example [1, 2, 4, 5, 6, 7, 8, 9]). This paper extends many of these results to finite rings. In the first part of this paper we develop polynomials which generate purely periodic sequences over any finite ring, R. We then use these polynomials with coefficients in R to establish bounds on the period of these sequences.