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*Distribution of Cycle Lengths of a Quadratic Map Over Finite Fields
of Characteristic 2,*
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Abstract

The map $x \mapsto x^2 + x$ defined on a fixed finite field of characteristic 2 is investigated as a dynamical system. The map is known to be a linear map. Its nilpotent points form a subfield, and periodic cycles are somewhat uniform. A general upper bound for the cycle lengths is given in terms of the Carmichael function of the field degree.