

## SECOND-ORDER LINEAR RECURRENCES WITH RESTRICTED COEFFICIENTS AND THE CONSTANT $(1/3)^{1/3}$

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*Abstract.* This paper provides bounds for second-order linear recurrences with restricted coefficients. It is determined that whenever the coefficients of the associated monic equation are less than the constant  $(1/3)^{1/3}$ , all solutions tend to zero at an exponential rate. This constant is optimal. Explicit inequalities are also provided, and some residue class structure is revealed.

*Mathematics subject classification (2000):* 39A10, 11B37, 65Q05.

*Key words and phrases:* linear recurrences, second-order equations, optimal bounds, partitions, restricted coefficients.

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