



Existence of Nonoscillatory Solution of Third Order Linear Neutral Delay Difference Equation with Positive and Negative Coefficients

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Abstract: In this paper, by using fixed point theorem, the problem of existence of the nonoscillatory solution for a class of neutral delay difference equations with both positive and negative coefficients has been investigated. Under the assumption of third order, a sufficient condition is proposed for the existence of the nonoscillatory solution. Further studies on the underlying problem have also been conducted.

Keywords: *Neutral delay difference equation; oscillation; positive and negative coefficients.*

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