ON THE OSCILLATORY AND
ASYMPTOTIC BEHAVIOR OF CERTAIN
FOURTH ORDER DIFFERENCE
EQUATIONS

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Abstract

Some new criteria for the oscillatory and asymptotic behavior of solutions of the fourth order difference equation
\[ \Delta^2 (a(k) (\Delta^2 x(k))^{\alpha}) - q(k) f(x(g(k))) = 0 \]

with the property that \( x(k)/k \to 0 \) as \( k \to \infty \) are established.

34C10, 34C15 Difference equation, asymptotic behavior, fourth order, oscillation.

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