

Oscillation of Solutions of Second Order Almost Linear Difference Equations

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Consider difference equation of the form

$$\Delta^{(2)}u(k) + F(u)(k) = 0,$$

where $\Delta u(k) = u(k+1) - u(k)$, $\Delta^{(2)} = \Delta \circ \Delta$, $F: l(N) \rightarrow l(N)$ ($l(N)$ denote the set of functions $u: N \rightarrow R$). In the work, when operator F has almost linear minorant, sufficient conditions are established for all proper solutions of the above equation to be oscillatory.