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Review text:

The generalized oscillator algebra with $aa^\dagger = \varphi(N)$ and $a^\dagger a = \varphi(N+1)$ giving energies in closed form $E_n = (\varphi(n)+\varphi(n+1))/2$ is reanalyzed as possibly giving energies via linear $(k+1)-$term recurrences $E_{n+1} = \lambda_0 E_n + \ldots + \lambda_{k-1} E_{n+1-k}$ with constant coefficients. For $\varphi(N) = N \times P(N)$ where $P(N) = 1 + \mu_1 N + \ldots + \mu_r N^r$ (and $r = k-2$) the authors evaluate the (μ_j-independent!) coefficients λ_j. It is emphasized that the transition to inhomogeneous recurrences re-introduces the μ_j-dependence into the coefficients. The alternative possibility of specifying energies via (for simplicity, three-term) recurrences with non-constant coefficients is also mentioned. A generalization of the construction is shown valid when replacing n by deformed $[n]_q$. In contrast, the further transition from $[n]_q$ to $[n]_{p,q}$ (recall Eq. (38) for definition) breaks the analogy. Two constructions (viz., with $r = 1, k = 5$ and with $r = 2, k = 9$) lead to the conjecture that $k = (r+2)(r+3)/2 - 1$ at $p \neq 1$.