

Generalized Pell – Padovan’s Sequence

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Abstract: The Generalized Pell – Padovan’s numbers satisfy the third-order recurrence relation $P_n = 2P_{n-2} + P_{n-3}$ with the initial conditions $P_0 = a, P_1 = b$ and $P_2 = c$ where a, b and c are real numbers. The sequence $\{P_n\}_{n=0}^{\infty}$ is defined in [1, 2] as first. Here, we give generating function and Binet – like formula for the sequence $\{P_n\}_{n=0}^{\infty}$. We also give some relations between this sequence and Fibonacci / Lucas sequence.

References

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- [2] Atassanov, K., Dimitrov, D. and Shannon, A.G. A remark on ψ -function and Pell-Padovan’s Sequence. *Notes on Number Theory and Discrete Mathematics* **15** (2) (2009) 1–44.