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Abstract

We use a complex seed for the Somos-5 sequence to get Gaussian integers with real and imaginary parts related by the Fibonacci sequence. For example, if $\{\mathbf{s}_n\}$ is Somos-5 with seed $(1, 1, \mathbf{i}, 1, 1)$, then $\{\mathbf{s}_{2n}\}_{n\geq 1}$ is the sequence

1, 1, $1 + \mathbf{i}$, $2 - \mathbf{i}$, $2+3\mathbf{i}$, $5-3\mathbf{i}$, $5+8\mathbf{i}$, $13-8\mathbf{i}$, $13+21\mathbf{i}$, $34-21\mathbf{i}$, ..., and the sequence of L_1 -norms is the Fibonacci sequence starting at 1.