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# Invariant number triangles, eigentriangles and Somos-4 sequences

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Using the language of Riordan arrays, we look at two related iterative processes on matrices and determine which matrices are invariant under these processes. In a special case, the invariant sequences that arise are conjectured to have Hankel transforms that obey Somos-4 recurrences. A notion of eigentriangle for a number triangle emerges and examples are given, including a construction of the Takeuchi numbers.

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