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The Self-Counting Flow,
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Abstract

This paper is based on the article “The self-counting identity”, published in the *Fibonacci Quarterly* in May 2017, vol. 55 and can be considered as its continuation.

In the beginning, we define the “self-counting flow Φ ”, which represents a tool for getting from one positive integer sequence to a corresponding other one. It is - so to say - a flow on all positive integer sequences and thereby the self-counting sequence $\{a_k\}_{k=1}^{\infty} = \{1, 2, 2, 3, 3, 3, 4, 4, 4, 4, \dots\}$ shows itself as a unique fixed point.

Various methods allow us to study the properties of the flow Φ such as its trajectories and the attraction of its fixed point. We also examine whether the self-counting sequence $\{a_k\}_{k=1}^{\infty}$ is the point of convergence of each positive integer sequence under a repeated application of the self-counting flow Φ .

At the end of this article, we show some properties of other flows on positive integer sequences, for example those of the “Fibonacci flow \mathcal{F} ”.