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Further results on derived sequences. (English) [Zbl 1058.11080](#)

J. Integer Seq. 6, No. 2, Art. 03.2.7, 7 p. (2003).

C. L. Cohen and *D. E. Iannucci* [*J. Integer Seq.*, 6, No. 1, Art. 03.1.1 (2003; [Zbl 1014.11069](#))] introduced the derived sequence of a positive integer n and showed they are bounded for all $n < 1.5 \times 10^{10}$. Bounded sequences end in a cycle, and they conjectured the existence of cycles of any order. This paper proves this conjecture and shows how to construct derived sequences of any order.

Reviewer: [Tom M. Apostol \(Pasadena\)](#)

MSC:

[11Y55](#) Calculation of integer sequences

[11A25](#) Arithmetic functions; related numbers; inversion formulas

[11B83](#) Special sequences and polynomials

Keywords:

arithmetic functions; multiplicative functions; cycles

Full Text: [EMIS](#) [EuDML](#)