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Henry P Towsner* (htowsner@math.upenn.edu). *If a sequence converges, how computable should the rate be?*

Standard examples show that when a sequence converges, the rate of convergence need not be computable. Nonetheless, a "rate of metastable" convergence" usually is computable, and can be used as a substitute in certain arguments.

We ask about an intermediate notion: computability of a bound on the number of fluctuations. While a bound on the number of fluctuations need not be computable, it often is, and whether or not it is turns out to be crucially connected to how the sequence behaves when extended to the nonstandard natural numbers. (Received March 18, 2017)