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Abstract

The "comma sequence" starts with 1 and is defined by the property that if k and k' are consecutive terms, the two-digit number formed from the last digit of k and the first digit of k' is equal to the difference k' - k. If there is more than one such k', choose the smallest, but if there is no such k' the sequence terminates. The sequence begins $1, 12, 35, 94, 135, \ldots$, and, surprisingly, ends at term 2137453, which is 99999945. The paper analyzes the sequence and its generalizations to other starting values and other bases. A slight change in the rules allows infinitely long comma sequences to exist.