

**Erdős, Paul; Shallit, J. O.**

**New bounds on the length of finite Pierce and Engel series.** (English) Zbl 0727.11003  
Sémin. Théor. Nombres Bordx., Sér. II 3, No. 1, 43-53 (1991).

The authors give estimates on the length of Engel series expansions for rational  $x$ . The upper and lower bounds are widely separated. The method of estimation of the length is extended to alternating Engel series which is also known as Pierce expansions. For a large variety of results on Engel series as a special case of a general series expansion, see the reviewer [Representations of real numbers by infinite series, Lect. Notes Math. 502. Berlin etc.: Springer-Verlag (1976; Zbl 0322.10002)].

Reviewer: Janos Galambos (Philadelphia)

**MSC:**

[11A67](#) Other number representations

Cited in **1** Review  
Cited in **2** Documents

**Keywords:**

rational numbers; length of Engel series expansions; alternating Engel series; Pierce expansions

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