

Prime Chain Dynamics in a 6-adic Collatz-like Map: Discovery of a Length-8 Chain

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February 28, 2026

A research note on prime-generating behavior in a 6-adic Collatz-like map:

$$f(x) = (7x + k) / 6, \text{ where } k \in \{-1, -5, +5, +1\}$$

k is selected based on $x \bmod 12$ to ensure divisibility and preserve odd parity.

Discovered Length-8 Prime Chain:

1099687

1282969

1496797

1746263

2037307

2376859

2773003

3235171