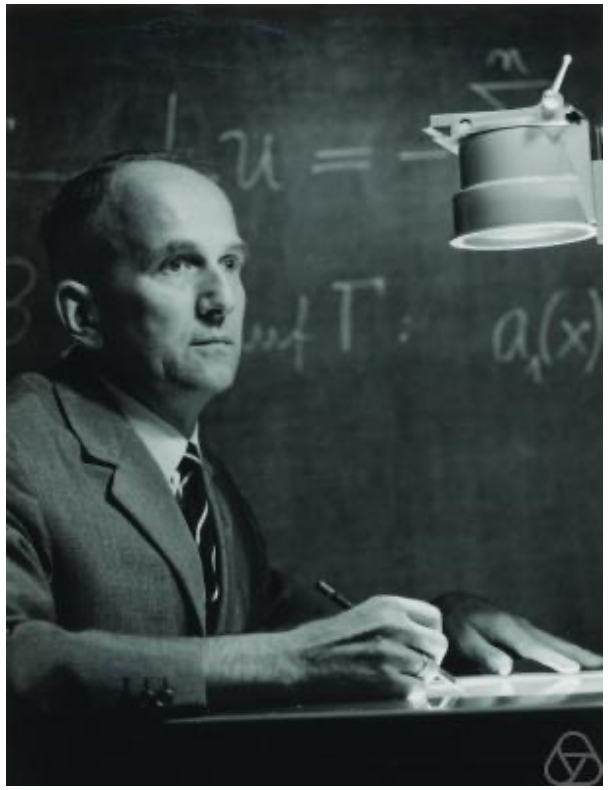

Lothar Collatz
German Mathematician
1910 - 1990

Start with any positive integer, x

if x is **odd**: $x = 3x + 1$

if x is **even**: $x = x / 2$

<u>Collatz Conjecture (1937):</u>

All sequences eventually reach:

$1 \rightarrow 4 \rightarrow 2 \rightarrow 1 \rightarrow 4 \rightarrow 2 \rightarrow 1\ldots$

Current Status: **not yet proved**
(but verified for all $x < 2^{68}$)