$$f(x) = \begin{cases} x/2, & \text{if } x \equiv 0 (mod 2) \\ 3x + 1, & \text{if } x \equiv 1 (mod 2) \end{cases}$$

$$U_{n+1} = f(U_n)$$

$$S = \{f(U_0) \mid f(U_0) = f(U_a), a > 0\}$$