255√   (Collatz)   Let n be a natural variable. It is easy to prove

$$n'=1 \quad \Longleftarrow \quad \textbf{if } n=1 \textbf{ then } ok$$
$$\textbf{else if } even \ n \textbf{ then } n:= n/2. \ \ n'=1$$
$$\textbf{else } n:= 3{\times}n + 1. \ \ n'=1 \textbf{ fi fi}$$

The problem is to find the execution time. Warning: this problem has never been solved.

§   see book Section 4.2