

**Exercise 4.9.** *[1X7] Prerequisites: [08Z]. Adapt the exercise [08Z] to define the Fibonacci sequence, which satisfies the rule*

$$a_0 = 1 \quad , \quad a_1 = 1 \quad , \quad a_n = a_{n-1} + a_{n-2}$$

*for  $n \geq 2$ .*

*Hint. You don't have to rewrite the whole proof of [08Z], rather choose  $A = \mathbb{N}^2$  and choose  $g$  with cunning.*

**Solution 1.** *[1X8]*