A most familiar sequence

A certain man put a pair of rabbits in a place surrounded on all sides by a wall. How many pairs of rabbits can be produced from that pair in a year if it is supposed that every month each pair begets a new pair which from the second month on becomes productive?

by Leonardo Pisano (1170–1250), called Fibonacci



 $F_{n+2} = F_{n+1} + F_n$ with $F_1 = 1$ and $F_2 = 1$