Problem 1: Coin Change
Write a function that takes an integer $d$, an array $c$, where $c[1] > c[2] > \ldots > c[d] = 1$, an integer $n$, and an array $k$, and performs the greedy coin change problem to make $n$. Therefore, it should modify $k$ such that:


Also make your function return $\sum_{i=1}^{d} k[i]$, which is the total number of coins used.

Problem 2: Exhaustive enumeration
Write two algorithms that iterate over every index from $(0, 0, \ldots, 0)$ to $(n_1, n_2, \ldots n_d)$. Make one algorithm recursive and one iterative.

Problem 3: Rabbits with limited life span
Modify the Fibonacci sequence by making every pair of rabbits die after giving birth to their $k^{th}$ pair (assume $k \geq 1$). Your program should output $F_n$ given $n$ and $k$. Investigate the growth of the sequence by exploring several values of $k$. 