

Cashier Problem

Coin Problems: Minimum.

Given a set of coin values coins $\{c_1, c_2, \dots, c_k\}$ and a target sum of money m , what's the minimum number of coins that form the sum m ? If there is no other way, return "-1"

Input:

The first line is the number of coin values, K . $1 \leq K \leq 10$

The second line consists of a set of coin values, coins $\{c_1, c_2, \dots, c_k\}$. $1 \leq c_i \leq 1000$

The last line contains the target sum of money, m . $1 \leq m \leq 10^5$

Output:

Result

Example:

K=8

Coins = {200, 100, 50, 20, 10, 5, 2, 1}

Target: 734

Input:

8

200 100 50 20 10 5 2 1

734

Output

8