Coin Combinations II

Consider a money system consisting of **n** coins. Each coin has a positive integer value. Your task is to calculate the number of distinct *ordered* ways you can produce a money sum **m** using the available coins.

For example, if the coins are **{2,3,5}** and the desired sum is **9**, there are **3** ways:

- 2+2+5
- 3+3+3
- 2+2+2+3

Input

The first input line has two integers **m** and **n**: the desired sum of money and the number of coins.

The second line has **n** distinct integers $\mathbf{c_1,c_2,\ldots,c_n}$: the value of each coin.

Output

Print one integer: the number of ways modulo $\mathbf{10^9+7}$.

Constraints

- $1 \le \mathbf{n} \le 100$
- $1 \le \mathbf{m} \le 10^6$
- $1 \le \mathbf{c_i} \le 10^6$

Example

Input:

9 3
2 3 5

Output:

3