

# 879. Profitable Schemes

## Description

There is a group of  $n$  members, and a list of various crimes they could commit. The  $i^{\text{th}}$  crime generates a  $\text{profit}[i]$  and requires  $\text{group}[i]$  members to participate in it. If a member participates in one crime, that member can't participate in another crime.

Let's call a **profitable scheme** any subset of these crimes that generates at least  $\text{minProfit}$  profit, and the total number of members participating in that subset of crimes is at most  $n$ .

Return the number of schemes that can be chosen. Since the answer may be very large, **return it modulo**  $10^9 + 7$ .

### Example 1:

**Input:**  $n = 5$ ,  $\text{minProfit} = 3$ ,  $\text{group} = [2,2]$ ,  $\text{profit} = [2,3]$

**Output:** 2

**Explanation:** To make a profit of at least 3, the group could either commit crimes 0 and 1, or just crime 1. In total, there are 2 schemes.

### Example 2:

**Input:**  $n = 10$ ,  $\text{minProfit} = 5$ ,  $\text{group} = [2,3,5]$ ,  $\text{profit} = [6,7,8]$

**Output:** 7

**Explanation:** To make a profit of at least 5, the group could commit any crimes, as long as they commit one. There are 7 possible schemes:  $(0)$ ,  $(1)$ ,  $(2)$ ,  $(0,1)$ ,  $(0,2)$ ,  $(1,2)$ , and  $(0,1,2)$ .

### Constraints:

- $1 \leq n \leq 100$
- $0 \leq \text{minProfit} \leq 100$
- $1 \leq \text{group.length} \leq 100$
- $1 \leq \text{group}[i] \leq 100$
- $\text{profit.length} == \text{group.length}$
- $0 \leq \text{profit}[i] \leq 100$

