## Sell Pigs

## English

 VietnameseMirko works on a pig farm that consists of M locked pig-houses and Mirko can't unlock any pighouse because he doesn't have the keys. Customers come to the farm one after another. Each of them has keys to some pig-houses and wants to buy a certain number of pigs. All data concerning customers planning to visit the farm on that particular day are available to Mirko early in the morning so that he can make a sales-plan in order to maximize the number of pigs sold. More precisely, the procedure is as following: the customer arives, opens all pig-houses to which he has the key, Mirko sells a certain number of pigs from all the unlocked pig-houses to him, and, if Mirko wants, he can redistribute the remaining pigs across the unlocked pig-houses. An unlimited number of pigs can be placed in every pig-house. Write a program that will find the maximum number of pigs that he can sell on that day

## Input

The first line of input file contains two integers $M$ and $N, 1 \leq M \leq 1000,1 \leq N \leq 100$, number of pig-houses and number of customers. Pig houses are numbered from 1 to M and customers are numbered from 1 to $N$. The next line contains $M$ integers, for each pig-house initial number of pigs. The number of pigs in each pig-house is greater or equal to 0 and less or equal to 1000. The next N lines contains records about the customers in the following form ( record about the $i$-th customer is written in the (i+2)-th line): A K1 K2 ... KA B It means that this customer has key to the pig-houses marked with the numbers K1, K2, ... KA (sorted non-decreasingly) and that he wants to buy $B$ pigs. Numbers $A$ and $B$ can be equal to 0 .

## Output

The first and only line of the output file should contain the number of sold pigs.

## Sample

pigs.in

33
3110
2122
2133
126
pigs.out

7
pigs.in

66
632013
2120
133
111

2238
2452
2466
pigs.out
15
pigs.in

115
12210241112
5123453
412675
2381
336115
389103
pigs.out

17

