Ada and Database

Ada the Ladybug has inserted all data from her TODO-list into the database. The database is represented as multidimensional structure with direct indexing. Your task is simple - read the database and tell Ada the data on given indices!

Input

There will be multiple test-cases.

The first line of each test-case contains **n** integers **1≤ D_i ≤ 10^5** , indicating the size of each dimense. **n** will be between **2** and **10**. Their product won't exceed **10^6**

Each of following **D_1×D_2×...×D_{n-1}** lines contains **D_n** integers (where **D_n** is size of last dimension), all between **0** and **10^{18}**.

Last line of each test-case contains 0 to 5 queries. Each query consists of **n** integers **A_1, ... ,A_n**, where **1 ≤ A_i ≤ D_i** (note that array is one-indexed).

Input file will have at most **2*10^6** integers. There won't be any other lines than those described above.

NOTE: If you are not confident about what number is on index **[A_1][A_2]...[A_n]**, imagine input as **D_1** blocks of **D_2** blocks of **D_3** blocks of **...** of **D_n** integers.

Output

For each query, output integer on indices **[A_1][A_2]...[A_n]** on a single line. After each test-case, output line with as many hashes ('#'), as the number of test-case (beginning with 1)

Example Input

```
2 2
1 2
3 4
1 1 1 2 2 1 2 2
2 2 2
10 9
8 7
6 5
2 1
2 2 2
1 2 6
1 2 3 4 5 6
6 5 4 3 2 1
1 1 1 1 2 1
```

Example Output

```
1
```

2
3
4
#
1
##
1
6
###