
Description

Some friends convinced me to join them in a memory game. They will each tell me their favourite numbers. Then one of my friends will ask me, “What were my numbers?” I win if I successfully remember that friend’s numbers, otherwise they win.

The trouble is, they have incredibly good memories, and I don’t. But I really want to win. Can you help me out?

Input

The first line will contain the integer $1 \leq n \leq 100,000$, denoting the number of friends playing the game. The next n lines will consist of an integer $m_i \geq 1$, denoting how many favourite numbers friend i has, followed by this friend’s m_i favourite numbers. These numbers will fit in a signed 32-bit integer. The last line of input will contain a single integer $0 \leq k < n$, denoting the friend whose favourite numbers I must recall.

Most friends have only 1 or 2 favourite numbers, but there could be a few that have many. I guarantee you that the input will contain at most 1,000,000 numbers in total.

Output

You must print out a single line, containing all the favourite numbers of friend k in the order they were provided.

Sample Input 1

```
3
5 1 2 3 4 5
1 5
3 3 2 1
2
```

Sample Output 1

```
3 2 1
```

Explanation: There are 3 friends. Friend 0 has five favourite numbers (1, 2, 3, 4, 5), friend 1 has one favourite number (5), and friend 2 has three favourite numbers (3, 2, 1). We are asked to recall friend 2’s favourite numbers so we output 3 2 1.

Sample Input 2

```
3
5 1 2 3 4 5
1 5
3 3 2 1
0
```

Sample Output 2

```
1 2 3 4 5
```

Explanation: Again, there are 3 friends. This time we are asked for friend 0's favourite numbers so we output 1 2 3 4 5.

Sample Input 3

```
1
1 1000000
0
```

Sample Output 3

```
1000000
```

Explanation: There is only one friend, so we output their only favourite number (1000000) when asked.