B. Flags

Time Limit: 2 seconds

Points: 100

Joanna is running a diplomacy game. The players have formed n groups of various sizes a_i, and each group will be the delegation from a single fictional country.

Of course, each country needs a flag. Joanna has m different flags (where $m \geq n$), with b_j copies of the jth flag. She can order more flags if necessary, but the only available order consists of one copy of each flag.

Joanna wants to assign a different flag to each country, and give one copy of that flag to each player in the group. There can be flags unassigned, and there can be country flags left over (if there are more copies of the flag than there are group members).

Help Joanna decide whether such an assignment is possible, and if not, how many times she has to order new flags to make it possible.

Input

The first line of input consists of two space-separated integers, n and m, representing the number of groups and the number of different flags respectively.

The second line of input consists of n space-separated integers, $a_1, \ldots, a_n$, the ith of which represents the number of players in group i.

The third line of input consists of m space-separated integers, $b_1, \ldots, b_m$, the jth of which represents the number of copies of flag j.

Constraints

All input will satisfy the following constraints:

- $1 \leq n \leq m \leq 1,000,000$
- For all $1 \leq i \leq n$:
  - $1 \leq a_i \leq 1,000,000,000$
- For all $1 \leq j \leq m$:
  - $1 \leq b_j \leq 1,000,000,000$

Output

If all countries can be assigned a flag, output a single line `YES`.

Otherwise, output `NO` in the first line of output, followed by the minimum number of times that Joanna has to order flags in the second line of output.

Subtasks

B1 (50 points): only output one line (`YES` or `NO`).

B2 (50 points): no restrictions.

Sample Input 1

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

Sample Output 1

```
YES
```

Sample Input 2

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

Sample Output 2

```
NO
2
```

Sample Input 3

```
2 3
1 3
1 2 3
```

Sample Output 3

```
YES
```

Explanations

In sample 1, Joanna should assign:

- flag 1 to country 1,
- flag 3 to country 2 and
- flag 2 to country 3 (with one copy spare).

There is no need to order more flags.

In sample 2, Joanna should order two more copies of each flag, at which she will have 3 copies of flag 1, 4 of flag 2 and 5 of flag 3. Then, she can assign them to the countries in order.

In sample 3, Joanna should assign flag 3 to country 2 and either of the other flags to country 1.

Only the first line of output (`YES` in samples 1 and 3, `NO` in sample 2) should be present for subtask B1.