XXV Spain Olympiad in Informatics
Final, day 2
`rompepuertas`

Doorbreaker

A team of m villagers is playing a game called *doorbreaker*. The j-th villager has strength f_j. There are n doors in a row. The i-th row has resistance d_i. The strength required to break a sequence of doors is the sum of their resistances. The villagers go in order and run towards the row of doors, trying to break as many doors as possible. Once a villager has broken a door, the following villagers can go through it without losing strength, but if a villager does not have enough strength to break a door, the resistance of the door will remain the same.

Find the total number of doors broken after all m villagers have their run.

Input and output

In the first line there are two integers n and m, the number of doors and the number of villagers.

In the next line there are n integers d_0, ..., d_{n-1}. In the next line there are m integers f_0, ..., f_{m-1}.

You must write one line by the number of doors broken by the team.

Samples

Sample 1

Input:

```
5 2
1 2 3 4 5
4 7
```

Output:

```
4
```

Explaination 1

The first person has strength 4, and therefore is capable of breaking the first two doors. (1 + 2 = 3). But he can not break the third door, because the total resistance of the first three doors is 6.

The second person has strength 7, same as the resistance of the next two doors, so he can break them. At the end all the 4 doors are broken.

Sample 2

Input:

```
5 3
4 8 7 9 3
13 8 7
```

Output:

3

Constraints

$1 \leq n \leq 3 \cdot 10^5$.
$1 \leq m \leq 3 \cdot 10^5$.
$1 \leq d_i \leq 10^9$.
$1 \leq f_i \leq 10^9$.

Subtasks

1. (17 points) $m = n$ and $f_i = d_i$ for all i.
2. (23 points) Resistance of all doors is equal.
3. (35 points) $n \leq 10^4$.
4. (25 points) No additional restrictions.