

Goat II

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output
points: 100 · problem code: goatii · author: jbroeksteeg

Problem Statement

Andy the goat is very hungry. Luckily, there is a line of n tufts of grass directly in front of him in a line. However, the i -th tuft of grass takes A_i seconds to eat.

Andy has q questions, each of the form "How many tufts of grass could I eat in B_i seconds?". Note that he must eat the tufts in the order given in the input.

Input

The first line of input will consist of two integers, n and q .

The second line of input will consist of n integers, the array A .

The third line of input will consist of q integers, each being the amount of tufts Andy is thinking about in one question.

Output

The output should consist of a single line of q integers, one for each question.

Constraints

For all test cases:

- $1 \leq n \leq 10^5$
- $1 \leq q \leq 10^5$
- $1 \leq A[i] \leq 10^3$
- $1 \leq B[i] \leq 10^8$

Sample Test Cases

Example 1

Input

```
3 2
1 5 9
7 16
```

Output

```
2 3
```

Explanation

In 7 seconds, Andy can eat the first two tufts of grass (takes $1 + 5 = 6$ seconds).

In 16 seconds, Andy can eat all three tufts of grass (takes $1 + 5 + 9 = 15$ seconds).