B. Worms

It is lunch time for Mole. His friend, Marmot, prepared him a nice game for lunch.

Marmot brought Mole n ordered piles of worms such that i-th pile contains a_i worms. He labeled all these worms with consecutive integers: worms in first pile are labeled with numbers 1 to a_1, worms in second pile are labeled with numbers $a_1 + 1$ to $a_1 + a_2$ and so on. See the example for a better understanding.

Mole can't eat all the worms (Marmot brought a lot) and, as we all know, Mole is blind, so Marmot tells him the labels of the best juicy worms. Marmot will only give Mole a worm if Mole says correctly in which pile this worm is contained.

Poor Mole asks for your help. For all juicy worms said by Marmot, tell Mole the correct answers.

Input

The first line contains a single integer n ($1 \le n \le 10^5$), the number of piles.

The second line contains n integers $a_1, a_2, ..., a_n$ ($1 \le a_i \le 10^3$, $a_1 + a_2 + ... + a_n \le 10^6$), where a_i is the number of worms in the i-th pile.

The third line contains single integer m ($1 \le m \le 10^5$), the number of juicy worms said by Marmot.

The fourth line contains m integers $q_1, q_2, ..., q_m$ ($1 \le q_i \le a_1 + a_2 + ... + a_n$), the labels of the juicy worms.

Output

Print m lines to the standard output. The i-th line should contain an integer, representing the number of the pile where the worm labeled with the number q_i is.

Examples

input

Copy

```
5
2 7 3 4 9
3
1 25 11
```

output

Copy

```
1
5
3
```

Note

For the sample input:

- The worms with labels from [1, 2] are in the first pile.
- The worms with labels from [3, 9] are in the second pile.
- The worms with labels from [10, 12] are in the third pile.
- The worms with labels from [13, 16] are in the fourth pile.
- The worms with labels from [17, 25] are in the fifth pile.