

## B. Worms

time limit per test: 1 second  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

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  $n$  ( $1 \leq n \leq 10^5$ ), the number of piles.

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

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

The fourth line contains  $m$  integers  $q_1, q_2, \dots, q_m$  ( $1 \leq q_i \leq a_1 + a_2 + \dots + a_n$ ), 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
5 2 7 3 4 9 3 1 25 11
output
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.