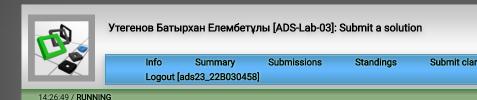
Clars

Settings



Н

Submit a solution for H-Debugging

Time limit: 1 s
Real time limit: 5 s
Memory limit: 256M

Problem H: Debugging

Jonathan almost finished his project by Object-Oriented Programing course. His code consists of N consecutive blocks, each of them consists of certain amount of lines. Unfortunately, Jonathan made a lot of mistakes. Compiler showed that Jonathan made M mistakes, each of them described by the number of line where this mistake was made. To debug his project faster, Jonathan wants to define number of block in which I made a mistake. Please, help Jonathan debug his project before deadline will expire.

Input format

First line consists of integers N and M - number of blocks and mistakes (1 \leq N, $M \leq$ 2 \cdot 10⁵).

The second line contains N integers a_i - number of lines in the i_{th} block (1 $\leqslant a_i \leqslant 10^4$).

Each of the next M lines contains one integer b_i - number of line where the i_{th} mistake was made (1 $\leq b_i \leq 2 \cdot 10^9$).

Output format

Print M lines, the i_{th} line must contain the number of block in which the i_{th} mistake was made.

Examples

Input

3 4

Output

2

Input

Output

2 3

Notes

In the first sample lines [1, 3] belong to the first block and lines [4, 7] to the second. So, Jonathan will find mistake at the fifth line at the second block

In the second sample lines [1, 5], [6, 12], [13, 18] belong to the first, second and third blocks respectively. So, the fifth line is inside first block, the ten line is inside second block and the fifteenth line is inside third block.

Hint: Think about inplementing binary search function to solve this problem.

Hint: Build a new array P, where P_i is the line at which i_{th} block ends. You can notice, that this array is sorted.

Submit a colution

