# Problem H. High Load Database

Time limit: 2 seconds
Memory limit: 512 megabytes

Henry profiles a high load database migration script. The script is the list of $n$ transactions. The $i$-th transaction consists of $a_i$ queries. Henry wants to split the script to the minimum possible number of batches, where each batch contains either one transaction or a sequence of consecutive transactions, and the total number of queries in each batch does not exceed $t$.

Unfortunately, Henry does not know the exact value of $t$ for the production database, so he is going to estimate the minimum number of batches for $q$ possible values of $t$: $t_1, t_2, \ldots, t_q$. Help Henry to calculate the number of transactions for each of them.

## Input

The first line contains a single integer $n$ — the number of transactions in the migration script ($1 \le n \le 200\,000$).

The second line consists of $n$ integers $a_1, a_2, \ldots, a_n$ — the number of queries in each transaction ($1 \le a_i$; $\sum a_i \le 10^6$).

The third line contains an integer $q$ — the number of queries ($1 \le q \le 100\,000$).

The fourth line contains $q$ integers $t_1, t_2, \ldots, t_q$ ($1 \le t_i \le \sum a_i$).

## Output

Output $q$ lines. The $i$-th line should contain the minimum possible number of batches, having at most $t_i$ queries each. If it is not possible to split the script into the batches for some $t_i$, output "`Impossible`" instead.

Remember that you may not rearrange transactions, only group consecutive transactions in a batch.

## Example

| standard input | standard output |
|---|---|
| 6<br>4 2 3 1 3 4<br>8<br>10 2 5 4 6 7 8 8 | 2<br>Impossible<br>4<br>5<br>4<br>3<br>3<br>3 |