# 7840   Reservoir

A big reservoir was built in Red river using a dam. Assume that the reservoir is a rectangular box with unit length width. The reservoir consists of many tanks. An example a cross section of an empty reservoir along its length and height dimensions is shown in the picture on the right:

Water flows in from the top left gate into the reservoir. The tanks in the resevoir are constructed using water resistant walls. Each wall is one unit length thick (along the width dimention) and has its height smaller than the height of the reservoir.

Given the location and the height of the walls and the unit volume K of water flowing in, your task is to figure out the last wall water flows over.
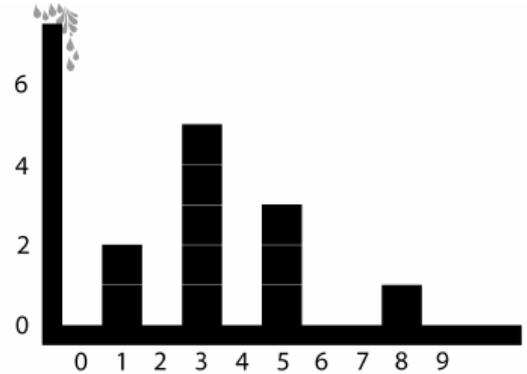
Input

The input consists of several datasets. The first line of the input contains the number of datasets which is a positive integer and is not greater than 20. The following lines describe the datasets.

Each dataset is described by the following lines:

- The first line contains one positive integer N that is the number of walls separating the tanks ($N \leq 10^5$).

- The second line contains N positive integers L_i where L_i is the horizonal location (along the length dimention of the reservoir) of the i-th wall ($1 \leq L_i \leq 10^9$, $L_i > L_{i-1} + 1$ for $i > 1$).

- The third line contains N positive integers H_i where H_i is the height in unit length of the i-th wall ($1 \leq H_i \leq 10^5$).

- The fourth line contains an integer Q that is a number of queries ($Q \leq 10^{50}$).

- In the next Q lines, each line contains a positive integer K that is the unit volume of water flowing in the reservoir ($K \leq 10^5$)

Output

For each dataset, write out Q lines where the i-th line contains the index of the last wall that water flows over for the i-th query. If there is no wall that water flows over, output '0'.
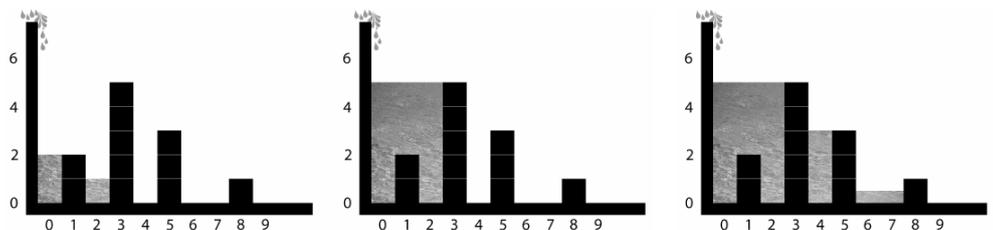
Explanations: The picture on the right illustrates the three samples below.

Sample Input

```
1
4
1 3 5 8
2 5 3 1
3
3
```

```
13
17
```

Sample Output

```
1
1
3
```