Problem A. **GBus count**

Confused? Read the quick-start guide.

| Small input | Solve A-small |
| 9 points | You may try multiple times, with penalties for wrong submissions. |

| Large input | You must solve the small input first. |
| 15 points | You have 8 minutes to solve 1 input file. (Judged after contest.) |

Problem

There exist some cities that are built along a straight road. The cities are numbered 1, 2, 3... from left to right.

There are **N** GBuses that operate along this road. For each GBus, we know the range of cities that it serves: the i-th gBus serves the cities with numbers between A_i and B_i, inclusive.

We are interested in a particular subset of **P** cities. For each of those cities, we need to find out how many GBuses serve that particular city.

Input

The first line of the input gives the number of test cases, **T**. Then, **T** test cases follow; each case is separated from the next by one blank line. (Notice that this is unusual for Kickstart data sets.)

In each test case:

- The first line contains one integer **N**: the number of GBuses.
- The second line contains 2**N** integers representing the ranges of cities that the buses serve, in the form A_1 B_1 A_2 B_2 A_3 B_3 ... A_N B_N. That is, the first GBus serves the cities numbered from A_1 to B_1 (inclusive), and so on.
- The third line contains one integer **P**: the number of cities we are interested in, as described above. (Note that this is not necessarily the same as the total number of cities in the problem, which is not given.)
- Finally, there are **P** more lines; the i-th of these contains the number C_i of a city we are interested in.

Output

For each test case, output one line containing `Case #x: y`, where x is the number of the test case (starting from 1), and y is a list of **P** integers, in which the i-th integer is the number of GBuses that serve city C_i.

Limits

$1 \le T \le 10$.

Small dataset

$1 \le N \le 50$
$1 \le A_i \le 500$, for all i.
$1 \le B_i \le 500$, for all i.
$1 \le C_i \le 500$, for all i.
$1 \le P \le 50$.

Large dataset

$1 \leq N \leq 500$.
$1 \leq A_i \leq 5000$, for all i.
$1 \leq B_i \leq 5000$, for all i.
$1 \leq C_i \leq 5000$, for all i.
$1 \leq P \leq 500$.

Sample

Input

```
2
4
15 25 30 35 45 50 10 20
2
15
25

10
10 15 5 12 40 55 1 10 25 35 45 50 20 28 27 35 15 40 4 5
3
5
10
27
```

Output

```
Case #1: 2 1
Case #2: 3 3 4
```

In Sample Case #1, there are four GBuses. The first serves cities 15 through 25, the second serves cities 30 through 35, the third serves cities 45 through 50, and the fourth serves cities 10 through 20. City 15 is served by the first and fourth buses, so the first number in our answer list is 2. City 25 is served by only the first bus, so the second number in our answer list is 1.