apac test powered by Google Code Jam Practice Mode

Problem B. GBus count

Questions asked 4

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the Quick-Start Guide to get started.

Small input 9 points	Solve B-small
Large input 15 points	Solve B-large

- Submissions

Cube IV

8pt	Not attempted **1708/2380 users** correct (72%)
15pt	Not attempted **1492/1679 users** correct (89%)

GBus count

9pt	Not attempted **2048/2354 users** correct (87%)
15pt	Not attempted **1865/2018 users** correct (92%)

Sort a scrambled itinerary

11pt	Not attempted **1623/1914 users** correct (85%)
15pt	Not attempted **1483/1602 users** correct (93%)

Itz Chess

12pt	Not attempted **654/1008 users** correct (65%)
15pt	Not attempted **393/622 users** correct (63%)

- Top Scores

Kirino	100
Kriii	100
Balajiganapathi	100
uws933	100
NExPlain	100
culaucon	100
fahimzubayer18	100
pattara.s	100
buaamm	100
LiJiancheng	100

Problem

There exists a straight line along which cities are built.

Each city is given a number starting from 1. So if there are 10 cities, city 1 has a number 1, city 2 has a number 2,... city 10 has a number 10.

Different buses (named GBus) operate within different cities, covering all the cities along the way. The cities covered by a GBus are represented as 'first_city_number last_city_number' So, if a GBus covers cities 1 to 10 inclusive, the cities covered by it are represented as '1 10'

We are given the cities covered by all the GBuses. We need to find out how many GBuses go through a particular city.

Input

The first line contains the number of test cases (**T**), after which **T** cases follow each separated from the next with a **blank** line.
For each test case,
The first line contains the number of GBuses.(**N**)
Second line contains the cities covered by them in the form
$\mathbf{a_1\ b_1\ a_2\ b_2\ a_3\ b_3 ... a_n\ b_n}$
where GBus1 covers cities numbered from a_1 to b_1, GBus2 covers cities numbered from a_2 to b_2, GBus3 covers cities numbered from a_3 to b_3, upto **N** GBuses.
Next line contains the number of cities for which GBus count needs to be determined (**P**).
The below **P** lines contain different city numbers.

Output

For each test case, output one line containing "Case #T_i:" followed by **P** numbers corresponding to the number of cities each of those **P** GBuses goes through.

Limits

1 <= **T** <= 10
$\mathbf{a_i}$ and $\mathbf{b_i}$ will always be integers.

Small dataset

1 <= **N** <= 50
1 <= $\mathbf{a_i}$ <= 500, 1 <= $\mathbf{b_i}$ <= 500
1 <= **P** <= 50

Large dataset

1 <= **N** <= 500
1 <= $\mathbf{a_i}$ <= 5000, 1 <= $\mathbf{b_i}$ <= 5000
1 <= **P** <= 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
```

Explanation for case 1:
2 GBuses go through city 15 (GBus1 [15 25] and GBus4 [10 20])
1 GBus goes through city 25 (GBus1 [15 25])