Problem: Conveyor Belts

There are two parallel conveyor belts carrying, each, a sequence of products of varying value and type. The conveyor belts move independently and each can advance as far as you like but cannot move backwards. If, at the edge of the conveyors, there are two compatible products, i.e., two products with the same type, you got a pair and you can take both products together from the conveyor belts. The value of a pair is the sum of the two products' values.

For reasons unknown, every product falling from a conveyor without being taken as part of a pair cannot be reused.

Task

Given two product sequences, return the maximum possible value you can take and the minimum number of pairs necessary to achieve it.

Input

The first line of the input contains an integer C with the number of test cases. For each test case, the first line has the number L of products of the first conveyor belt. Then, on each line, from first to last product, comes each product information: product name S (a string), product type T (an uppercase letter) and product value V (an integer). The sequence of products on the second conveyor belt follows, in the same format.

Constraints

$0 < C \leq 5$	Number of test cases
$0 \leq L \leq 2\,000$	Number of products on a conveyor belt
$0 < \lvert S \rvert \leq 32$	Length of a product name
$0 \leq V \leq 100\,000$	Product value

Output

For each test case, a line consisting of: the maximum possible value, one space, the minimum number of pairs, and a newline.

Sample Input

```
3
4
nail B 5000
spoon A 1200
orange C 5
nail B 50
3
fork A 50000
hammer B 10
apple C 600
3
zorg X 500
xylf Y 50
krypt Z 450
3
xylf Y 50
tonite Z 450
lum X 500
1
a B 1
0
```

Sample Output

```
51805 2
1000 1
0 0
```

Sample Explanation

In the first test case, the maximum value is obtained when the `spoon`, of type `B`, is matched with the `fork`, also of type `B`, and the `orange` is matched with the `apple`, both of type `C`.

In the second test case, there are two ways of obtaining the value 1000, but the one that needs fewer pairs is when the products of type `X` are matched.

In the last test case, there is no product on the second conveyor belt, so no product can be matched with the product on the first belt.