TOLLCNT

You are required to write a program that calculates the parking charges that vehicles have to pay for parking in a parking facility.

You are given the entry and exit times of each vehicles and how to compute the cost.

Suppose a vehicle entered at time ti

and left at time tf then the total cost is based on the time spent which is $tf-ti$

.

The cost is computed as follows, the total number of hours spent is calculated and **rounded up** to the nearest integer, so if a vehicle spent 1.5 hours then it is rounded up to 2. For the first hour, the vehicle will be charged Rs. 60 and for every hour thereafter an extra Rs. 30 will be charged.

Print the total amount obtained from all the vehicles.

The data is provided in the form of events, where each event consists of

- a string which is either "entry" (denoting that the vehicle arrived) or "exit" (denoting that the vehicle is leaving the lot)
- a string which represents the license plate of the vehicle
- an integer which represents the time (given in minutes from 12:00 AM) at which the event (either vehicle entering or leaving) occurs.

It is guaranteed that the data provided is consistent with the following facts:

- every vehicle enters and leaves exactly once
- every vehicle leaves only after it has entered

Input

The first line contains an integer n

, the total number of events.

This is followed by the description of n

events, each event contains three lines.

The first line contains a string, which is either "entry" or "exit"

The second line contains a string which denotes the license plate of the vehicle

The third line represents an integer t

, which denotes the time of the day (given as minutes from 12:00 AM) that the event occurs.

The events are provided in ascending order of the time at which they occurred.

Output

Print in a single line an integer, the total cost to be paid by all the vehicles

Constraints

$1 \le n \le 105$

$0 \le t \le 86399$

It is guaranteed that for every "exit" event, there exists an "entry" event with the same vehicle (i.e. every vehicle would have entered the parking lot before it left).

Sample Input

```
4
entry
AB00CD0000
360
entry
EF01GH0001
420
exit
AB00CD0000
540
exit
EF01GH0001
570
```

Sample Output

```
240
```

Explanation

There are two vehicles with plates 'AB00CD0000' and 'EF01GH0001'

The vehicle 'AB00CD0000' entered at 6:00 AM (360 minutes = 6 hrs from 12:00 AM) and left at 9:00 AM (540 seconds = 9 hrs from 12:00 AM).

Therefore the total time spent by 'AB00CD0000' is exactly 3 hrs and according to the scheme the cost to be paid is 60 + 2 * 30 = 120.

The vehicle 'EF01GH0001' entered at 7:00 AM (420 minutes = 7 hrs from 12:00 AM) and left at 9:30 AM (570 seconds = 9.5 hrs from 12:00 AM).

Therefore the total time spent by 'AB00CD0000' is 2.5 hrs and for the purpose of toll calculation should be rounded **up** to 3 hrs and so this vehicle will also need to pay 120.

The total amount obtained from all the vehicles is 120 + 120 = 240 which is printed.