Problem F. Four Ways to Travel

Input file:	`stdin`
Output file:	`stdout`
Time limit:	1 second
Memory limit:	256 megabytes

A new payment system has been introduced for public transportation in city M: the electronic card "Tetrad". It is a refillable card suitable for paying for the following means of public transportation: bus, trolleybus, tram and subway.

A passenger starts using "Tetrad" by buying the card itself and putting some money on the card balance via a vending machine or a payment terminal. Then he uses his card by swiping it at a validator when boarding some means of surface transportation or entering the subway system, and some amount of money is deducted from the card balance. Note that the payment does not depend on the duration of a trip.

The common payment for using subway is 28 rubles, and 26 rubles for bus, trolleybus or tram. However, for passengers who make a lot of transfers during their travel, a new "90 minutes" plan has been developed: for 44 rubles, a passenger can travel by any number of buses, trolleybuses or trams, and also enter the subway system no more than once, during an 1.5-hour interval. The order of using different means of transportation does not matter. For example, you can take a subway train first, then take a trolleybus; or travel by bus first, then descend into the subway, take a train or two there (you swipe the card at a validator upon entering the subway system as a whole, not when changing trains), come up again and take a tram to reach the desired location; or use various means of ground transportation only. In any of the above cases, only 44 rubles will be deducted from the card for the whole trip using the "90 minutes" plan. The time when the transport arrives at a destination does not matter — only the moments when you enter a bus, a trolleybus, a tram or the subway system are essential for time management.

The electronic system determines the moment to activate the "90 minutes" plan automatically. For simplicity, let us consider ground transportation first. If there is a second trip during the 90 minute interval from the first one (inclusive), the system activates the "90 minutes" plan from the time of the first trip, and the cost of the second one is automatically decreased. Further trips which start within 1.5 hours since the first one are free of charge: you can travel without any limits.

It is getting more complicated with the subway. The "90 minutes" plan allows entering the subway system only once. In the case when, during an ongoing 1.5-hour travel interval, the passenger enters the subway system for the second time, this 1.5-hour travel interval is interrupted, and using the subway costs the usual 28 rubles. If a ground transportation takes place soon enough, the latter subway boarding will be the start of a new 90-minute travel interval.

For example, let us assume that at `10:00` you enter the subway, paying with a "Tetrad" card. The validator shows "-28" (28 rubles are deducted from your card). Then at `10:30` you exit the subway and take a tram. Only 16 rubles ($44 - 28 = 16$) are deducted from your card when boarding a tram. After that, at `10:50` you take a bus, and this time, it is legally free of charge. Then at `11:20` you enter the subway once again. 28 rubles will be deducted from card, because only one entry to the subway is included in the "90 minutes" regardless of the 1.5-hour interval from the time of the first trip. So, this second subway trip starts a brand new 1.5-hour interval. If your next trip on, say, trolleybus starts at `12:50`, then it's 16 rubles, but if it starts at `12:51`, it's 26 rubles.

This new plan is very hard to comprehend by citizens and is seen as overly complex by them. However, it would be even harder if passengers could decide when to activate the "90 minutes" plan for themselves. Currently, it is done automatically.

Let us assume that you have planned your trips for a day and have enough rubles on your "Tetrad" card balance. What amount will be deducted from the card by the end of the day? Could you pay less if you could decide when to activate the "90 minutes" plan yourself? Note that in the latter scenario, it is still not allowed to switch off or suspend the "90 minutes" plan voluntarily once it is activated. That is, once

you activate the "90 minutes" plan, you have no other choice but to pay according to the plan. You have to either wait for 1.5 hours or enter the subway system for a second time to have it wear off, and only since that moment, you once again control the time of the next activation (for example, you can activate it again instantly).

Input

The first line of input contains a single positive integer N: the number of trips. Each of the next N lines contains a description of a trip. Each description consists of the time of boarding in the format `hh:mm` (hour and minute respectively, left-padded with zeroes to two digits) and a single letter: '`S`' if this trip uses surface transportation (bus, trolleybus or tram), or '`U`' if it uses underground transportation (subway). The time of boarding and the letter are separated by a single space. The trips are described in chronological order and fit within one day (the time is ascending from `00:00` to `23:59`). Each trip lasts for at least one minute, therefore, no moment of time is given twice in the input.

Note that letter '`U`' means entering the subway system (not just switching trains while underground).

Output

Output a single line with two integers: the amount that will be deducted from the "Tetrad" card for taking these N trips, and the minimum possible amount of expenses in case you had an ability to control the activation of the "90 minutes" plan.

Examples

stdin	stdout
2 00:00 U 23:59 S	54 54
5 10:00 U 10:30 S 10:50 S 11:20 U 12:51 S	98 98
4 20:00 S 21:30 S 21:31 S 21:32 S	88 70