

Cafeteria

During the week, the cafeteria of my university is open until 2:30 PM. Normally, I will be at the university before this time anyway. Since I am a lazy person, I don't want to cook for myself and prefer eating in the cafeteria. But sometimes I don't have any classes in the morning, so I have to make sure to get to the university before the cafeteria closes.

There are several bus stops within walking distance of my home and each one has a bus connection to the university. For each bus stop, there will be a bus driving to the university every ten minutes, so I just need to remember the number of minutes after a full hour when the first bus departs from each stop, how long it takes to get to the bus stop and how long the bus needs to drive to the university.

Given a sequence of integers *offset* (the number of minutes after a full hour when the first bus departs), a sequence of integers *walkingTime* (the number of minutes I need to walk to a bus stop) and a sequence of integers *drivingTime* (the number of minutes the bus needs to drive to the university) you should find and print the latest time when I have to leave my house in order to be at the university at 2:30 PM or before. The *i*th element of *offset*, *walkingTime* and *drivingTime* refers to the *i*th bus stop.

The format of the time to print should be HH:MM (HH the hour, MM the minute). The 12 hour time format is used.

Times between noon and 1 PM should be written as 12:MM (where MM is the number of minutes after noon).

Input Specification

The input will contain several test cases, each test cases will consist of three lines, the first will contain the *offset* sequence, the second will contain the *walkingTime* sequence, and the third will contain the *drivingTime* sequence. You can assume the follow will always be true:

- *offset*, *walkingTime* and *drivingTime* contain the same number of elements.
- *offset*, *walkingTime* and *drivingTime* contain between 1 and 50 elements, inclusive.
- Each element of *offset* is between 0 and 9, inclusive.
- Each element of *walkingTime* is between 1 and 30, inclusive.
- Each element of *drivingTime* is between 1 and 300, inclusive.

Output Specification

Print one line per test case with the answer, follow the format below

Input Example

```
9
1
1
6
9
120
6 9
```

9 10
120 121
0
20
250
0
21
250
1
30
300
0 1 2 3 4 5 6 7 8 9
11 11 11 11 11 11 11 11 11 11
190 190 190 190 190 190 190 190 190 190 190 190

Output Example

02:28
12:17
12:19
10:00
09:59
08:51
11:09