Setting the Alarm

Vambola wants a computer programme that helps him figure out what time to wake up in the morning. He will enter the time he goes to sleep, and the number of seconds that he wants to sleep, and the programme will calculate the time at which Vambola should set the alarm. Assume that Vambola never wants to sleep for more than 12 hours.

Input

The input will contain multiple instances The first line will contain a single integer n. This will be followed by n input instances, each on a separate line. Each line will contain a time in the format HH:MM:SS, giving the hour of the day, the minute and the second (each in two digits), separated by colons. This will be followed by the number of seconds to sleep.

All times should be on a 12-hour clock (not a 24-hour clock).

Output

Generate one line of output for each input line. The output should contain the time to wake up in the same HH:MM:SS format as described above.

Sample Input

```
2
10:01:08 7200
08:59:00 18265
```

Sample Output

```
12:01:08
02:03:25
```