Swimming pool P11888_en

(The original statement in Catalan has some private jokes. This English version goes straight to the point of the problem.)

There is a swimming pool with some free slots of time. There are two rules:

- A slot can only be used from its beginning.
- If a slot is used, even if partially, you must wait for at least one hour *from the end of the slot* before you can use another slot.

Input

Input consists of several cases. Every case begins with the number of slots n, followed by n pairs of triplets $h_1{:}m_1{:}s_1$ $h_2{:}m_2{:}s_2$, which indicate that there is a slot from $h_1{:}m_1{:}s_1$ until $h_2{:}m_2{:}s_2$. Assume $1 \leq n \leq 1000$, that hours are between 0 and 23, that minutes are between 0 and 59, and that $h_1{:}m_1{:}s_1$ is smaller than $h_2{:}m_2{:}s_2$. The end of input is marked with a special case with $n = 0$.

Output

For every case, print the maximum number of seconds that you can swim.

Sample input 1

```
1
00:00:00 00:10:00
2
01:10:00 02:10:00
00:00:00 00:10:00
2
01:09:59 02:10:00
00:00:00 00:10:00
4
00:10:40 00:35:30
01:00:00 01:55:00
02:10:00 03:15:00
12:00:20 23:59:59
5
12:00:00 13:00:00
12:30:00 14:30:00
14:00:00 15:00:00
15:30:00 17:30:00
16:00:00 17:00:00
0
```

Sample output 1

```
600
4200
3601
48569
14400
```

Problem information

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