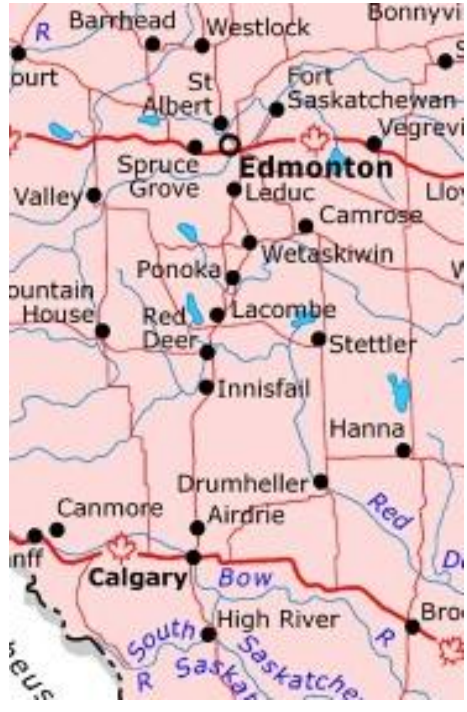
The University of Calgary team qualified for the 28th ACM International Collegiate Programming Contest World Finals in Prague, Czech Republic. Just by using the initials of team members they got a very cunning team name: **ACM** (**A**lecs, **C**elly and **M**onny). In order to prepare for the contest, they have decided to travel to Edmonton to learn the tricks of trade from **D**ilbert, Alberta-wide famous top-coder.

Due to a horrible miscommunication which is as welcome as a plague among such teams, **A**, **C** and **M** drive from Calgary to Edmonton in separate cars. To make things worse, there was also a miscommunication with **D**, who being always so helpful, decides to go to Calgary in order to save the team a trip to the far, freezing North. All this happens on the same day and each car travels at a constant (but not necessarily the same) speed on the famous Alberta #2.

Then **A** passed **C** and **M** at time t_1 and t_2, respectively, and met **D** at time t_3. **D** met **C** and **M** at times t_4 and t_5, respectively. The question is: at what time did **C** pass **M**?



Input

The input is a sequence of lines, each containing times t_1, t_2, t_3, t_4 and t_5, separated by white space. All times are distinct and given in increasing order. Each time is given in the $hh:mm:ss$ format on the 24-hour clock. A line containing '`-1`' terminates the input.

Output

For each line of input produce one line of output giving the time when **C** passed **M** in the same format as input, rounding the seconds in the standard way.

Sample Input

```
10:00:00 11:00:00 12:00:00 13:00:00 14:00:00
10:20:00 10:58:00 14:32:00 14:59:00 16:00:00
10:20:00 12:58:00 14:32:00 14:59:00 16:00:00
08:00:00 09:00:00 10:00:00 12:00:00 14:00:00
-1
```

Sample Output

```
12:00:00
11:16:54
13:37:32
10:40:00
```