Problem 97: Time and Time Again

Difficulty: Medium

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Problem Background

Times and periods of times can be expressed in many different ways. National and regional differences, and even personal preferences, have led to a wide range of formats for expressing times. This can lead to a great deal of confusion; does the date 01/03 refer to January 3rd or March 1st... or January 2003? Is the time 8:45 in the morning or the evening?

You have been asked to break through some of this confusion by converting a list of times to a new, consistent format.

Problem Description

Your program will receive a list of time durations that provide the number of hours, minutes, and/or seconds within the duration.

- Hours will be given as a non-negative integer followed by a lowercase letter 'h' (e.g. 2h). Hours will range from 0 to 99 inclusive.
- Minutes will be given as a non-negative integer followed by a lowercase letter 'm' (e.g. 2m). Minutes will range from 0 to 59 inclusive.
- Seconds will be given as a non-negative integer followed by a lowercase letter 's' (e.g. 2s). Seconds will range from 0 to 59 inclusive.

These values may not be presented in this order. Values may be separated by spaces, commas, and/or the word "and"; this text should be ignored. Some of these values may be missing; for example, an input may only give you minutes and seconds. Any omitted values should be assumed to be zero.

Regardless of what information is provided, your program will need to print the duration in a simpler, more consistent format:

HH:MM:SS

In this format, HH is a two-digit number representing the number of hours (including a leading zero, if necessary). MM is a two-digit number representing the number of minutes (including a leading zero, if necessary). SS is a two-digit number representing the number of seconds (including a leading zero, if necessary). Each number is separated from the next with a colon, and they are always presented in the same order. All numbers must be included with the output, even if they are zero.
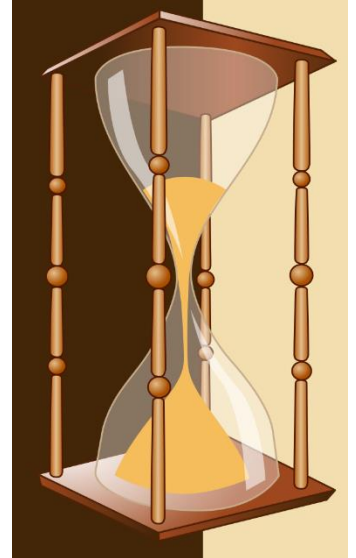
Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include a single line of input containing a string describing a time duration in a variable format as noted above.

```
5
1m and 45s
10m,10s
32s, and 12h
76h
1s
```

Sample Output

For each test case, your program must output the same time interval on a single line in the HH:MM:SS format described above.

```
00:01:45
00:10:10
12:00:32
76:00:00
00:00:01
```