Problem 233: Countdown

Difficulty: Medium

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Problem Background

You've been hired by an advertising company that manages a number of huge billboards in Times Square in New York, Trafalgar Square in London, and many other major cities around the world. Inspired by the famous countdown on New Year's Eve, the company is interested in expanding their business to develop countdown timers for other holidays and major events. They've asked you to develop a countdown timer application to support this business expansion.

Problem Description

The company is looking to get an MVP – Minimally Viable Product – online quickly so they can demonstrate to investors the potential of this idea. They've asked you to develop an algorithm that will allow them to supply the current date and time, and the date and time of the holiday or event. The algorithm should then calculate the time remaining until the holiday or event, and present that time in days, hours, minutes, and seconds.

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 text containing two timestamps separated by a pipe character (|). The first timestamp represents the "current" time and date, and the second timestamp represents the event's time and date. Both timestamps will be presented in MM.DD.YYYY HH:MM:SS format. All times presented are within the same time zone, and daylight savings may be ignored.

```
4
11.30.2024 17:46:09|12.25.2024 07:02:28
01.10.2026 14:15:13|01.01.2027 15:25:20
03.12.2025 23:59:46|01.01.2026 11:31:38
05.05.2024 05:09:43|07.04.2024 04:10:50
```

Sample Output

For each test case, your program must print a single line showing the amount of time remaining (from the "current" time until the time of the event) in the format "## Days ## Hours ## Minutes ## Seconds", where each ## is the amount of the following time unit. Each number should contain a

minimum of two digits, using leading zeroes where necessary. Account for proper pluralization: Ex. "01 Days" should be "01 Day".

```
24 Days 13 Hours 16 Minutes 19 Seconds
356 Days 01 Hour 10 Minutes 07 Seconds
294 Days 11 Hours 31 Minutes 52 Seconds
59 Days 23 Hours 01 Minute 07 Seconds
```