# Problem 1 – Exam Schedule

At SoftUni we have a new trainee Stamat, who is assigned to make **schedules for the entrance exams**. Since today is his first day at work he is a little bit nervous and he is not working very fast. Unfortunately, it seems that he will not have enough time to make the schedule for the next exam and there is no one else to do the job … except you of course. You will be given **exam starting time** in the standard 12-hour clock (**hours**, **minutes** and **part of the day**) and **exam duration** (**hours** and **minutes**). Your job is to write a program that calculates **at what time the exam ends**.

\* Note that the **standard 12-hours clock** uses the following arrangements of the hours of the day: 12AM (midnight), 1AM, 2AM, 3AM, 4AM, 5AM, 6AM, 7AM, 8AM, 9AM, 10AM, 11AM, 12PM (noon), 1PM, 2PM, 3PM, 4PM, 5PM, 6PM, 7PM, 8PM, 9PM, 10PM, 11PM, 12AM, 1AM, … (learn more at <http://en.wikipedia.org/wiki/12-hour_clock>).

## Input

The input data should be read from the console. The input data consists of exactly 5 lines:

* The first three lines are holding the exam start time: **hour**, **minutes** and **part of the day (AM or PM)**.
* The last two lines are holding two integer number: the exam **duration hours** and **minutes**.

The input data will always be valid and in the format described. There is no need to check it explicitly.

## Output

You have to print the time the exam ends in format **HH:MM:PartOfDay**.

## Constraints

* The **starting hour** will be an integer number in the range [1…12] inclusive.
* The **starting minutes** will an integer number in the range [0…59] inclusive.
* The **part of the day** will consist of exactly two capital letters: **AM** or **PM**.
* The **duration hours** will be an integer number between [0…23] inclusive.
* The **duration minutes** will be an integer number between [0…59] inclusive.
* Allowed work time for your program: 0.1 seconds.
* Allowed memory: 16 MB.

## Examples

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Input** | **Output** |  | **Input** | **Output** |  | **Input** | **Output** |  | **Input** | **Output** |
| 9  30  AM  6  00 | 03:30:PM | 2  0  PM  2  30 | 04:30:PM |  | 11  30  AM  2  0 | 01:30:PM |  | 11  59  PM  0  3 | 12:02:AM |