



## 2077 - Clock

North America - Rocky Mountain - 2000/2001

### Clock

You are given a standard 12-hour clock with analog display, an hour hand and a minute hand. How many times does the minute hand pass the hour hand in a given time interval?

### Input

The input file contains an indefinite number of lines; each line contains four numbers. The first pair of numbers represents an "initial time"; the second pair represents a "final time". In each such number pair, the first number represents hours, second number represents minutes. The hours will be in the range 1..12, the minutes in the range 0..59. No initial time and no final time will be an instant at which the minute hand just passes the hour hand. (In particular, 12 00 will not occur as an initial or final time). No initial time will be the same as the corresponding final time. Between each initial time and corresponding final time, the hour hand will have turned less than one full revolution (360 degrees). As the hour hand turns from its initial position to its final position, it may or may not sweep past the number 12 on the clock's dial. If it does, then either the initial time is an "A.M." time and the final time a "P.M." time, or vice versa. If it does not, then either both times (initial and final) are "A.M." or both are "P.M.".

### Output

Each line of input gives rise to one line of output, containing the initial and final times, and the number of times the minute hand passes the hour hand between the initial time and the final time. Observe all details of formatting, such as upper/lower case letters, punctuation, blank spaces, and the absence of blank lines. In each time display, the hours and minutes are displayed in fields of width 2, separated by a colon. The ten's digit (of hours or minutes) is displayed as a zero if it is zero.

Here is a formatting template shown between two lines of the above output:

```
Initial time  Final time  Passes
12345678901234567890123456789012
      12:50      01:02      0
```

### Sample Input

```
12 50  1  2
 3  8  3 20
 2 45 11  0
11  0  3 20
 1  2 12 50
 3 20  3  8
```

### Sample Output

```
Program 3 by team X
Initial time  Final time  Passes
```

12:50	01:02	0
03:08	03:20	1
02:45	11:00	8
11:00	03:20	4
01:02	12:50	11
03:20	03:08	10

End of program 3 by team X

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