

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

```
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
```