

**STA Online Computer Programming Contest (DWITE)  
January 2004**

**Problem 2**

**Digital Clocks**

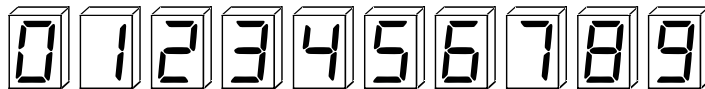
LCD digital clocks display each of their digits with up to 7 illuminated segments.



When the clock changes its value to the next minute, it will illuminate and/or turn off some of the segments of the digits in order to make up the new time.

For example, if the clock reads 7:38 it will turn off 1 segment when it displays 7:39. From 7:39 to 7:40, it will turn off 3 segments and turn on 2 segments. From 7:40 to 7:41, it will turn off 4 segments.

Your job is to calculate how many segments are turned on and off between two given times. For example, for a clock to start at 7:38 and end at 7:41, it is required to turn on 2 segments and turn off 8 segments in total.



The digits are formed the following ways:

The input file (DATA2) will contain five lines of data. Each line will contain two times in the form HH:MM, where  $1 \leq HH \leq 12$  and  $0 \leq MM \leq 59$ . The two times will be separated by a single space. The first time is the starting time and the second time is the ending time. Leading zeroes are displayed only in the minutes. The ending time will be later than the starting time. Assume the ending time will be before 12 hours from the starting time.

The output file (OUT2) will contain five lines of data, corresponding to each line of the input file. Each line will contain two numbers, separated by a single space, representing the number of segments turned on, and then the number of segments turned off.

**Sample Input (Only three lines given)**

```
7:38 7:41
12:30 1:02
6:01 6:02
```

**Sample Output**

```
2 8
55 60
4 1
```