

## Problem G. Nano alarm-clocks

Input file: `stdin`  
Output file: `stdout`  
Time limit: 1 second  
Memory limit: 256 megabytes

An old watchmaker has  $n$  stopped nano alarm-clocks numbered with integers from 1 to  $n$ . Nano alarm-clocks count time in hours, and in one hour there are million minutes, each minute lasting a million seconds. In order to repair them all the watchmaker should synchronize the time on all nano alarm-clocks. In order to do this he moves clock hands a certain time forward (may be zero time). Let's name this time shift a transfer time.

Your task is to calculate the minimal total transfer time required for all nano alarm-clocks to show the same time.

### Input

The first line contains a single integer  $n$  — the number of nano alarm-clocks ( $2 \leq n \leq 10^5$ ). In each  $i$ -th of the next  $n$  lines the time  $h, m, s$ , shown on the  $i$ -th clock. Integers  $h, m$  and  $s$  show the number of hours, minutes and seconds respectively. ( $0 \leq h < 12, 0 \leq m < 10^6, 0 \leq s < 10^6$ ).

### Output

Output three integers separated with spaces  $h, m$  and  $s$  — total minimal transfer time, where  $h, m$  and  $s$  — number of hours, minutes and seconds respectively ( $0 \leq m < 10^6, 0 \leq s < 10^6$ ).

### Examples

stdin	stdout
2 10 0 0 3 0 0	5 0 0
3 11 999999 999999 0 0 0 11 999999 999999	0 0 2