Binary clock

Wersja polska English version

John found on the internet a specific type of clock which is called binary clock. He got interested in those clocks but he is not sure if he can change normal hour to binary format, so he asked you to write a program which would check whether he made it correctly or not.

Explanation of binary clock: http://en.wikipedia.org/wiki/Binary_clock

Input

The first line of the standard input contains one integer **t** (t<101) which is the number of test cases.

In each of the next **t** tests there are 24 digits (four lines with 6 digits in each of them) which represent the binary clock. There is one blank line after each test.

Output

One line with hour in following format: hour:min:sec or *ERROR* if time is incorrect.

Example

Input:

```
3
000000
000000
000000
010101

000000
010101
001011
100110

000001
000001
000001
000001
```

Output:

```
01:01:01
14:25:36
ERROR
```