

## 4232 Sixth Grade Math

In sixth grade, students are presented with different ways to calculate the *Least Common Multiple* (**LCM**) and the *Greatest Common Factor* (**GCF**) of two integers. The **LCM** of two integers  $a$  and  $b$  is the smallest positive integer that is a multiple of both  $a$  and  $b$ . The **GCF** of two non-zero integers  $a$  and  $b$  is the largest positive integer that divides both  $a$  and  $b$  without remainder.

For this problem you will write a program that determines both the **LCM** and **GCF** for positive integers.

### Input

The first line of input contains a single integer  $N$ , ( $1 \leq N \leq 1000$ ) which is the number of data sets that follow. Each data set consists of a single line of input containing two positive integers,  $a$  and  $b$ , ( $1 \leq a, b \leq 1000$ ) separated by a space.

### Output

For each data set, you should generate one line of output with the following values: The data set number as a decimal integer (start counting at one), a space, the **LCM**, a space, and the **GCF**.

### Sample Input

```
3
5 10
7 23
42 56
```

### Sample Output

```
1 10 5
2 161 1
3 168 14
```