



## A • 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 | Sample Output |
|--------------|---------------|
| 3            | 1 10 5        |
| 5 10         | 2 161 1       |
| 7 23         | 3 168 14      |
| 42 56        |               |