Problem D. Difference and GCD

We think you are tired of computing the greatest common divisor of two positive integers. Instead, in this problem, we will give you the greatest common divisor of two positive integers a and b instead. You need to print out a and b such that $\gcd(a, b) = g$. However, this may be too easy for you, so we give an additional condition: $b - a = h$, where h is given.

If we add this condition, such a and b might not exist, so first you have to determine whether there exists a solution or not. If at least one solution exists, you have to print a and b. However, we don't want to use large integers, so a must be the smallest among all possible solutions.

Input

Your input consists of an arbitrary number of records, but no more than 10,000.

Each record is a line that consists of two integers g $(1 \leq g \leq 10^9)$ and h $(1 \leq h \leq 10^9)$

The end of input is indicated by a line containing only the value -1.

Output

For each input record, print:

- a and b separated by a space, if at least one solution exists.
- "`IMPOSSIBLE`" (without quotes), otherwise.

Example

Standard input	Standard output

`5 5`
`2 1`
`-1`
	`5 10`
	`IMPOSSIBLE`

Time Limit

1 second.