Euclid Problem

The Problem

From Euclid it is known that for any positive integers A and B there exist such integers X and Y that $AX+BY=D$, where D is the greatest common divisor of A and B. The problem is to find for given A and B corresponding X, Y and D.

The Input

The input will consist of a set of lines with the integer numbers A and B, separated with space ($A,B<1000000001$).

The Output

For each input line the output line should consist of three integers X, Y and D, separated with space. If there are several such X and Y, you should output that pair for which $|X|+|Y|$ is the minimal (primarily) and $X<=Y$ (secondarily).

Sample Input

```
4 6
17 17
```

Sample Output

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-1 1 2
0 1 17
```