EUCLID 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 the corresponding X, Y , and D for a given A and B.

Input

The input will consist of a set of lines with the integer numbers A and B, separated with space (A,B < 1, 000, 000, 001).

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 and |X| +|Y | is minimal.

Sample Input - 1

4 6

Sample Output- 1

-1 1 2

Sample Input - 2

17 17

Sample Output- 2

0 1 17