

Greatest Common Divisor

Description

You are given two integers A, B . Please find their greatest common divisor $d = \gcd(A, B)$, and also, find some integers x, y so that $Ax + By = d$.

Input

Two integers A, B .

Output

Three integers d, x, y .

Technical Specifications

- It is guaranteed that $1 \leq A, B \leq 10^9$.
- Your output should satisfy $0 \leq |x|, |y| \leq 10^9$.

Scoring

- If you only get d correct, you'll get 40% score of each test case.
- If you get x, y correct, and also d correct, then you'll get full score.

Sample Input 1

8 5

Sample Output 1 (40% score)

1 0 0

Sample Output 1 (full score)

1 2 -3