Integers

Find two nonnegative integers x1 and x2 so that $a_1 * x_1 + b_1 = a_2 * x_2 + b_2$ and $x_1 + x_2$ is minimized. Given that there exist x_1 and x_2 satisfying the above equation.

Input

- A single line containing four integers a_1, b_1, a_2, b_2 (the integers are within the interval $[0..2^{31}-1]$.

Output

- Print two integers x_1, x_2.

Example

Input
3 4 5 5

Output
2 1