The 2018 Ethiopian Collegiate Programming Contest

Problem B
Farm
Time Limit: 0.1 Second

Sangbae raises sheep and goats on his farm where each of the number of sheep and the number of goats is at least one. Sheep and goats eat same food, and every day each sheep eats exactly a grams of food and each goat eats exactly b grams of food.

Sangbae checks every day how many sheep and goats are in the farm. It was not easy to count them separately because they were moving around. He counted the total number of sheep and goats instead. Also he checked total amount of food that sheep and goats have eaten yesterday. From these values, he wants to find the number of sheep and the number of goats.

Given a, b, n (total number of sheep and goats), w grams of food that both sheep and goats have eaten yesterday, write a program to find the number of sheep and the number of goats.

Input
Your program is to read from standard input. The input consists of single line containing four integers, a, b, n, and w where $1 \leq a \leq 1{,}000$, $1 \leq b \leq 1{,}000$, $2 \leq n \leq 1{,}000$, $2 \leq w \leq 1{,}000{,}000$.

Output
Your program is to write to standard output. Print exactly one line which contains both the number of sheep and the number of goats. If there are two or more feasible solutions or there is no feasible solution, print -1.

The following shows sample input and output for three test cases.

Sample Input 1	Output for the Sample Input 1
3 4 9 32	4 5

Sample Input 2	Output for the Sample Input 2
3 4 8 32	-1

Sample Input 3	Output for the Sample Input 3
100 100 2 200	1 1