C. Diophantine equation

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given an equation $A * X + B * Y = C$, A, B, C are positive integer coefficients, X and Y are variables which can have positive integer values only. Output the number of solutions of this equation and the solutions themselves.

Input

The only line of input contains integers A, B and C ($1 \leq A, B, C \leq 1000$), separated with spaces.

Output

In the first line of the output print the number of the solutions N. In the next N lines print the solutions, formatted as "XY", sorted in ascending order of X, one solution per line.

Examples

input
3 5 35

output
2 5 4 10 1

input
3 35 5

output
0