

# Trezor

[English](#)

[Vietnamese](#)

Mirko decided to open a new business – bank vaults. A branch of the bank can be visualized in a plane, vaults being points in the plane. Mirko's branch contains exactly  $L \cdot (A+1+B)$  vaults, so that each point with integer coordinates inside the rectangle with corners  $(1, -A)$  and  $(L, B)$  contains one vault.

The vaults are watched by two guards – one at  $(0, -A)$ , the other at  $(0, B)$ . A guard can see a vault if there are no other vaults on the line segment connecting them.

A vault is not secure if neither guard can see it, secure if only one guard can see it and super-secure if both guards can see it.

Given  $A$ ,  $B$  and  $L$ , output the number of insecure, secure and super-secure vaults.

## Input

The first line contains integers  $A$  and  $B$  separated by a space ( $1 \leq A \leq 2000$ ,  $1 \leq B \leq 2000$ ).

The second line contains the integer  $L$  ( $1 \leq L \leq 1\,000\,000\,000$ ).

## Output

Output on three separate lines the numbers of insecure, secure and super-secure vaults.

## Example

**Input:**

1 1  
3

**Output:**

2  
2  
5

**Input:**

2 3  
4

**Output:**

0  
16  
8

**Input:**

7 11  
1000000

**Output:**

6723409  
2301730

