E. Vasya and Polynomial

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

Vasya is studying in the last class of school and soon he will take exams. He decided to study polynomials. Polynomial is a function $P(x) = a_0 + a_1x^1 + ... + a_nx^n$. Numbers a_i are called coefficients of a polynomial, non-negative integer n is called a degree of a polynomial.

Vasya has made a bet with his friends that he can solve any problem with polynomials. They suggested him the problem: "Determine how many polynomials $P(x)$ exist with **integer non-negative** coefficients so that , and , where and b are given positive integers"?

Vasya does not like losing bets, but he has no idea how to solve this task, so please help him to solve the problem.

Input

The input contains three integer positive numbers no greater than 10^{18}.

Output

If there is an infinite number of such polynomials, then print "`inf`" **without quotes**, otherwise print the reminder of an answer modulo $10^9 + 7$.

Examples

input
2 2 2
output
2

input
2 3 3
output
1