PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

B. Jzzhu and Sequences

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

Jzzhu has invented a kind of sequences, they meet the following property:

You are given x and y, please calculate f_n modulo 1000000007 ($10^9 + 7$).

Input

The first line contains two integers x and y ($|x|, |y| \le 10^9$). The second line contains a single integer n ($1 \le n \le 2 \cdot 10^9$).

Output

Output a single integer representing f_n modulo 1000000007 ($10^9 + 7$).

Examples

input
2 3 3
output
1

input
0 -1 2
output
1000000006

Note

In the first sample, $f_2 = f_1 + f_3$, $3 = 2 + f_3$, $f_3 = 1$.

In the second sample, $f_2 = -1$; -1 modulo $(10^9 + 7)$ equals $(10^9 + 6)$.