SQRT Problem

Input file:	**standard input**
Output file:	**standard output**
Time limit:	3 seconds
Memory limit:	256 megabytes

Miss Burger has three positive integers n, a, and b. She wants to find a positive integer solution x $(1 \le x \le n - 1)$ that satisfies the following two conditions:

- $x^2 \equiv a \pmod{n}$

- $\lfloor \sqrt[3]{x^2} \rfloor = b$

Additionally, it is guaranteed that n is an odd number and $\gcd(a, n) = 1$. Here $\gcd(x, y)$ denotes the greatest common divisor of x and y. We also guarantee that there exists a unique solution.

Note that $\lfloor x \rfloor$ represents the largest integer not exceeding x, such as $\lfloor 0.5 \rfloor = 0$, $\lfloor 11.3 \rfloor = 11$, $\lfloor 101.9 \rfloor = 101$, $\lfloor 99 \rfloor = 99$, $\lfloor 0 \rfloor = 0$, $\lfloor 2 \rfloor = 2$.

Input

The first line contains a single integer n $(3 \le n \le 10^{100} - 1)$.

The second line contains a single integer a $(1 \le a \le n - 1)$.

The third line contains a single integer b $(1 \le b \le n - 1)$.

Output

Output a single integer denoting the solution x.

Examples

standard input	standard output
9 4 3	7
650849 253233 5059	359895
29268658540371639122046169677605538931 22216978925831646928504047924228222624 92265211239638326127701620	28025732380501848167087889769592298758