# Pair Making

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|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 2.5 seconds |
| Memory limit: | 256 megabytes |

You are given integers $n$, $k$ and a prime $p$.

We call an ordered pair $(a, b)$ *good* if $a$ and $b$ are at least 1 and at most $n$, and the remainder when $a^2b$ is divided by $p$ is $k$.

More precisely, $(a, b)$ is *good* iff $a^2b \equiv k \pmod{p}$ and $1 \leq a, b \leq n$.

## Input

One single line of 3 space-separated integers $n, k, p$ such that $1 \leq k < p \leq 10^5$ and $1 \leq n \leq 10^9$.

## Output

Print in a single line, the number of *good* ordered pairs $(a, b)$.

## Examples

| standard input | standard output |
|---|---|
| 5 2 3 | 8 |
| 4 3 5 | 4 |

## Note

It is guaranteed that the input $p$ is prime. There is no need to check for that.

In the first test case, the only possible *good* pairs are: $(1, 2), (1, 5), (2, 2), (2, 5), (4, 2), (4, 5), (5, 2), (5, 5)$. So output should be 8.

In the second test case, the only possible *good* pairs are: $(1, 3), (2, 2), (3, 2), (4, 3)$. So output should be 4.