

Series Sum I

time limit per test: 1 second
memory limit per test: 488.3 megabytes
input: standard input
output: standard output

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Problem Statement

You are given two integers n and k .

You have the following infinite sequence $S = [1 \bmod k, (1 + 2) \bmod k, (1 + 2 + 3) \bmod k, \dots]$, in other words $S_i = (\sum_{j=1}^i j) \bmod k$.

Determine the value of S_n , in other words, determine the n^{th} value of the infinite sequence.

Input Format

Your first line will contain three space-separated integers n and k respectively.

Output Format

You should output a single integer S_n , the n^{th} integer of S (one-indexed).

Constraints

- $1 \leq n \leq 10^9$
- $1 \leq k \leq 10^9$

Sample Cases

Input 1

1 10

Output 1

1

Input 2

3 10

Output 2

6

Input 3

4 10

Output 3

0

Input 4

123451234 123451234

Output 4

61725617

Template

```
n, k = map(int, input().split())  
  
# print your output
```