**MODULAR EXPONENTIATION**

Given three numbers a,b,c. Calculate (a^b)mod c.

**Input Format:**

Single line containing three integers a,b,c separated by space.

**Constraints:**

1<=a,b,c<=100000

**Output Format**

Print (a^b)mod c.

**Sample Input**

2 2 3

**Sample Output**

1

Program --

#include<iostream>

using namespace std;

long long int pow\_exp(long long int x, long long int n,long long int c)

{long long int res = 1;

while (n > 0)

{if (n & 1)

res = res \* x;

res%=c;

res=(res+c)%c;

x = x \* x;

x%=c;

n >>= 1;

}

return res%c;

}

long long int mod\_exp(long long int a, long long int b, long long int c)

{

return (pow\_exp(a,b,c))%c;

}

int main() {

long long int a,b,c;

cin>>a>>b>>c;

cout<<mod\_exp(a,b,c);

return 0;

}