

C. Dreamoon and Sums

time limit per test: 1.5 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Dreamoon loves summing up something for no reason. One day he obtains two integers a and b occasionally. He wants to calculate the sum of all *nice* integers. Positive integer X is called *nice* if and , where k is some **integer** number in range $[1, a]$.

By we denote the *quotient* of integer division of X and y . By we denote the *remainder* of integer division of X and y . You can read more about these operations here: <http://goo.gl/AcsXhT>.

The answer may be large, so please print its remainder modulo 1 000 000 007 ($10^9 + 7$). Can you compute it faster than Dreamoon?

Input

The single line of the input contains two integers a, b ($1 \leq a, b \leq 10^7$).

Output

Print a single integer representing the answer modulo 1 000 000 007 ($10^9 + 7$).

Examples

input
1 1
output
0
input
2 2
output
8

Note

For the first sample, there are no nice integers because is always zero.

For the second sample, the set of nice integers is $\{3, 5\}$.

Codeforces Round #272 (Div. 2)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Problem tags

math

No tag edit access

→ Contest materials

- Announcement
- Tutorial