

A. Dreamoon and Stairs

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Dreamoon wants to climb up a stair of n steps. He can climb 1 or 2 steps at each move. Dreamoon wants the number of moves to be a multiple of an integer m .

What is the minimal number of moves making him climb to the top of the stairs that satisfies his condition?

Input

The single line contains two space separated integers n, m ($0 < n \leq 10000, 1 < m \leq 10$).

Output

Print a single integer — the minimal number of moves being a multiple of m . If there is no way he can climb satisfying condition print -1 instead.

Examples

input
10 2
output
6

input
3 5
output
-1

Note

For the first sample, Dreamoon could climb in 6 moves with following sequence of steps: {2, 2, 2, 2, 1, 1}.

For the second sample, there are only three valid sequence of steps {2, 1}, {1, 2}, {1, 1, 1} with 2, 2, and 3 steps respectively. All these numbers are not multiples of 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

implementation math

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 