A. Factory

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

One industrial factory is reforming working plan. The director suggested to set a mythical detail production norm. If at the beginning of the day there were x details in the factory storage, then by the end of the day the factory has to produce (remainder after dividing x by m) more details. Unfortunately, no customer has ever bought any mythical detail, so all the details produced stay on the factory.

The board of directors are worried that the production by the given plan may eventually stop (that means that there will be a moment when the current number of details on the factory is divisible by m).

Given the number of details a on the first day and number m check if the production stops at some moment.

Input

The first line contains two integers a and m ($1 \le a, m \le 10^5$).

Output

Print "Yes" (without quotes) if the production will eventually stop, otherwise print "No".

Examples

input
1 5
output
No

input
3 6
output
Yes

Codeforces Round #276 (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 matrices

No tag edit access

→ Contest materials

- Announcement
- Tutorial