A. Pineapple Incident

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

Ted has a pineapple. This pineapple is able to bark like a bulldog! At time t (in seconds) it barks for the first time. Then every s seconds after it, it barks twice with 1 second interval. Thus it barks at times t, $t+s$, $t+s+1$, $t+2s$, $t+2s+1$, etc.

Barney woke up in the morning and wants to eat the pineapple, but he can't eat it when it's barking. Barney plans to eat it at time x (in seconds), so he asked you to tell him if it's gonna bark at that time.

Input

The first and only line of input contains three integers t, s and x ($0 \le t, x \le 10^9$, $2 \le s \le 10^9$) — the time the pineapple barks for the first time, the pineapple barking interval, and the time Barney wants to eat the pineapple respectively.

Output

Print a single "YES" (without quotes) if the pineapple will bark at time x or a single "NO" (without quotes) otherwise in the only line of output.

Examples

input
3 10 4
output
NO

input
3 10 3
output
YES

input
3 8 51
output
YES

input
3 8 52
output
YES

Note

In the first and the second sample cases pineapple will bark at moments 3, 13, 14, ..., so it won't bark at the moment 4 and will bark at the moment 3.

In the third and fourth sample cases pineapple will bark at moments 3, 11, 12, 19, 20, 27, 28, 35, 36, 43, 44, 51, 52, 59, ..., so it will bark at both moments 51 and 52.

Codeforces Round #362 (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

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