

A. Carpeting the Room

time limit per test: 2 seconds
memory limit per test: 64 megabytes
input: standard input
output: standard output

Soroush's room is a square with side length n . Before this contest he bought k fine Persian carpets to carpet his room for celebrating the 100th contest on his favorite site. Each Persian carpet is a square of side length n_1 .

Soroush wants to cover all the area of his room. Carpets can be put over each other but it is not allowed to rotate the carpets. Can Soroush carpet his room completely?

Input

The input consists of three integer numbers n , k and n_1 ($10 \leq n \leq 12$, $1 \leq k \leq 10$,).

Output

Write a single YES or NO. Write YES if and only if Soroush can carpet his room completely.

Examples

input
10 4 6
output
YES

input
10 2 5
output
NO