

## Problem B. Exact power(exponent) of two



Given a natural number N. Print the word YES if the number N is an exact power of two, or the word NO otherwise.

The exponentiation operation cannot be used!

Input data

A natural number is entered.

Output

Print the answer to the problem.

Examples of  
input data

3

output

NO

input data

8

output

YES

8=2^3 yes

32=2^5 yes

N=10  
  
for(...; 1 ;....)  
{  
    2,4,8,16  
  
    if()  
    {  
        break;  
    }  
}

```
int N;  
  
int multipleTwo = 1;  
  
// N = 10  
// start loop for multiples of 2  
// if it skips over N number, then answer "NO"  
std::cin >> N;  
  
for (int i = 1; 1; i++) {  
    multipleTwo = 2 * multipleTwo;  
  
    if (multipleTwo == N) {  
        std::cout << "YES" << std::endl;  
        break;  
    }  
    else if (multipleTwo > N) {  
        std::cout << "NO" << std::endl;  
        break;  
    }  
}
```