

# Good Arrays

An array satisfies the PRIME-3 property if all of its elements are divisible any 3 distinct prime numbers. If  $a$ ,  $b$  and  $c$  are primes that divide an element of the array, another set could divide another element and this would not violate the PRIME-3 property.

Lucy, a Computer Science student from your school, decided that an array that satisfies the PRIME-3 property is a *Good Array*. Given the description of an array, determine whether it is *good*.

## Input

The input contains two lines. The first line contains a positive integer  $n$  ( $1 \leq n \leq 50$ ), the size of the array. The following line contains  $n$  space-separated positive integers  $N_i$ . It is guaranteed that these integers will be in the range of  $[1, 2310]$ .

## Output

If the array satisfies the PRIME-3 property, output "YES". If not, please output "NO". In any case, please do not include quotes in your output!

## Example

**Input:**

1  
5

**Output:**

NO

**Input:**

3  
30 105 385

**Output:**

YES