F. Break Number

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

Let's define $f(x)$ as the number of times at which the integer x can be divided by 2.

You are given N numbers, and you should print the maximum $f(x)$ among all these numbers.

Input

The first line contains one number N ($1 \leq N \leq 10^5$).

The second line contains N space-separated numbers where each number is between 1 and 10^{18} (inclusive).

Output

Print the maximum $f(x)$ among all numbers.

Examples

input	Copy
3 18 24 7	

output	Copy
3	

input	Copy
4 14 7 9 5	

output	Copy
1	

Note

In the **first** test case:

1. $f(18)$ is equal to 1; because we can divide 18 by 2 resulting in 9, but we cannot divide 9 by 2 (9 is not divisible by 2).
2. $f(24)$ is equal to 3; because we can divide 24 by 2 resulting in 12; again we can divide 12 by 2 (12 is divisible by 2) resulting in 6; again we can divide 6 by 2 (6 is divisible by 2) resulting in 3, but we cannot divide 3 by 2 (3 is not divisible by 2); so we could divide 24 three times.
3. $f(7)$ is equal to 0; because we cannot divide 7 by 2.

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- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1
- Sheet #1 (Data type - Conditions)

Contest #2
Finished