Minimize Number

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Given a number N and an array A of N **positive** numbers. Print **maximum** possible operations that can be performed.

The operation is as follows: if all numbers are **even** then divide each of them by **2** otherwise, you can not perform any more operations.

Input

First line contains a number N ($1 \leq N \leq 200$) number of elements.

Second line contains N numbers ($1 \leq A_i \leq 10^9$).

Output

Print the **maximum** possible number of operations that can be performed.

Examples

standard input	standard output
3 8 12 40	2
4 5 6 8 10	0

Note

First example:

Initially, [**8,12,40**] are written on the blackboard. Since all those integers are even, You can perform the operation.

After the operation is performed once, [**4,6,20**] are written on the blackboard. Since all those integers are again even, You can perform the operation.

After the operation is performed twice, [**2,3,10**] are written on the blackboard. Now, there is an odd number **3** on the blackboard, so you cannot perform the operation any more.

Thus, you can perform the operation at most twice.

Second example:

Since there is an odd number **5** on the blackboard already in the beginning, You cannot perform the operation at all.