DMPG '17 B6 - Multiply and Surrender

Roger has found N numbers, numbered $A_1, A_2, A_3, \ldots A_{N-1}, A_N$. Roger wants to know how many digits there are in the the binary representation of the product $A_1 \times A_2 \times A_3 \times \ldots \times A_{N-1} \times A_N$. Help Roger find this number!

Input Specification

The first line will consist of a single integer, N.
The next line will consist of N space separated integers, $A_1, A_2, \ldots A_{N-1}, A_N$.

Output Specification

Print the number of digits in the binary representation of the product $A_1 \times A_2 \times A_3 \times \ldots \times A_{N-1} \times A_N$.

Subtasks

Subtask	Points	N	A_i
1	10	$1 \leq N \leq 10$	$1 \leq A_i \leq 10$
2	90	$1 \leq N \leq 10^5$	$1 \leq A_i \leq 10^{18}$

Sample Input

```
5
2 2 2 2 2
```

Sample Output

```
6
```

Explanation of Sample Output

Let X_{dec} denote a decimal number and X_{bin} denote a binary number.
$2_{dec} \times 2_{dec} \times 2_{dec} \times 2_{dec} \times 2_{dec} = 32_{dec} = 100000_{bin}$.