DMPG '17 B6 - Multiply and Surrender

Time limit: 1.0s **Memory limit:** 64M

Roger has found N numbers, numbered $A_1, A_2, \ldots, A_N$. Roger wants to know how many digits there are in the binary representation of the product $A_1 \times A_2 \times \cdots \times A_N$. 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, $A_1, A_2, \ldots, A_N$.

Output Specification

Print the number of digits in the binary representation of the product $A_1 \times A_2 \times \cdots \times A_N$.

Constraints

Subtask 1 [10%]

$1 \leq N \leq 10$

$1 \leq A_i \leq 10$

Subtask 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.
$2_{dec} \times 2_{dec} \times 2_{dec} \times 2_{dec} \times 2_{dec} = 32_{dec} = 100000_{bin}$.