

## OLIMPIADA DE INFORMATICĂ ÎN ECHIPE – ETAPA NAȚIONALĂ

martie 2023

### Base12

Input file: standard input  
Output file: standard output  
Time limit: 0.3 seconds  
Memory limit: 128 megabytes

RANDy is now very interested in winning the grand prize at the new lotteries opened in his country. Because he has relations everywhere, he got a list of the winning numbers from all the  $N$  lotteries available. The winning numbers are expressed in base 12 (the numbers can begin with digit 0).

However, the lotteries could not agree on which letters (upper case English alphabet letters) should be used for 10 and 11, so each made its own choice. Even though he has such a great advantage, RANDy still doesn't know the rules to win the lottery. He thinks that in order to win the prize from a lottery he needs to guess only one digit from the winning number.

He doesn't know how to write, so help him learn the minimum number of digits in order to win (in his conception) at each lottery.

### Input

The first line of the input contains a single number,  $N$  ( $1 \leq N \leq 2.5 * 10^5$ ), representing the number of lotteries. Each of the next  $N$  lines contains a number written in base 12, representing the winning numbers.

The sum of lengths of all the numbers is at most  $4 * 10^6$ .

For test worth 13 points, all the numbers will be written in base 10.

For test worth 21 more points, all numbers will be written in base 12, but only with digits 10 and 11.

For test worth 27 more points,  $1 \leq N \leq 5 * 10^3$ .

### Output

The only line of the output contains a single integer,  $K$ , representing the minimum number of digits RANDy has to learn how to write in order for him to believe he can win every lottery.

### Example

standard input	standard output
4 AABAA B112 DAA 1777768CD	2

### Note

RANDy can learn the following two digits: 1 and A. He can write "1" for lotteries 2 and 4 and "A" for lotteries 1 and 3. Thus he thinks that he wins at all of them.