

# Problem J

## Game of Nines

Time Limit: 1 second Memory Limit: 1GB

You are playing a simple game of adding digits. You are given a list of single digits between 0 and 8 (inclusive). In each move, you may choose any two digits  $a$  and  $b$ , add  $a$  to  $b$ , and replace  $b$  with the sum  $a + b$ . If  $a + b \geq 10$ , keep only the units digit (e.g.  $5 + 8$  becomes 3;  $4 + 6$  becomes 0). Whenever the sum is 9, the result is eliminated immediately and cannot participate in further additions.

Your goal is to eliminate as many digits as possible, using any number of moves.

### Input

The first line of input contains a single integer  $n$  ( $2 \leq n \leq 1000$ ), the number of digits. Each of the next  $n$  lines contains a single digit between 0 and 8, forming the initial list of digits.

### Output

Output a single integer, the minimum number of digits that will remain if you play optimally to eliminate as many digits as possible.

### Explanation of Sample Case 1

Add 3 to 6 and eliminate one digit ( $3 + 6$  becomes 9). The remaining digits are 2 and 3. Then add 2 to 3 three times ( $3 + 2$  becomes 5,  $5 + 2$  becomes 7,  $7 + 2$  becomes 9). The single digit remaining is 2. It is also possible to eliminate two digits with a different sequence of moves.

Sample Input 1	Sample Output 1
3 2 3 6	1

Sample Input 2	Sample Output 2
2 4 4	2