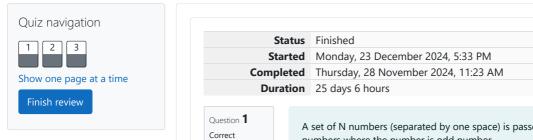
# GE23131-Programming Using C-2024



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□ Flag question

A set of N numbers (separated by one space) is passed as input to the program. The program numbers where the number is odd number. Input Format: The first line will contain the N numbers separated by one space. **Boundary Conditions:** 3 <= N <= 50 The value of the numbers can be from -99999999 to 99999999 Output Format: The count of numbers where the numbers are odd numbers. Example Input / Output 1: Input: 5 10 15 20 25 30 35 40 45 50 Output: Explanation: The numbers meeting the criteria are 5, 15, 25, 35, 45. Answer: (penalty regime: 0 %)

|       | 5 10 15 20 2 | 25 30 35 40 | 45 50 | 5 | 5 |  |
|-------|--------------|-------------|-------|---|---|--|
| Passe | d all tests! |             |       |   |   |  |

Question **2**Correct
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question

Given a number N, return true if and only if it is a confusing number, which satisfies the follow

We can rotate digits by 180 degrees to form new digits. When 0, 1, 6, 8, 9 are rotated 180 degrees to respectively. When 2, 3, 4, 5 and 7 are rotated 180 degrees, they become invalid. A *confusir* when rotated 180 degrees becomes a **different** number with each digit valid.

#### Example 1:

6 -> 9

Input: 6

Output: true

Explanation:

We get 9 after rotating 6, 9 is a valid number and 9!=6.

#### Example 2:

89 -> 68

Input: 89

Output: true

Explanation:

We get 68 after rotating 89, 86 is a valid number and 86!=89.

## Example 3:

11 -> 11

Input: 11

Output: false

Explanation:

We get 11 after rotating 11, 11 is a valid number but the value remains the same, thus 11 is n

### Note:

- 1. 0 <= N <= 10^9
- 2. After the rotation we can ignore leading zeros, for example if after rotation we have 000 considered as just 8.

Answer: (penalty regime: 0 %)



| 0,7 | ci uc | ci ac |
|-----|-------|-------|
| 25  | false | false |

#### Passed all tests!

Question **3**Correct
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question

A nutritionist is labeling all the best power foods in the market. Every food item arranged in a beginning from 1 and increasing by 1 for each, until all items have a value associated with the same as the number of macronutrients it has. For example, food item with value 1 has 1 macro value 2 has 2 macronutrients, and incrementing in this fashion.

The nutritionist has to recommend the best combination to patients, i.e. maximum total of m nutritionist must avoid prescribing a particular sum of macronutrients (an 'unhealthy' numbe nutritionist chooses food items in the increasing order of their value. Compute the highest to can be prescribed to a patient, without the sum matching the given 'unhealthy' number.

Here's an illustration:

Given 4 food items (hence value: 1,2,3 and 4), and the unhealthy sum being 6 macronutrients the sum is 6, which matches the 'unhealthy' sum. Hence, one of the three needs to be skippe is from among:

- 2+3+4=9
- 1+3+4=8
- 1+2+4=7

Since 2 + 3 + 4 = 9, allows for maximum number of macronutrients, 9 is the right answer.

Complete the code in the editor below. It must return an integer that represents the maximu modulo  $1000000007 (10^9 + 7)$ .

It has the following:

n: an integer that denotes the number of food items

k: an integer that denotes the unhealthy number

#### **Constraints**

- $1 \le n \le 2 \times 10^9$
- $1 \le k \le 4 \times 10^{15}$

Input Format For Custom Testing

The first line contains an integer, n, that denotes the number of food items.

The second line contains an integer, k, that denotes the unhealthy number.

# Sample Input 0

2

2

# Sample Output 0

3

#### **Explanation 0**

The following sequence of n = 2 food items:

1. Item 1 has 1 macronutrients.

| Sample Input 1   |
|--|
| 2  |
|  |
| 1  |
| Sample Output 1  |
| 2  |
| Explanation 1  |
|  |
| 1. Cannot use item 1 because $k = 1$ and $sum \equiv k$ has to be avoided at any time. |
| 2. Hence, max total is achieved by $sum = 0 + 2 = 2$ .                                 |
| Sample Case 2  |
| Sample Input For Custom Testing  |
| Sample Input 2   |
| 3  |
| 3  |
| 3  |
| Sample Output 2  |
| 5  |
| Explanation 2  |
| 2 + 3 = 5, is the best case for maximum nutrients.                                     |
| Answer: (penalty regime: 0 %)  |
|  |
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|  |
|  |
|  |
|  |
| Input Expected Got   |
|  |

| Input | Expected | Got |
|-------|----------|-----|
| 2 2   | 3        | 3   |
| 2     | 2        | 2   |
| 3     | 5        | 5   |

Passed all tests!

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