

1088. Confusing Number II

Hard👑 328🔒 87📖 Add to List🔗 Share

A **confusing number** is a number that when rotated 180° degrees becomes a different number with **each digit valid**.

We can rotate digits of a number by 180° degrees to form new digits.

- When $0, 1, 6, 8,$ and 9 are rotated 180° degrees, they become $0, 1, 9, 8,$ and 6 respectively.
- When $2, 3, 4, 5,$ and 7 are rotated 180° degrees, they become **invalid**.

Note that after rotating a number, we can ignore leading zeros.

- For example, after rotating 8000 , we have 0008 which is considered as just 8 .

Given an integer n , return the *number of **confusing numbers** in the inclusive range $[1, n]$* .

Example 1:

Input: $n = 20$
Output: 6
Explanation: The confusing numbers are $[6,9,10,16,18,19]$.
 6 converts to 9 .
 9 converts to 6 .
 10 converts to 01 which is just 1 .
 16 converts to 91 .
 18 converts to 81 .
 19 converts to 61 .

Example 2:

Input: $n = 100$
Output: 19
Explanation: The confusing numbers are $[6,9,10,16,18,19,60,61,66,68,80,81,86,89,90,91,98,99,100]$.

Constraints:

- $1 \leq n \leq 10^9$

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1

0 ~ 6 months

6 months ~ 1 year

1 year ~ 2 years

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Confusing Number Easy

Hide Hint 1

Which set of digits have the valid numbers?

Hide Hint 2

Only 0, 1, 6, 8, 9 are the valid set of digits, do a backtracking to generate all the numbers containing this digits and check they are valid.

```
1 class Solution {
2     public int confusingNumberII(int n) {
3     }
4 }
5
```