P1. Broken Counter

[[홍원표]]

1 ~ 10 → 1 * 10 → 9
→ 9 * 3

1 ~ 30 → 3 * 10

1 ~ 100 → 1 * 100 → 81 → 9 * 9

1 ~ 300 → 3 * 100 → 9 * 9 * 3

1 ~ 1000 → 1 * 1000 → 729 → 9 * 9 * 9

1 ~ 3000 → 3 * 1000 → 9 * 9 * 9 * 3

Input의 각 Digit에 대해 따로 Count를 구한다.

ex)
3 2 4 1 6 8
3 0 0 0 0 0 → 3 * 100000 → 3 * 9*9*9*9*9
0 2 0 0 0 0 → 2 * 10000 → 2 * 9*9*9*9
0 0 4 0 0 0 → 4 * 1000 → 4 * 9*9*9 → 3 * 9*9*9
0 0 0 1 0 0 → 1 * 100 → 1 * 9*9
0 0 0 0 6 0 → 6 * 10 → 6 * 9 → 5 * 9*9*9
0 0 0 0 0 8 → 8 * 1 → 8

Add them all to get the total count of the ‘Broken Counter’

Input의 총 Digit 수를 N으로 가정.
Time Complexity = O(N)
Space Complexity = 4
- Result (Outcome)
- Input
- Temp1 (to count the digit)
- Temp2 (to indicate the last digit of each)

→ 7