

k-balance number

Your task is to calculate the sum (indicated by S) of all the k-balanced integers between [L, R]. An integer is called k-balanced when either of #1 or #2 below holds true.

1. The length of the integer $\leq k$
2. Sum of the first k digits (with no leading zeros) is equal to the sum of the last k digits.

Input format

L R k

Output format

S % 1000000007

Constraints

$0 < L \leq R < 10^{18}$

$0 < k \leq 18$

Sample Input

9 23 1

Sample Output

42

Explanation

9, 11 and 22 are the only 3 integers between 9 and 23 (both included) that are k-balanced. Hence, the answer is $9+11+22=42$