

## E. Segment Sum

time limit per test 1 second

memory limit per test 256 megabytes

input standard input

output standard output

You are given two integers  $l_l$  and  $r_r$  ( $1 \leq l \leq r$ ). Your task is to calculate the sum of numbers from  $l_l$  to  $r_r$  (including  $l_l$  and  $r_r$ ) such that each number contains **at most**  $k_k$  different digits, and print this sum modulo 998244353998244353.

For example, if  $k = 1$   $k=1$  then you have to calculate all numbers from  $l_l$  to  $r_r$  such that each number is formed using only one digit. For  $l = 10, r = 50$   $l=10,r=50$  the answer is  $11 + 22 + 33 + 44 = 110$   $11+22+33+44=110$ .

### Input

The only line of the input contains three integers  $l_l$ ,  $r_r$  and  $k_k$  ( $1 \leq l \leq r < 10^{18}$ ,  $1 \leq k \leq 10$   $1 \leq l \leq r < 10^{18}, 1 \leq k \leq 10$ ) — the borders of the segment and the maximum number of different digits.

### Output

Print one integer — the sum of numbers from  $l_l$  to  $r_r$  such that each number contains at most  $k_k$  different digits, modulo 998244353998244353.

### Examples

#### input

**10 50 2**

**Copy**

#### output

**1230**

**Copy**

#### input

**1 2345 10**

**Copy**

#### output

**2750685**

**Copy**

#### input

**101 154 2**

**Copy**

#### output

**2189**

**Copy**

### Note

For the first example the answer is just the sum of numbers from  $l_l$  to  $r_r$  which equals to  $\frac{50 \cdot 51}{2} - \frac{9 \cdot 10}{2} = 1230$   $50 \cdot 51 - 9 \cdot 10 = 1230$ . This example also explained in the problem statement but for  $k = 1$   $k=1$ .

For the second example the answer is just the sum of numbers from  $l_l$  to  $r_r$  which equals to  $\frac{2345 \cdot 2346}{2} = 2750685$   $2345 \cdot 2346 = 2750685$ .

For the third example the answer is

$101 + 110 + 111 + 112 + 113 + 114 + 115 + 116 + 117 + 118 + 119 + 121 + 122 + 131 + 133 + 141 + 144 + 151 = 2189$

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