

5. CUDAK

Božo is a strange little boy. Every day he tires his friends with strange questions. Today's question is: how many integers in the interval $[A, B]$ are there such that the sum of their digits is S , and which is the smallest such number?

Write a program that answers Božo's question so that he can get some sleep.

Input

The input contains three integers A , B and S ($1 \leq A \leq B < 10^{15}$, $1 \leq S \leq 135$).

Output

The first line should contain the number of integers in the interval with the digit sum equal to S .

The second line should contain the smallest such integer.

The input data will guarantee that the first number is at least 1.

Scoring

For correctly outputting one of the two numbers you will receive 50% of the score.

Note: if you want to receive credit for just the second number, be sure to output something (0, for example) as the first number so the judge can interpret your output correctly.

Sample test data

input

1 9 5

output

1

5

input

1 100 10

output

9

19

input

11111 99999 24

output

5445

11499