Problem J
Special Numbers
Time Limit: 1.5 Seconds

Number theorist Dr. J is attracted by the beauty of numbers. When we are given a natural number $a = a_1a_2 \cdots a_n$ of n digits and a natural number k, a is called *k-special* if the product of all the digits of a, i.e. $a_1 \cdot a_2 \cdot a_3 \cdots a_n$ is divisible by k. Note that the number 0 is always divisible by a natural number.

For example, if $a = 2349$ and $k = 12$, then the product of all the digits of a, $2 \cdot 3 \cdot 4 \cdot 9 = 216$ is divisible by $k = 12$, so the number 2349 is 12-special. If $a = 2349$ and $k = 16$, then the product of all the digits of a, $2 \cdot 3 \cdot 4 \cdot 9 = 216$ is not divisible by $k = 16$, so the number 2349 is not 16-special.

Given three natural numbers k, L, and R, write a program to output z % $(10^9 + 7)$ where z is the number of k-special numbers among numbers in the range $[L, R]$.

Input
Your program is to read from standard input. The input has one line containing three integers, k, L, and $R(1 \leq k \leq 10^{17}, 1 \leq L \leq R \leq 10^{20})$.

Output
Your program is to write to standard output. Print exactly one line. The line should contain z % $(10^9 + 7)$ where z is the number of k-special numbers among the numbers in the range $[L, R]$, where both L and R are inclusive in the range.

The following shows sample input and output for three test cases.

Sample Input 1	Output for the Sample Input 1
5 1 20	4

Sample Input 2	Output for the Sample Input 2
5 50 100	19

Sample Input 3	Output for the Sample Input 3
15 11 19	0