Problem H
Subprime
Time Limit: 2 seconds



Image by Marina Shemesh

There is an open math problem: Is every non-negative integer a substring of at least one prime number when expressed in base ten?

A positive integer is a prime number if it is greater than one and not a product of two smaller positive integers. Integer a is a substring of integer b if it is equal to an integer derived from b by deleting zero or more consecutive digits of the most and least significant digits of b. For example, 123 is a substring of: $\underline{123}, 56\underline{123}, \underline{123}789, 50182\underline{123}65, 41\underline{23}7912\underline{3}$.

Given two integers l and h along with an integer p, you are to check how many primes between the lth smallest prime and the hth smallest prime (both ends are inclusive) contain a substring that equals p. We are interested in substrings that may include significant leading zeroes, and thus p may have leading zeroes. A prime shall be counted only once even if the integer p occurs more than once as its substring.

For example, consider $l = 1, h = 10$ and $p = 9$. This is a search from the 1st smallest prime (2) to the 10th smallest prime (29) for any prime containing the substring "9". There are 2 such primes: $1\underline{9}$ and $2\underline{9}$.

Input

The first line of input has two integers l and h ($1 \leq l \leq h \leq 10^5$). The second line has a sequence of 1 to 6 digits giving the integer p, which may be zero or have significant leading zeroes.

Output

Output the count of prime numbers in the given range that contain p as a substring.

Sample Input 1	Sample Output 1
1 10 9	2

Sample Input 2	Sample Output 2
500 1000 43	26

Sample Input 3	Sample Output 3
1 1000 00	10