Problem B
Average Substring Value
Time Limit: 1 second, Memory limit: 2G

Let s be a nonempty string consisting entirely of base-10 digits (0–9). If the length of s is n, number the digits $1, 2, 3, \ldots, n$ from left to right, and for $1 \leq i \leq j \leq n$, let $s[i, j]$ denote the substring consisting of the digits from position i to position j, inclusive. (It follows that we are only considering *nonempty* substrings.) Assign a value to each substring that is simply equal to the largest digit in the substring. What is the average value of the substrings of s?

Note that two different substrings may be identical (as strings), but for the purposes of this problem they are treated as distinct. For example, if $s = \texttt{1010}$, then $s[1, 2] = s[3, 4] = \texttt{10}$ are distinct substrings (both with value 1).

Input

The input is a single nonempty string, s, of base-10 digits. The length of s is at most 200 000.

Output

Output a line containing the average value of the substrings of s. If the average is an integer, print the integer. If the average is a proper fraction, i.e., is equal to a/b, where a and b are positive integers and $a < b$, print this fraction in lowest terms, with a '/' symbol separating the numerator and denominator. If the average is greater than 1 and does not simplify to an integer, print the whole part followed by the proper fractional part, separated by a space, with the proper fractional part in lowest terms and formatted as described in the previous sentence.

Sample Input 1	Sample Output 1
123	2 1/3

Sample Input 2	Sample Output 2
4084	6

Sample Input 3	Sample Output 3
1010	4/5

Sample Input 4	Sample Output 4
00000	0

This page is intentionally left blank.