

A. Digits

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

John gave Jack a very hard problem. He wrote a very big positive integer A_0 on a piece of paper. The number is less than 10^{200000} . In each step, Jack is allowed to put '+' signs in between some of the digits (maybe none) of the current number and calculate the sum of the expression. He can perform the same procedure on that sum and so on. The resulting sums can be labeled respectively by A_1, A_2 etc. His task is to get to a single digit number.

The problem is that there is not much blank space on the paper. There are only three lines of space, so he can't perform more than three steps. Since he wants to fill up the paper completely, he will perform exactly three steps.

Jack must not add leading zeros to intermediate results, but he can put '+' signs in front of digit 0. For example, if the current number is 1000100, 10 + 001 + 00 is a valid step, resulting in number 11.

Input

First line contains a positive integer N ($1 \leq N \leq 200000$), representing the number of digits of A_0 .

Second line contains a string of length N representing positive integer number A_0 . Each character is digit. There will be no leading zeros.

Output

Output exactly three lines, the steps Jack needs to perform to solve the problem. You can output any sequence of steps which results in a single digit number (and is logically consistent).

Every step consists of digits and '+' signs. Steps should not contain several '+' signs in a row, whitespaces, or '+' signs as the first or last character. They also need to be arithmetically consistent.

Solution might not be unique. Output any of them in that case.

Examples

input
1 1
output
1 1 1

input
4 5806
output
5+8+0+6 1+9 1+0

Note

In the first sample, Jack can't put '+' signs anywhere, so he just writes 1 in each line and solves the problem. Here, solution is unique.

In the second sample, Jack first puts ' + ' between every two consecutive digits, thus getting the result $5 + 8 + 0 + 6 = 19$. He does the same on the second step, getting $1 + 9 = 10$. Once more, he gets $1 + 0 = 1$, so after three steps, the result is 1 and his solution is correct.