

# 1558. Periodical Numbers

Time limit: 1.0 second

Memory limit: 64 MB

Little Tom likes amusing mathematical tasks a lot. After studying ordinary periodical numbers he wondered, what if period will be before decimal point. Generally speaking, such a "number" will have infinite number of digits before decimal point, and it will not be even a number, but it is possible to apply some operations to them. But after trying to sum up this numbers for a while, he found this task a bit complicated, even when numbers have periods of the same length and don't have unperiodical part. So he decided to write a program that will solve this problem. But he is not very good at programming, so asked you to help him and write it.

Periodical numbers can be written in form  $(a_1a_2\dots a_k)b_1b_2\dots b_m = \dots a_1a_2\dots a_k a_1a_2\dots a_k a_1a_2\dots a_k b_1b_2\dots b_m$ , where  $a_i$  and  $b_j$  are digits. The summation process starts from the less significant digit and going on like in addition of normal numbers, but never finishes. Your task is to sum up two periodical infinite numbers.

## Input

Input has two lines containing two infinite periodical numbers each. It is guaranteed that the given numbers will not have unperiodical part (i.e. will be given in form " $(a_1a_2 \dots a_k)$ ") and the given periods of numbers will be the same length not greater than nine.

## Output

The output must have one line containing desired number itself. It must be printed in the representation with minimal period length. Among such representations the one having the least unperiodical part's length must be chosen.

## Sample

input	output
(234) (342)	(576)

**Problem Source:** Novosibirsk SU Contest. Petrozavodsk training camp, September 2007