

Task: SIL Factorial

UFAM Workshop, contest #2. Source file sil.* Available memory: 128 MB.

Byteasar's favourite number is n , so he is very proud of a long piece of paper on which he's written n factorial, that is $n! = 1 \cdot 2 \cdot 3 \cdots n$. Unfortunately, some of the digits on the paper get blurred. Can you help Byteasar restore the number?

Input

In the first line of the input there is an integer n ($1 \leq n \leq 200\,000$). In the second line there is a number $n!$ in which at least one and at most three consecutive digits are replaced with question marks (characters ?).

Output

In the only line of the output you have to print digits that should replace question marks in order to restore the original contents of the paper.

Example

For the input data:

7
5??0

the correct result is:

04