

Insert the index

Given a singly linked list of integers. Prepend each element its index number in the original list. Assume that the index number starts with 1.

Print out the list once inserted.

Input Format

Consists of multiple lines, each containing an integer with an absolute value of no more than 106106.

The end of the list is zero (zero is not counted in the list).

The given data ensures the list has at least 1 element. The number of elements must not exceed 105105 and the number 0 appears only once at the end of the line.

Output Format

A single line is the list after inserting the index number (no trailing zeros), the elements in the list are separated by spaces.

Sample test

input
3 9 -5 0
output
1 3 2 9 3 -5

Explanation for sample test

Example 1:

In the given linked list there are 3 integers 3, 9, -5.

These numbers have the index number of 1, 2, 3. So the inserted list is: 1, 3, 2, 9, 3, -5.