

Creating an Array

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

Sofia gave Anton an array of **digits**! Although this array was not the first one he had seen, he did not consider it less interesting. After playing with the array, he did not notice how he broke it to a state where he could no longer restore the original.

He was very upset because there were almost countless ways to compose the initial array. However, he remembers an interesting property of the gift: $\sum_{i=1}^n \sum_{j=i}^n \text{concat}(a_i, a_j)$, which means the sum of concatenations of all pairs of its elements, is **maximum** among all possible arrays made from these digits consisting of the same elements, as the gift.

In other words, we take all pairs of positions i and j such that j is not to the left of i ($i \leq j$). And add to the sum $\overline{a_i a_j}$, where \overline{ab} means the number that will result if we write the numbers a and b in order (or $10 \cdot a + b$). This is called the concatenation of a and b .

For example, if Anton had an array $[1, 0, 3]$, then the sum would be equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 11 + 10 + 13 + 00 + 03 + 33 = 70$.

Help Anton and print an array that has this property. If there are multiple answers, any of them can be output.

Input

The first line contains 10 integers $c_0, c_1, c_2, c_3, c_4, c_5, c_6, c_7, c_8, c_9$ ($0 \leq c_i \leq 50$) — where c_i corresponds to the number of digits i in the initial array.

It is guaranteed that the sum of all numbers is greater than zero.

Output

Print an array consisting of $c_0 + c_1 + c_2 + c_3 + c_4 + c_5 + c_6 + c_7 + c_8 + c_9$ elements, and has the same properties as the array given by Sophia.

Examples

standard input	standard output
0 0 0 0 0 2 0 0 0 0	5 5
1 0 1 1 0 0 0 0 0 0	3 2 0

Note

In the second example, there are such possible arrays:

1. $[0, 2, 3]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 00 + 02 + 03 + 22 + 23 + 33 = 83$;
2. $[0, 3, 2]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 00 + 03 + 02 + 33 + 32 + 22 = 92$;
3. $[2, 0, 3]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 22 + 20 + 23 + 00 + 03 + 33 = 101$;
4. $[2, 3, 0]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 22 + 23 + 20 + 33 + 30 + 00 = 128$;
5. $[3, 0, 2]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 33 + 30 + 32 + 00 + 02 + 22 = 119$;
6. $[3, 2, 0]$, the sum is equal to $\overline{a_1 a_1} + \overline{a_1 a_2} + \overline{a_1 a_3} + \overline{a_2 a_2} + \overline{a_2 a_3} + \overline{a_3 a_3} = 33 + 32 + 30 + 22 + 20 + 00 = 137$.