# Sort Numbers

Write a program that reads a list of numbers separated by a comma and space.

Arrange the numbers in descending order.

Output all numbers on a single line, separated by a comma and a space.

## Input

* On the only line you will receive all the numbers to be sorted.

## Output

* On the only line of output, print all the numbers sorted in format n1, n2, n3, .. n

## Input

2, 3, 1, 5, 6

## Output

6, 5, 3, 2, 1

## Input

1, 2, 3

## Output

3, 2, 1

# Reverse Number

## Description

Write a method that reverses the digits of a given decimal number.

## Input

* On the first line you will receive a number

## Output

* Print the given number with reversed digits

## Sample tests

| Input | Output |
| --- | --- |
| 256 | 652 |
| 123.45 | 54.321 |

# Combine Lists

Write a program that reads two lists of numbers and combines them by alternatingly taking elements:

* combine 1,2,3 and 7,8,9 -> 1,7,2,8,3,9
* you can assume that the input lists will have the same length.

Print the resulting combined list to the output, separating elements with a comma.

## Input

* On the first line you will receive the first list.
* On the second line -> 2nd list.

## Output

* On the only line of output, print all the numbers in format n1,n2,n3,..n

## Input

2,3,1

5,2,3

## Output

2,5,3,2,1,3

# Rotate List

Write a program that rotates a list several times (the first element becomes last).

* list = 1,2,3,4,5 and N = 2 -> result = 3,4,5,1,2

Note that N could be larger than the length of the list.

* list = 1,2,3,4,5 and N = 6 -> result = 2,3,4,5,1

## Input

* On the first line you will receive the list of numbers.
* On the second line you will receive N

## Output

* On the only line of output, print the numbers separated by a comma.

## Input

5,3,2,1

2

## Output

2,1,5,3

## Input

2,1,3,4

5

## Output

1,3,4,2

# Is a List Sorted?

Write a program that checks if a list is already sorted. For a list to be sorted, the next element must NOT be smaller than the previous one.

## Input

* On the first line - you will receive a number N.
* On the next N lines, you will receive a list of numbers, separated by a comma

## Output

* There are N lines of output
* for each list you receive, print 'true' if sorted or 'false' otherwise.

## Constraints

* 1 <= N <= 10
* 1 <= list.length <= 20

## Input

3

1,2,3,4,5

1,2,8,9,9

1,2,2,3,2

## Output

true

true

false

# Remove Duplicates

Write a program that removes all duplicates from a list of elements.

* 1,2,2,2,4,7 -> 1,2,4,7.

Maintain the relative order of the remaining items.

## Input

* On the only line of input, you will receive the elements, separated by a comma.

## Output

* Display the list with the duplicates removed, separated by a comma.

## Constraints

* 1 <= list.length <= 20

## Input

1,2,2,2,2,18,3,12

## Output

1,2,18,3,12

## Input

c,c,a,b,a,a,b,c

## Output

c,a,b

# Strange Order

Write a program that orders a list of numbers in the following way:

* 3,-2,1,0,-1,0,-2,1 -> -2,-1,-2,0,0,3,1,1

You need to find out the criteria for yourself by looking at the example. You can also check the example below.

## Input

* On the only line of input, you will receive the numbers, separated by a comma.

## Output

* Display the list with the mysterious ordering applied removed, separated by a comma.

## Constraints

* 1 <= list.length <= 20

## Input

3,-12,0,0,13,5,1,0,-2

## Output

-12,-2,0,0,0,3,13,5,1

## Input

0,1,-1

## Output

-1,0,1

# Below and Above Average

Write a program that calculates the average of a list of numbers. Display the average, all the numbers below the average, and all the numbers above the average. Maintain the relative order of numbers.

## Input

* On the only line of input, you will receive the numbers, separated by a comma.

## Output

* On the first line, print the average, with two digits after the decimal separator.
* On the second line, print all the numbers bellow the average
* On the third line, print all the numbers above the average

## Constraints

* 1 <= list.length <= 20

## Input

3,-12,0,0,13,5,1,0,-2

## Output

avg: 0.89

below: -12,0,0,0,-2

above: 3,13,5,1

## Input

0,1,-1

## Output

avg: 0.00

below: -1

above: 1

# Array Sort

Given an array integers, write a program that moves all of the zeroes to the end of it, while maintaining the relative order of the non-zero elements.

## Input

Read from the standard input:

* There is one line of input, containing N amount of integers, seperated by a comma (",")

## Output

Print to the standard output:

* There is one line of outpit, containing the sorted integers, seperated by a comma (",")

## Constraints

* 5 <= N <= 1000

## Sample Tests

### Input

0,1,0,3,12

### Output

1,3,12,0,0

### Input

0,0,0,5,0,3,2,3

### Output

5,3,2,3,0,0,0,0

# Array Search

Given an array of integers, some elements appear twice and others appear once. Each integer is in the range of [1, N](https://learn.telerikacademy.com/judge/problem/239?contestId=178&courseId=186&languageId=15), where N is the number of elements in the array.

Find all the integers of [1, N](https://learn.telerikacademy.com/judge/problem/239?contestId=178&courseId=186&languageId=15) inclusive that do NOT appear in this array.

## Input

Read from the standard input:

* There is one line of input, containing N amount of integers, seperated by a comma (",")

## Output

Print to the standard output:

* There is one line of output, containing the sorted integers, seperated by a comma (",")

## Constraints

* N will always be in the range of [5, 1000](https://learn.telerikacademy.com/judge/problem/239?contestId=178&courseId=186&languageId=15)

## Sample Tests

### Input

1,2,3,3,5

### Output

4

### Input

4,3,2,7,8,2,3,1

### Output

5,6

### Input

1,1,1,1,1,1,1,1

### Output

2,3,4,5,6,7,8