

1 - String palindrome

You are given a string, and your task is to determine whether or not the string is a palindrome.

A palindrome is a string where the string is the same when read both forwards and backwards, for example: "racecar", "12321" or "(*v*("

The input will be a string, output True or False accordingly

For example:

Input:

>racecar

Output:

>True

2 - Permutation find

You are given 3 letters: a, b and c. Your task is to find all permutations of this arrangement. The letters can be repeated.

Output on a newline for every permutation. Output a string of 3 letters on each line. For example, the first 3 lines for the output may be:

Output:

>aaa

>aab

>abb

3 - Square coordinates

Given 4 cartesian coordinates that represent a square on a cartesian plane, output the number of points with integer coordinates that lie within, or on the sides of the square.

The input is given in a 2x4 2D array denoting the x y coordinates of each point that makes up the square in a clockwise direction.

Output a single integer denoting the number of points.

For example:

Input:

>[[1,1],[1,-1],[-1,-1],[-1,1]]

Output:

>9 (4 vertices, 4 on the edges, 1 within)

