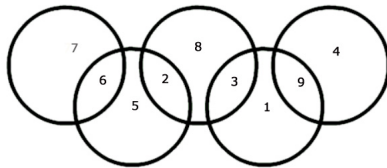


K. Olympic Rings

Time limit: 1 second
Memory limit: 65535 kBytes

Description

The Olympic rings define 9 closed regions. Place all the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9 in these regions so that the sum of the numbers in each ring to be the same. The example below shows such an arrangement: 765283194.



List all possible solutions in lexicographic order. Each line of the output file should contain a solution in the same order as in the example (765283194, that is: start, down, down, up, up, down, down, up, up)

Input

There is no input for this problem.

Output

Each line in the output file contains a solution in the same order as in the example. The lines must be in lexicographic order.