Interlocked Rings

Description:

In five interlocked rings, there are 9 blank spaces.



Please fill number 1 to 9 into these 9 spaces without replacement. The condition is sum of numbers in each ring equal to each other.

Question 1:

Please develop a program using any programming language to get the maximum and minimum value of the sum.

Question 2:

If the number of rings increased to 50 (so the number of spaces increased to 99), please develop the program to solve this problem and add testing functionality. If your program in question 1 could solve problem already, you only need to add the testing functionality.

Question 3:

If the number of rings increased to 500 (and number of spaces increased to 999), can you design and program a feasible solution? Please give a solution overview.