Gordon Burgin's Puzzles

## May 2019 challenge

## MIND-Xpander Logic Puzzle

There are five people in a room and each shakes every other person's hand exactly one time. How many handshakes will there be?

## ROMAN Arithmetic Puzzles

Solve the following arithmetic problems and state your answers in Roman Numerals. Letters representing numbers in the Roman numerical system: $I=1, V=5, X=10, L=50, C=100$, $D=500, M=1,000$. In this system, a letter placed after another of greater value adds (thus XVI is 16) whereas a letter placed before another of greater value subtracts (thus XC is 90 ). Example: 2017 = MMXVII
A) MMCCLXV - CXXII - XLIV - XCIX = ?
B) CCCXXI + DCLIV + CMLIIIVII = ?
C) DIII + XDXII + CMXXIV + CLXXI =?
D) DCLXVI - DVI + DLV + CCCXXXIII + CDXLIV = ?

## HEXAGON-numeric Puzzle (Level 2)

Fit the numbers $1-6$ in each hexagon and where the hexagon segments touch each other, their numbers in these 2 segments will be the same. No number can be repeated in a hexagon. The numbers in the shaded areas are the sum of the numbers in the 2 or 4 segments that they side with. The numbers in the 'Input' and 'Output' boxes are the sum of the numbers in the 3 triangular segments that they side with. Solve the puzzle and find the 'Output' number (?).


