Logic Puzzles for Fun, contributed by Gordon Burgin, Norwich u3a member – Maths Group. Solutions will be posted in November. Please email janine.aldridge@u3a.org.uk if you would like to share your solutions or comments.

OCTOBER '26 LOGIC Puzzles

1. Safety-codes:
   To open each safe, you must enter their Safety-code in the correct order. The number on each key tells you how many squares to move, and the letters tell you in which direction (U = up, D = down, L = left or R = right). From the following safes' entry keypads, can you determine which is the first key to be pressed in the code in order to open each safe?
   (Hint: Try working the Safety-code backward.)

Safe A

1D	2D	2D	1L	3L
2R	3R	3D	1D	1L
1D	3R	OPEN	3L	2D
4R	2R	1L	3U	3U
4U	3U	1U	2L	4L

Safe B

2D	1D	4D	3D	2L
4R	1L	1R	1U	3D
3R	1R	OPEN	2D	2U
2R	1U	2R	2L	1U
1U	4U	3U	2L	4L

2. Find the number equivalent for the following alphametic expressions to make the equations true. Each letter is unique with values from 0 to 9. (Note: There may be more than one answer.)

   a) XYZ + XYZ + XYZ = ZZZ

   b) MATH + ATH + TH + H = 5000

   c) ZERO + ONE + TWO = THREE (Given: R = 3)

   d) TWO + THREE + SEVEN = TWELVE (Given: V = 5)

   e) SEVEN + SEVEN + SIX = TWENTY (Given: I = 5, W = 3 and X = 0)

3. In the following diagram, each of the nine letters stand for a number (1 through 9, without repeats). Using the following clues, can you determine the number that represents each letter **A** through **I**?

   a) In one diagonal, each number is a square.
   b) **D, C** and **I** are odd numbers in ascending order.
   c) **G** is the sum of **A** and **F**.
   d) **B** is the product of **E** and **H**.
   e) One row has consecutive numbers in some order.

A	B	C
D	E	F
G	H	I