



# Gordon Burgin's Puzzles

## October 2018 challenge

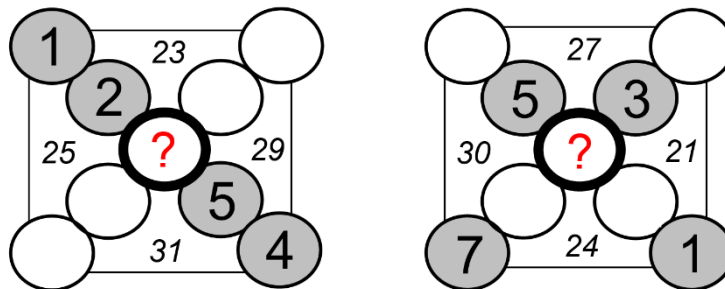
### MIND-Xpander Maths Problem

In basic algebra, a rational expression is nothing more than a fraction in which the numerator and/or the denominator are polynomials. Reduce the following rational expression to its lowest terms (?).

$$\frac{6^5 - 6^4}{5} = ?$$

### X-Sums puzzles

The 4 numbers, in italics, outside the 9 circles represent the sum of the numbers in the 5 surrounding circles. The numbers in the circles can only be 1 to 9 and each number can be used only once. Four numbers have been provided to get you started. Find the number (?) that should be in the centre of the X.



### EQUATE+3 puzzle

Each row, column & diagonal is an equation and you use the numbers 1 to 9 to complete the equations. 'Three' numbers have been provided to get you started. Find the remaining six numbers that satisfies all the resulting equations. Note – multiplication (x) & division (/) are performed before addition (+) and subtraction (-).

6	+		-		=	14
+	+	-		+		
	x	4	-		=	27
-		/	+	x		
	-		x	3	=	1
=		=		=	=	
7		7		16		13