Gordon Burgin's Puzzles

## December 2017 challenge

## MIND-Xpander Logic Problems:

1. Ship Ahoy - A ship is at anchor. Over its side hangs a rope ladder with rungs a foot apart. The tide rises at the rate of 8 inches per hour. If the ladder was 8 feet above the water level when the tide began to rise, how much of the rope ladder will remain above water after 6 hours?
2. Water lilies on a certain lake double in area every twenty-four hours. From the time that the first water lily appears until the lake is completely covered takes 60 days.
On what day is the lake half-covered?

## EQUATE-Times Puzzles

The missing numbers are between $1 \& 9$ with no repeats. The three numbers in each row, when multiplied or times together, equals the totals on the right, and the columns, when multiplied together, equals the totals along the bottom. The multiples of the two diagonals are also given. Solve the puzzle by finding all of the missing numbers that satisfy all of the multiplied results as shown.
A.


105
$=$
$=6$
$=420$
$=504$
$=4$
B.


## 24

$=$
$=108$
$=56$
$=60$

$\square$

HEXAGON-numeric Puzzle (Level 3)


Solve the puzzle and find the 'Output' number.

Fit the numbers 1 - 6 in each hexagon and where the hexagon sides touch each other, the 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. The numbers in the 'Sum' boxes are the sum of the numbers in the 4 segments that they side with.

