Maths Challenge – Week 39

Welcome to week 39 of our weekly maths challenge, with problems and puzzles posed by Gordon Burgin, Andrew Holt and the U3A Maths and Stats Subject Adviser - David Martin.

If you would like to share your ideas on how to solve these puzzles please join our learning forum or discuss within your U3A and interest group. **Check back each week for the solutions** and let us know how you get on by contacting National Office. New maths puzzles will go up onto the website every Thursday.

Week Thirty-nine

Question 1.

How many litres of a 25% saline solution must be added to 3 litres of a 10% saline solution to obtain a 15% saline solution?

Question 2.

Marion went on two long holidays lasting a total of 41 nights. The second holiday was 7 nights longer than the first. How long was the first holiday?

Question 3.

Four touching circles of radius 1 are drawn with their centres at the corners of a square. What is the radius of the circle through their points of contact?

Question 4.

Five positive integers have the following properties:
-       Median is 4
-       Mode is 2
-       Mean is 5
-       Range is 8
What is the product of the five numbers?