

### 31 March Midweek Special Puzzles

A (This is one of my favourite puzzles, which I first heard when I was about 18. That wasn't yesterday. It is totally logical)

George, living in a semi-detached house, had a new neighbour move in next door.

They first met outside at the front, and exchanged greetings. The new neighbour, Henry, asked about George's family, and George replied that he had three sons.

Henry asked how old they were, and George said, "I won't tell you directly, but the product of their ages (taking all ages as being whole numbers) is 36."

Henry said, "Come on, I can't tell their ages from that! Give me another clue."

"OK," said George, "As it happens the sum of their three ages is equal to the number of your house."

Henry thought for a few moments, and then finally said, "No, I still can't tell from that."

When George then informed Henry that his oldest boy had just broken his arm, Henry immediately told George their correct ages.

What ages were George's three boys?

B My sock drawer now contains 4 socks: 2 tartan ones and 2 blue ones. If I randomly take out two socks, what is the probability that I will have a matching pair of tartan socks?

C There are three crates, one containing apples, one containing oranges, and one containing a mixture of apples and oranges. Each crate is closed and labelled with one of three labels: Apples, Oranges, or Apples and Oranges, but each of the three labels is incorrect!

How could you pick just one fruit from one crate to work out what the contents of each crate is so that you can relabel them all correctly?

D Using any letter of the alphabet only once, what are the largest and smallest numbers that you can write down in words?