# GAUSS

1777 - 1855

Johann Friederich Carl Gauss was a German mathematician known simply as ‘Carl’ to his many and varied friends. His Dad ran a bricklaying business and had the grand plan that his son would become a gardener. Fortunately for the world of mathematics, Carl was such a great genius that even his father was forced to admit that he was destined for greater things. Along with Archimedes and Newton, he is considered one of the top three mathematicians of all time.

His skills were first recognised when, at the age of three, he overheard his mother doing a particularly large sum. She made a small mistake, and Carl corrected her. His mother was so amazed that from then on she used Carl as a human calculator when doing the books for the building business.

Sadly for Carl, things did not always go so well. When he was ten, he had a nasty maths teacher – the sort that doesn’t exist today. He used to beat his students so much that they forgot their own names. One particularly bad day the teacher was in a foul mood, so set a problem that was designed to take up the whole lesson:

‘*Work out 81297 + 81495 + 81693 + … + 100899’*

*(This is a very long sum with 100 different numbers to add up)*

Carl worked it out even before the teacher had finished writing the problem on the board, and sat for one hour in complete silence with his arms folded waiting for his work to be marked. When the teacher saw that the answer was correct, he first accused Carl of cheating, but then realised the boy was a complete genius so let him off and bought him a maths textbook as a present.

Gauss was the first mathematician to work with ‘modular arithmetic’. This sounds complicated, but is really just like counting in the 12 hour clock system – when you get to 13, you go back to 1, and so on. He didn’t know it at the time, but his work (along with Fermat’s\*) would become the basis for security with credit cards, mobile phones, the internet and many other things. Carl was way ahead of his time.

Gauss was nearly killed when he was thrown out of a carriage by frightened horses near a railway line, but in fact died less than a year later of a disease called dropsy. If you can find out what this is please let me know as I haven’t got a clue.

*\*Fermat had a Little Theorem with a big consequence. He also had a Last Theorem that was a big problem. Find out about him later.*