



News

The Camp Hill Girls maths department is celebrating the publication of its first ever department newsletter. If you would like a copy, you can go and get one from the maths department. In it, you'll find things like this...



The Count, from Sesame Street, said his favourite number was 34,969 because it's a square, 187^2 , and it's the product of two squares, $11^2 \times 17^2$. Meanwhile, 187 is the difference of two squares, $94^2 - 93^2$, as well as being $94 + 93$. This sounds impressive, but is it really that unusual?

Maths Quote

"If people do not believe that mathematics is simple, it is only because they do not realise how complicated life is." – John Von Neumann.

However, if you do realise how complicated life is, but you still find maths difficult, why not come to Maths Workshop, every Friday lunchtime in room 13. 😊

Maths Word

'Zenzizenzizic' is an old maths word that means 'to the power of 8'. 'Zenzizenzizic' has more Zs than any other word in the Oxford English Dictionary.

$$x^8 = ((x^2)^2)^2$$

We have no idea how to put the word 'zenzizenzizic' into a sentence (apart from this one).*

Puzzle

The sum of the digits of $(10^x)^y - 64$ is 279. What is the value of xy ?

- a) 28 b) 29 c) 30 d) 31 e) 32

Maths Club

Maths Club, for years 7 to 9, is every Tuesday lunchtime at 1 pm in room 14. This is a fun maths club, run by year 12 students, where you will be able to play games, solve puzzles, learn origami, and generally do lots of other maths related things. You can even get extra help with your maths homework. Have lunch first then come along.

Joke

If 2000 grams are called '2 kilograms' and 2000 metres are called '2 kilometres', what do you call 2000 mockingbirds?



*We do really – you could say "the zenzizenzizic of 2 is 256"

Did you know?

Most people know that the first six prime numbers are 2, 3, 5, 7, 11 and 13, but did you know that $23 \times 57 = 1311$?

Birmingham University

For most of the year, the Mathematics department at Birmingham University hosts a monthly lecture that is free of charge and open to the public. The next lecture, called 'The Children of Erdős', is on Wednesday 21st October at 7:30pm and will be given by Dr Andrew Treglown.

This is what they say about the lecture:

Paul Erdős was perhaps the most remarkable mathematician of the 20th Century. He worked with more than 500 mathematicians and wrote more than 1500 research papers. His work has had profound implications to a wide variety of areas such as Analysis, Combinatorics, Number theory, Probability Theory and Set Theory.

Lewis Carroll

When he was not writing popular children's books like *Alice's Adventures in Wonderland*, Lewis Carroll was an Oxford University mathematician named Charles Dodgson, writing books with titles like



An Elementary Treatise on Determinants – with their Applications to Simultaneous Linear Equations and Algebraical Geometry. Although these books were never as popular as Alice, and there are no plans to turn any of them into a film, they were still important books at the time. If you are in year 7, look out for the Alice in Wonderland Cakes Puzzle competition coming soon!

Famous Mathematician

Sophie Germain was a French mathematician who lived from 1776 to 1831. Girls were not encouraged to learn maths, so she would read and work in secret during the night, in a room so



cold that her ink would sometimes freeze. Sophie was thirteen when rioters, unhappy with King Louis XVI, stormed the Bastille, a prison situated only a mile or so from where she lived, and in doing so began the French Revolution. She continued to study, submitting work to the local university using the name of a male friend, as women were not allowed to go to university at that time. She became inspired by a book by mathematician Carl Gauss, and went on to do important work in the field of Number Theory, even proving special cases of Fermat's Last Theorem. Several things have been named after her, including Sophie Germain Primes, which are prime numbers p where $2p + 1$ is also a prime number, and Sophie Germain's Identity which is the clever factorisation:

$$a^4 + 4b^4 = (a^2 + 2b^2 + 2ab)(a^2 + 2b^2 - 2ab)$$

Mini-Puzzle

How many 2-digit numbers are 3 times the sum of their digits? What if I change the 2 and 3 to two different numbers?

The Next Newsletter

If you have anything mathematical to go into the next maths newsletter, please tell your maths teacher.