King Edward VI Camp Hill School for Girls

Maths Department Newsletter

19th October 2015

2 is the only even prime

News

Welcome to the second ever maths newsletter. By the time you read this, you will have probably done your first WAG test and will soon be getting your result. Hopefully, it will have gone well. If you find, however, that you are struggling a little to keep up with your work, and you think you might benefit from a sixth form maths mentor to help you, we will be sorting these out over the next couple of weeks. Just let your maths teacher know on which day of the week you would like to meet with your mentor, and we will organise it for you. If you are a sixth form maths student and would like to be a mentor, just let your maths teacher know.

Mini-Puzzle

Can you find two numbers, neither of which contain the digit zero, that multiply together to make one million?

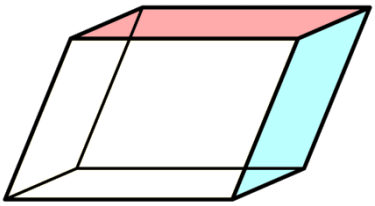
Maths Quote

"Knowing mathematics is like wearing a pair of x-ray specs that reveal the hidden structures underneath the messy and chaotic surface of the world." – Jordan Ellenberg.

However, if your specs could do with a bit of a clean, why not come to Maths Workshop, every Friday lunchtime in room 13. ☺

Maths Word

A 'parallelepiped' is a prism whose faces are all parallelograms.



Nobody is quite sure how you are meant to pronounce it, but we think you should probably say 'parallel-le-pipe-head'. Why not try to use this word in conversation from time to time?

Did you know?

Seconds of time are called 'seconds' because they are what you get if you divide an hour into sixty parts for a second time.

Maths Club

Don't forget that Maths Club, for years 7 to 9, is now every Tuesday lunchtime at 12:45 pm in room 14.

Puzzle

For which 5-digit number is it true that if we put a number 1 onto the end of it, we get a number three times bigger than if we were to put a number 1 on to the beginning of it? Tell your maths teacher if you work it out.

Joke

I thought I'd lost some of my nine sided shapes, but I checked and none are gone.

Did you know?

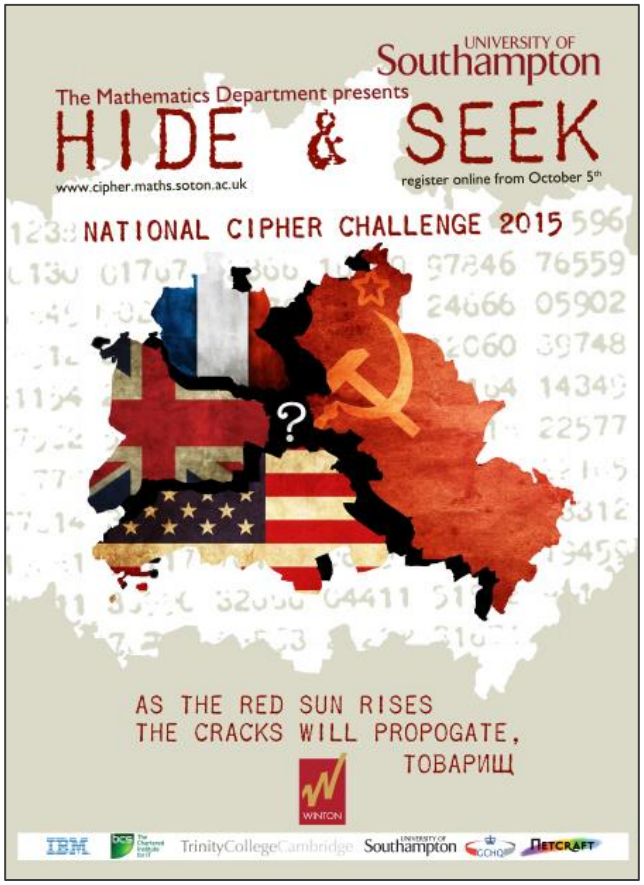
The string of digits 79873884 occurs in pi at position 79873884, counting from the first digit after the decimal point.

Birmingham University

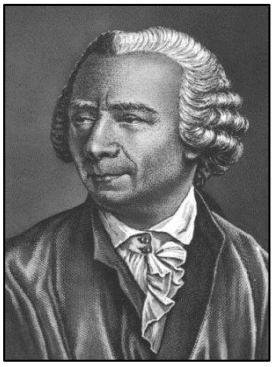
As mentioned in the previous newsletter, the lecture 'The Children of Erdős', will take place on Wednesday 21st October at 7:30pm in the Watson Building at Birmingham University.

Code Breaking

If you enjoy code breaking, why not sign up for Southampton University's 2015 'National Cipher Challenge'? You can enter on your own or as part of a team. Register as soon as you can, as the first code was published on 15th October. The top prize is £1000, with other prizes to be announced later. To register, go to www.cipher.maths.soton.ac.uk



Famous Mathematician



Leonhard Euler was almost certainly the best mathematician who ever lived. His name is pronounced 'Oiler' (not 'Yooler', as Keira Knightly says it in *The Imitation Game*.) He was born in Switzerland but spent most of his life in Russia and Berlin. He lived from 1707 until 1783, in the period commonly called 'The Enlightenment'. The 18th century saw great advances in science and mathematics, and Euler played a large part in this. He even carried on doing mathematics when he went blind, simply saying, "Now I will have less distraction." In fact the quantity of his output seemed to be inversely proportional to the quality of his eyesight. (Hopefully, as a good maths student, you understand what that means!) Many formulas are named after him, such as these:

$$e^{i\pi}+1=0$$

$$e^{i\theta}=\cos\theta+i\sin\theta$$

$$\gamma=\lim_{n\to\infty}\left(1+\frac{1}{2}\cdots+\frac{1}{n}-\log(n)\right)$$

$$V-E+F=2$$

Why not try to find out what some of them mean?

The Next Newsletter

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