King Edward VI Camp Hill School for Girls

Maths Department Newsletter

2nd November 2015

3 is the first odd prime

News

Welcome to the third maths newsletter. We hope you had a good half term break and that you didn't miss maths too much.

Pythagoras thought that three was the first number, so if this is the first maths newsletter you have read, just say you are following Pythagoras and that you didn't really think one and two were proper numbers. As excuses go, we think that one is quite good.

There are a few things going on in the department this week, but I think I'll give them their own headings. The first one is

Alice's Cakes

Every year, at about this time, Mr. Bettison runs a problem-solving competition for **year 7 students**. Alice, from *Alice in Wonderland* (a regular character in the maths newsletter), needs help working out how to arrange some cupcakes into rows. It's quite a tricky little puzzle. If you'd like to have a go at solving it, take a copy of the puzzle from outside the maths office.

There are house points available for any year 7 student who solves it, and one student will also win a prize.

Maths Word

A 'hypotenuse' is a right-angled triangle's longest side.

Hypotenuse

The word comes from the Latin *hypotēnūsa*, which itself is a combination of the Greek words *hypó*, meaning 'under' and *teínō*, meaning 'I stretch.' The idea is that the hypotenuse is stretched between the two legs of the triangle, on the underside. At least, it is when the triangle is this way up. Maybe next time you see something stretched underneath something, you could say, "That's like a hypotenuse." Your friends will be both puzzled and amazed by this.

Maths Quote

"In maths, *easy* means *I know this now* and *difficult* just means *I don't know this yet*." – Andrew Jeffrey

However, if there are things you don't know yet that you think perhaps you should know now, why not come to Maths Workshop, on Friday lunchtime, in room 13. ☺

Joke

I hired an odd job man to do 8 jobs for me. When I got back, he'd only done jobs 1, 3, 5, and 7.

When were you born?

Do you know the day of the week on which you were born? If you don't, you can work it out using the following table. The numbers in it are generated using a formula called **Zeller's Algorithm**.

Choose your school year group from along the top of the table and the month in which you were born from down the side. Take the number this gives you from inside the table. Add the day of the month on which you were born to this number. Divide this number by 7 and find the remainder. If the remainder is 0, you were born on a Sunday, if it's 1 it was a Monday, 2 Tuesday, 3 Wednesday, 4 Thursday, 5 Friday or 6 Saturday.

	7	8	9	10	11	12	13
Jan	3	2	1	0	5	4	3
Feb	6	5	4	3	1	0	6
Mar	0	5	4	3	2	0	6
Apr	3	1	0	6	5	3	2
May	5	3	2	1	0	5	4
Jun	1	6	5	4	3	1	0
Jul	3	1	0	6	5	3	2
Aug	6	4	3	2	1	6	5
Sep	0	6	5	4	2	1	0
Oct	2	1	0	6	4	3	2
Nov	5	4	3	2	0	6	5
Dec	0	6	5	4	2	1	0

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.

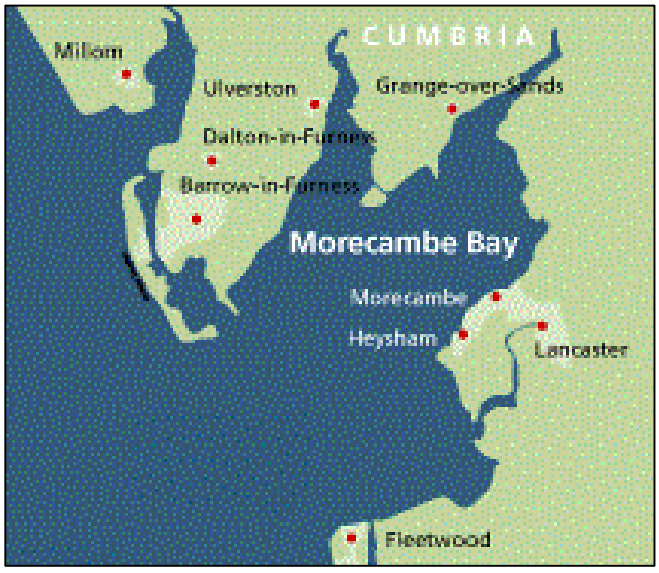
Senior Maths Challenge

On Thursday 5th November, it's the Senior Maths Challenge, for years 12 and 13. The questions can be quite tricky. Here is question 5 from the 2010 paper. #random

A notice on Morecambe promenade reads: 'It would take 20 million years to fill Morecambe Bay from a bath tap.' Assuming that the flow from the bath tap is 6 litres a minute, what does the notice imply is the approximate capacity of Morecambe Bay in litres?

A 6×10^{10} **B** 6×10^{11} **C** 6×10^{12}
D 6×10^{13} **E** 6×10^{14}

Can you work out the answer? Morecambe is in the north of England. If any of you ever get the chance to go there and get a picture of that sign, it would be good to have a copy of it in the maths department.



The Next Newsletter

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