King Edward VI Camp Hill School for Girls

Maths Department Newsletter

3rd October 2016

23 and 239 cannot be written as the sum of 8 cubes[1]

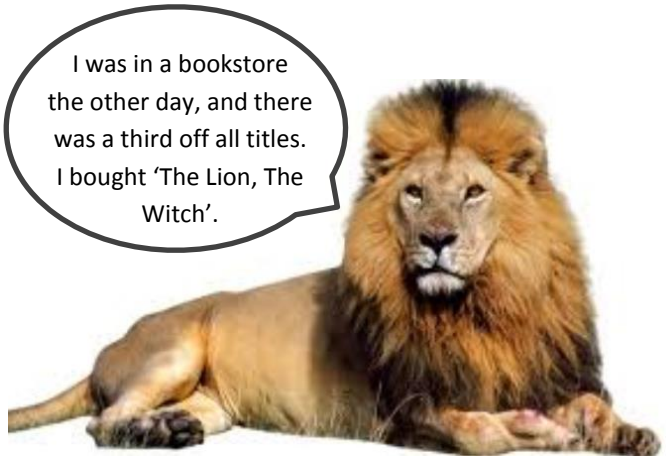
News

Welcome to this special issue of the maths department newsletter. I know you're thinking surely they're all special and, of course, you're right, but this one is extra special as it's almost exactly a year since the first newsletter, and we think this deserves a party – or at least, a maths puzzle about a party. The question then is this: How many people would you need to have at a party for there to be more than a 50% chance that two of them have the same birthday?[2]

Maths Quote

"I could never have gone far in any science because on the path of every science the lion mathematics lies in wait for you."
C. S. Lewis

What C. S. Lewis really needed was to come to maths workshop to get help. You have the opportunity to do this, every Monday lunchtime in room 13.



Maths Puzzle

In April 2015, this puzzle about 'Cheryl's Birthday' went viral on the internet.

Albert and Bernard just became friends with Cheryl, and they want to know when her birthday is. Cheryl gives them a list of 10 possible dates.

May 15, May 16, May 19, June 17,
June 18, July 14, July 16, August 14,
August 15, August 17

Cheryl then tells Albert and Bernard separately the month and the day of her birthday respectively.

Albert then says, "I don't know when Cheryl's birthday is, but I know that Bernard does not know either."
Bernard says, "At first I didn't know when Cheryl's birthday is, but I know now."
Albert says, "Then I also know when Cheryl's birthday is."

So when is Cheryl's birthday?
Can you work out the solution?

Maths Club

Maths Club for years 7, 8 and 9 is on Tuesdays in Room 14 at 1 o'clock. Why not go along and join in?

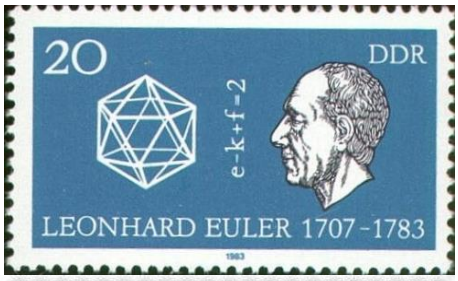
Joke

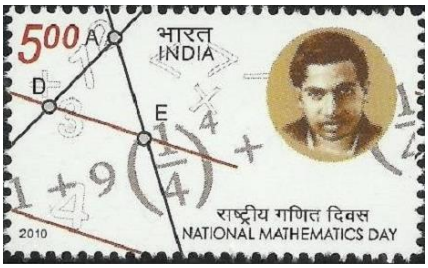
Did you know that birthdays are good for you? Statistics show that those who have the most live the longest.

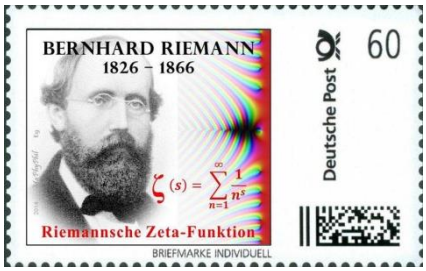
1. All other positive whole numbers can be written as the sum of 8 cubes.
2. This extremely well-known maths puzzle can be generalised to apply to any situation. It doesn't have to be a party. Year 10 students should know the answer, because we look at this puzzle in year 9.

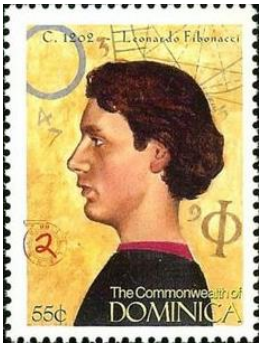
Can you recognise these famous mathematicians?

Sometimes famous mathematicians are featured on stamps. For each of these stamps, can you identify the mathematician and the country that the stamp is from?[3]









As a good mathematician yourself, why don't you try to find out what each of these mathematicians became famous for? Meanwhile, don't forget we'll be signing up for the University of Southampton code breaking competition before the next newsletter, so see Mr. Taylor or Mr. Bettison if you want to be part of our official Camp Hill team. The codes will be released every Thursday at 3 p.m., starting on 13th October, and we are planning to put them in registers every Friday morning for those students who have signed up with us. We will then have a week to complete each code.

3. For some of the stamps, this just means reading what's written on them.