News

If you like maths, you'll be pleased to know that since the last newsletter Simon Singh[1] has made a website full of maths activities called the Parallel Maths Project. It's full of puzzles, jokes and short films about all sorts of interesting bits of maths you probably don't know about. We think that, since you are discerning enough to read the maths newsletter, you would almost certainly enjoy it. Why not go and sign up now at www.parallel.org.uk?

We are also pleased to say that Kiera Fernandes in 7X did very well in the Junior Maths Olympiad, achieving a merit.

Weird Fractions

$$\frac{1}{3} + \frac{2}{3} + \frac{4}{3} = \frac{7}{3}$$

but if we square each fraction in the sum, then we have

$$\left(\frac{1}{3}\right)^2 + \left(\frac{2}{3}\right)^2 + \left(\frac{4}{3}\right)^2$$

$$= \frac{1}{9} + \frac{4}{9} + \frac{16}{9} = \frac{21}{9} = \frac{7}{3}$$

So we have three fractions whose sum is the same as the sum of their squares. How unusual is this?

Maths Word

A **polyomino** is a flat shape formed by joining one or more equal squares edge to edge. One type of polyomino is a **hexomino**, which is made by joining six squares together. There are 35 ways in which this can be done.
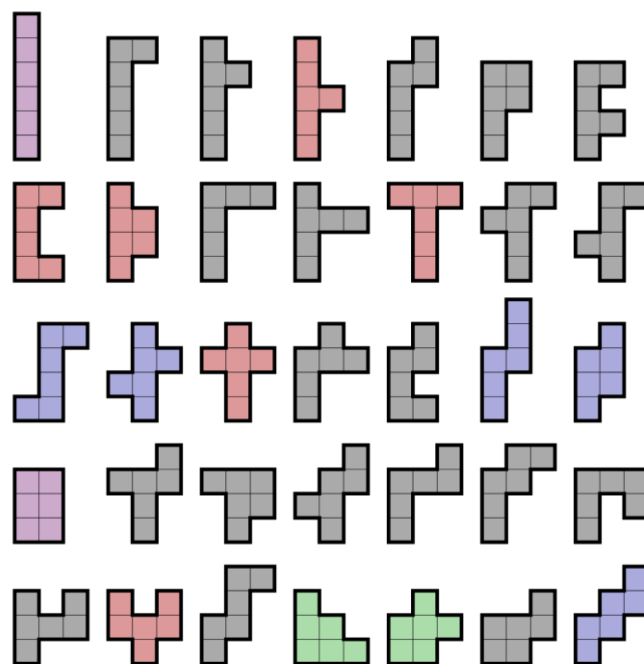
How many ways are there of joining a different number of squares together?

Joke
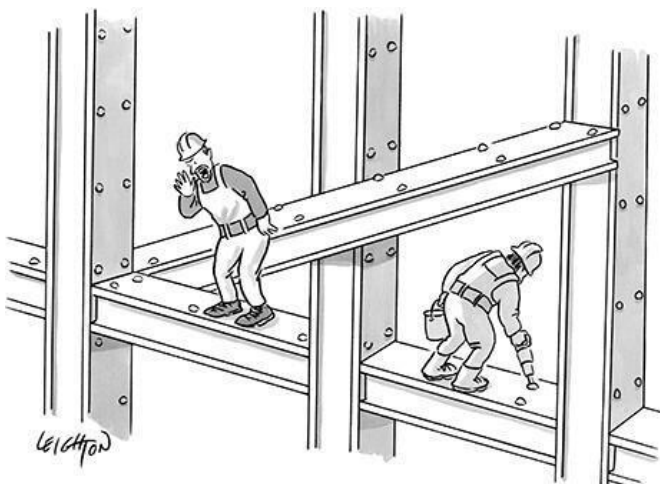
"Escher! Get up here and sort this out!"

1. You might remember Simon Singh from the code breaking programmes. He has also written some popular books about maths, such as *Fermat's Last Theorem* and *The Simpsons and their Mathematical Secrets*.

The Year 9 Team Challenge at Bishop Challoner

On Tuesday 4th July, six year 9 students (Kanakdurga Nanda, Salma Berriche, Shreya Shyam, Maya Patel, Hazel Cooper and Maleeha Ahmad) represented us in the South Birmingham Network Team Challenge at Bishop Challoner School, and I'm pleased to say that they finished the day in first place! This is the first time we have won this competition since 2014, when it was won by a team of girls who are now in year 12. As you can see from the photos, the competition involves making things, as well as solving traditional maths puzzles. In the final round, Maleeha solved the following puzzle, to win the competition.

How can you make the number 676 using only the numbers 2, 3, 6, 7, 9, and 100?[2]

The Edge Hill University Maths Challenge

On Wednesday 5th July, two teams of girls from year 9 went up to Edge Hill University, near Liverpool, to take part in the final round of their annual maths competition. We have some really excellent mathematicians in year 9, so we managed to get two teams into the final 20 for this competition, out of around 350 teams that originally entered. Both

Left to right: Shreya Shyam, Shreya Gopisri, Kanakdurga Nanda, Poppie Rogers, Hazel Cooper, Salma Berriche and Maya Patel.

of our teams baked cakes for the judges, and we managed to end the day in third place, which is the same as we did last year. It's still an impressive achievement though and we had a good day. We hope you all have a good break over the summer and come back in September ready to take part in all the different maths activities that take place every year. Keep an eye on the competitions board in the maths corridor for information about what's going on. Have a good holiday ☺

2. The usual Countdown rules apply. Use each number no more than once, but you can use as many symbols and brackets as you like.