



Mathematics

St Ninian's Mathematics Department Newsletter

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<https://blogs.glowscotland.org.uk/er/StNinians/> @StNiniansMaths/@MrCookeMaths

Welcome!

Hello and welcome to February's mathematics newsletter. February is of course the shortest month with only 28 days. (Unless it is a leap year) We have delved into the archives to find some interesting facts about 28. So be prepared to have your mind blown!



Did you know? A 28 sided polygon is called an *icosikaoctagon*? No, either did we. But we did know the square root of 784 is 28, and that it is also an even composite number composed of two prime numbers multiplied together.



Also! In the USA, the 28th of February is "Ask a silly question day" something we teachers 'celebrate' every day in school.....

Mrs Robison's Puzzle

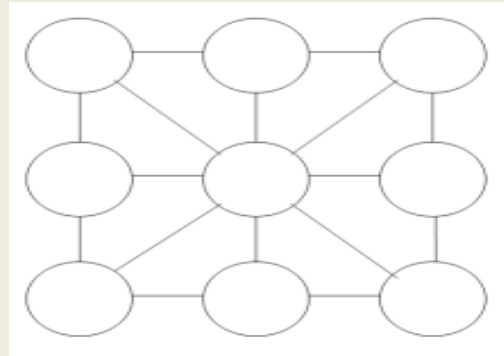
There are some cows and Chickens in a field. Together they have 35 heads and 94 feet. How many cows?

How many chickens?



Well done to all completed entries for last month.

The answer to the above brain tickler was 12 horses and 23 chickens. Here is this month's puzzle!



Place the numbers 1-9 so each line adds to 15

S1 Better Buys

The first year mathematicians this month will be helping to decorate our classroom walls with new better buys posters! This topic helps our students become more aware of what they are paying for whether it is for food, items or electronics. It even teaches real life techniques to help deal with wages and expenditures. Have a look in all classrooms and pick your favourite for best poster!

Did you hear about the mathematician who is afraid of negative numbers?

He will stop at nothing to avoid them.

S3 reports

Note to all staff that full term reports for all S3 classes are due for next **Friday, 10th February.**

Superbowl L I

It's super bowl time!

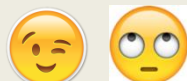
The 2017 edition of the NFL game to decide which team is best at American Football and take home the Vince Lombardi trophy is live on Sunday 5th February!

It all kicks off at 23:30 GMT but due to the satisfyingly thorough time-span of your average NFL match, and a



far higher amount of bells, whistles and half-time entertainment than normal, you can expect it to be wrapped up by about 03:30. Probably worth recording

so you can get to bed on time for school on Monday!



But who does the mathematics department at St.Ninian's think will win between The New England Patriots and The Falcons?

For us, we are putting our money on the Atlanta Falcons due to a mathematical prediction that comes from a University of Pittsburgh researcher who backs his claim with seven years of National Football League data and statistics.

Konstantinos Pelechrinis's study analysed 1,869 regular and postseason games from 2009 to 2015. Through in-depth analysis, he identified key in-game factors that directly correlate with winning probability. The analysis found that committing one fewer turnover than the opposition presented a 20 percent gain in winning probability. A 10-yard advantage in penalty yardage correlated to a 5 percent difference.

He then used a probability model to create a Football Prediction Matchup (FPM) engine to compare teams. Pelechrinis compared the Patriots' and the Falcons' performances in those key in-game factors during the 2016 regular season and finally, ran 10,000 simulations of the game in order to draw his

conclusion: **The Atlanta Falcons have a 54 percent probability of prevailing in Super Bowl 51.**



So there you have it! It's the Atlanta Falcon's year! If you want to read more on this story then visit:

<https://phys.org/news/2017-02-atlanta-falcons-super-bowl-pitt.html#jCp>

Supported study

Supported study is still being held for all exam classes for the remainder of the year. Please take advantage of this class as often as possible

Monday: National 5 mathematics

Wednesday: Higher mathematics/
S1-S3 homework club

Thursday: Higher mathematics



Pupil of the month

Mr Wilson has been organising this month's Pupil of the month for S1 and S2. He will be collecting names from all teachers by the end of the week for the student that has shown the most dedication to learning mathematics. So if you take your studies seriously, always attempt homework and go above and beyond to succeed at your level, then it might be you!!

Get involved!

Got something you think will interest the mathematics department? Don't hesitate to contact **Mr Cooke** to have a feature in next month's newsletter. It can be anything! A joke, puzzle, something mathematical you seen in the news, it's completely up to you!

