

Dear Dr Maths,
I KNOW that maths is important but how can I encourage my daughter to be more interested in it?

HELEN
NEWCASTLE

Dear Helen,
MATHEMATICS is all around us, we only have to look more carefully to see it. From our own local bridges sweeping across the river Tyne to pebbles on the seashore, maths is everywhere.

It is in all our electrical equipment from mobile phones to dishwashers. We use it when we try to predict changes in the weather every night in the weather forecast.

Maths is all about patterns. Playing with puzzles is a great way to improve children's interest and ability in maths. One of my favourite puzzles is called Latin Squares. It was created by one of the greatest mathematicians ever, Leonhard Euler, who lived in the 18th century.

Here is the first version of his puzzle. You start with nine circles- 3 red, 3 yellow and 3 green. You also have nine squares - 3 red, 3 yellow and 3 green. Match these together so that all nine pairs are different. It should look like this.



Then place the nine squares on to a three by three grid so that no row or column have any of the same colour circles or squares in them. A possible solution looks like this.



Can you find others?
You can now introduce another colour and make 16 different pairs. You can then place these on a four by four grid. Remembering that in each row and column there must be both different coloured circles and squares. Write or email me with your solution to the Latin Square puzzle. The first correct answer will win a copy of my book *The Experimenter's A to Z of Mathematics*. Congratulations to Sam Hogarth, from Gateshead, who worked out that a martian with four fingers on each hand would write the number 11 as 13.

Do you have a maths question or problem? Write to Dr Maths, Evening Chronicle, Groat Market, Newcastle, NE1 1ED. Questions published will receive my book.

Evening Chronicle

Thursday 9 December 2004

