

# Puzzles from the Team!

If you find the person who wrote the puzzle, you could ask them for a clue.  
Solutions at [www.insidemaths.co.uk/puzzles25](http://www.insidemaths.co.uk/puzzles25) - available from 11 February 2025.

## MAKING CONNECTIONS

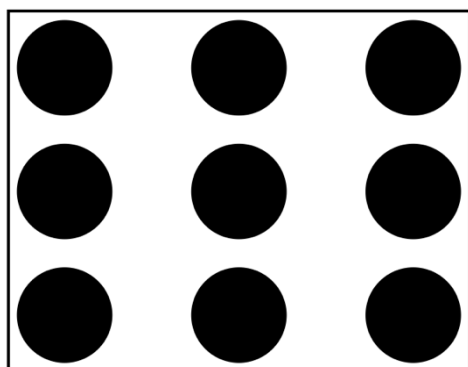
### Sam's Puzzle



The famous 'Utilities Puzzle' asks if it's possible to draw lines so that each house is joined up with all three of the utilities it needs (gas, electric and water), **without the lines crossing**. It cannot be done on a flat surface.

**Now:** Create an 'almost solution', where there is **only one crossing point**.

**At home:** Re-create your 'almost solution' on the surface of a mug, using a pen that rubs off. If you can you work out how to use the handle to get rid of the crossing point, you can show that the Utilities Puzzle can be solved on the surface of a mug!



### Ashleigh's Puzzle

Connect these 9 dots using 4 straight lines (without lifting your pen). You might need to **think outside the box**.

Do you think it is possible to do it with only 3 straight lines?

## MATHS IN HISTORY

### Brigitte's Challenge

Brigitte is an expert on the mathematician Mary Somerville. Find Brigitte and ask her about Mary Somerville!

**Extra challenge:** There is a bust (model of the head and shoulders) of Mary Somerville somewhere in the Ri! See if you can find it.

## PLAYING WITH NUMBERS

### Goran's Puzzle

What is the largest number you can make with the digits from today's date (1,0,2,2,5), using **each digit no more than once**, and any operators (eg +, ×). You are not allowed to 'join together' digits to make numbers – eg 1,0 cannot be joined together to make 10.

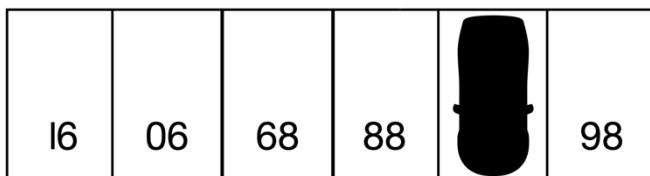
**Clue:** You could try powers! Eg  $5^2 = 5 \times 5 = 25$   
( $5^2$  means '5 to the power of 2' or '5 squared')

### Sam's Second Puzzle

A prime number is a number that is only divisible by 1 and itself (so it's not in any other number's times table). Which numbers between 80 and 100 are prime?

## LATERAL THINKING

### Mike's Puzzle



What number is in the parking space in which the car is parked?

### Goran's Second Puzzle(s)

What comes next in each of these sequences?



B

1,  
1,1  
2,1  
1,2,1,1,  
3,1,1,2

(saying these out loud may help!)