



MATHS AT TYLERS GREEN FIRST SCHOOL

RECEPTION MATHS MEETING

WEDNESDAY 6TH NOVEMBER 2024

AIMS OF THIS WORKSHOP

- To share *Mastery* approach to Teaching Maths
- To explain how *Maths* is taught in Foundation Stage
- To give ideas about how you can help your child at home

THE MASTERY APPROACH

- Everyone can do maths
- To Develop the belief for children that by working hard at maths they can succeed
- A mastery approach requires children to have time to think deeply about maths so they understand the concepts as well as the procedures

MAIN FEATURES OF MASTERY TEACHING

- Planning small steps of learning
- Fluency and revisiting prior learning
- Use full sentences for explanations
- Use of STEM sentences
- Varied and meaningful representations
- Teaching new concepts using Concrete, Pictorial and Abstract

SIX AREAS OF EARLY MATHEMATICAL LEARNING

- **Cardinality and Counting**

Understanding that the cardinal value of a number refers to the quantity, or 'howmanyness' of things it represents

- **Comparison**

Understanding that comparing numbers involves knowing which numbers are worth more or less than each other

- **Composition**

Understanding that one number can be made up from (composed from) two or more smaller numbers



- **Pattern**

Looking for and finding patterns helps children notice and understand mathematical relationships

- **Shapes and space**

Understanding what happens when shapes move, or combine with other shapes, helps develop wider mathematical thinking

- **Measures**

Comparing different aspects such as length, weight and volume, as a preliminary to using units to compare later

- **[NCETM Website](#)**



HOW WE TEACH MATHS AT TYLERS GREEN IN FOUNDATION STAGE

- We teach Maths using the Early Years Foundation Stage Framework as well as taking from the White Rose Scheme of work when appropriate. We follow the *Mastery* approach as a whole school.

Teaching new concepts using:

- Concrete – using physical objects to solve mathematical problems
- Pictorial – using drawings to solve mathematical problems
- Abstract – solving maths problems using only numbers (Summer term and into Year 1)



In school we teach one number each week and recap them throughout the year. Constantly revisiting prior knowledge as the year continues. We usually start the week by watching the Numberblocks episode related to the number. Whilst focusing on each number we will be:

- Learning to recognise and write the number
 - Finding different ways to make that number (addition and subtraction)
 - Looking at shapes with that number of sides, corners or points and finding them in the environment
 - Our maths activities are often outside and we use natural resources such as conkers, pinecones and stones to make representations of numbers.
 - As the year goes on, we will begin doubling, halving, sharing and problem solving
- 





EARLY LEARNING GOALS IN RECEPTION

There are two Early learning goals in Maths

This is what most children in Reception are expected to be able to do by the end of their first year at school



NUMBER

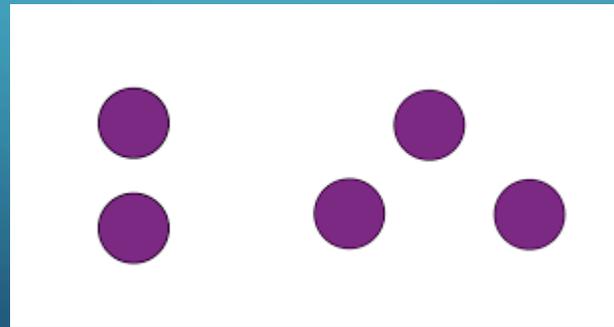
- Subitise (Recognise quantities without counting) up to 5.
- Have a deep understanding of numbers to 10, including the composition of each number.
- Automatically recall (without reference to rhymes, counting or other aids) Number bonds to 5 (including subtraction facts) and some Number bonds to 10, including double facts.

NUMERICAL PATTERNS

- Verbally count beyond 20, recognising the pattern of the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

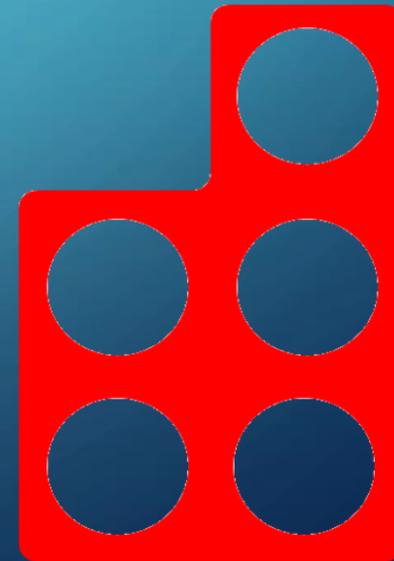
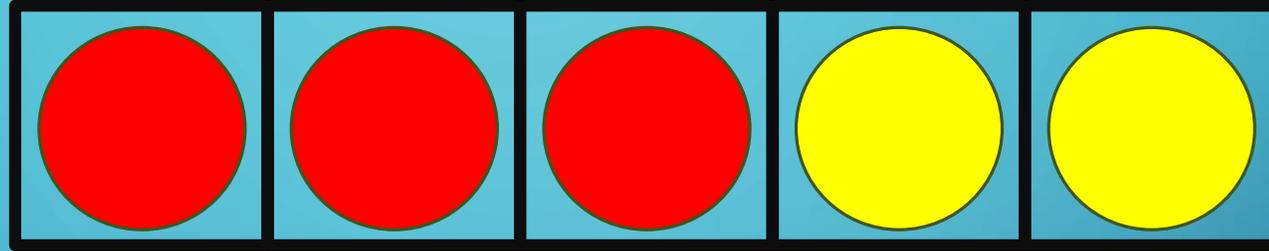
SUBITISING

- It is subitising and not counting that allows children to calculate efficiently
- Subitising is your brains ability to know how many? without counting.
- Stem sentence : “Don’t count see the amount”



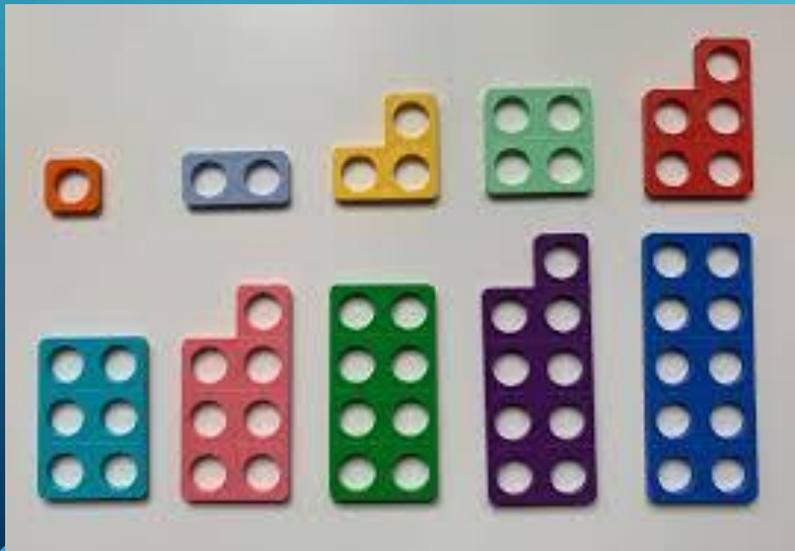
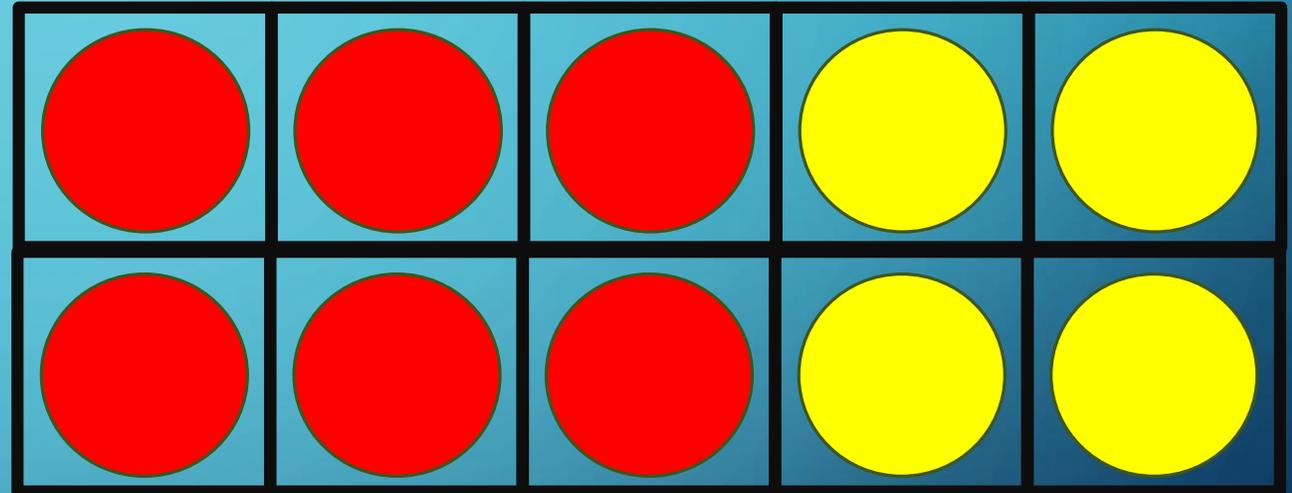
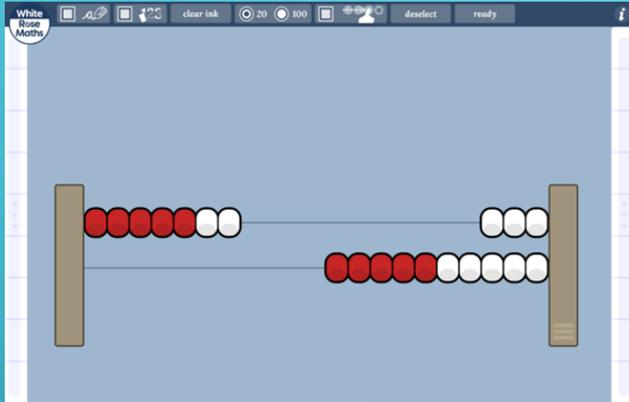
DEEP UNDERSTANDING OF NUMBERS TO 10

5



DEEP UNDERSTANDING OF NUMBERS TO 10

10



NUMBERBONDS

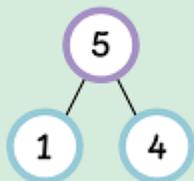
Numberbonds are pairs of numbers that can be added together to make another number e.g. $1 + 4 = 5$

Part whole models:

“5 is made of 1 and 4”

“1 is a part, 4 is a part, the whole is 5”

“ $1 + 4 = 5$ ”



Complete the part-whole models.

Fluency

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graph TD; 8((8)) --- P1(( )); 8 --- P2(( )); 10((10)) --- P3(( )); 10 --- P4(( ));
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DEEP UNDERSTANDING OF NUMBERS

- Type of activity to encourage reasoning skills and explanations

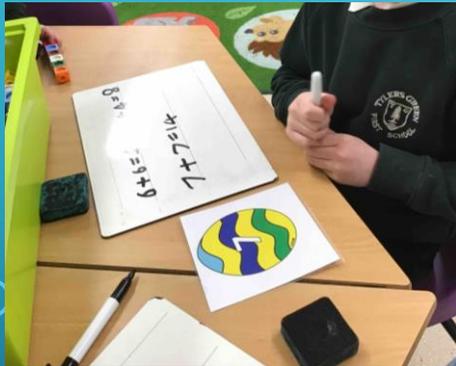
Technique: **Odd One Out** www.ks1maths.com

Odd one out

The image shows a 2x2 grid of visual representations. The top-left quadrant contains 8 green dots arranged in two rows of four. The top-right quadrant contains 8 orange dots arranged in two rows of four. The bottom-left quadrant shows a 2x5 grid of boxes, with 9 blue dots filling all boxes except the bottom-right one. The bottom-right quadrant shows two hands, one with 5 fingers extended and the other with 4 fingers extended, totaling 9 fingers.

NUMERICAL PATTERNS

Doubling numbers



Comparing numbers



Odds and evens



Blockzilla's puzzles

Help Blockzilla with these number puzzles.

$<$ Means is less than. $>$ Means is greater than. $=$ Means is equal to.

One has fewer blocks than Three. 1 is less than 3.

Four has more blocks than Two. 4 is greater than 2.

Two has the same number of blocks as Two. 2 equals 2.

Circle the Numberblock with more blocks.

Four is greater than 2.

Circle the Numberblock with fewer blocks.

One is less than 5.

20

Greater than / Less than and Equal to
Numberblock's
Blockzilla

REPRESENTATIONS OF NUMBERS

Numbering 1- 5

Representing 5 with the 5 number block character in chalk



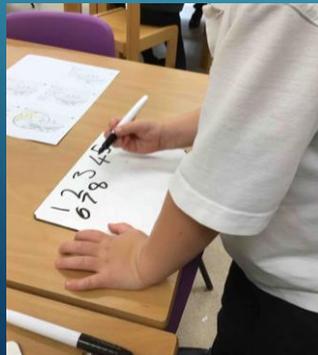
Showing 5 and how they are 1 more each time



Representing 18 in many different ways



Writing numbers



Number bonds to 10



1:1 Counting of objects on numbered plates





Making a triangle using 3 sticks and counting 3 leaves



Finding 3

Representing 5 on a 5 frame



Ordering numbers



Representing 5 in playdough



Representing 5 using Part, Part, Whole



HOW YOU CAN HELP AT HOME

Opportunities for counting

- Counting jumps, steps or bounces of a ball
- Hide and seek
- Board games- e.g. snakes and ladders -subitise using the dice
- What's the time Mr Wolf?

Talking about numbers

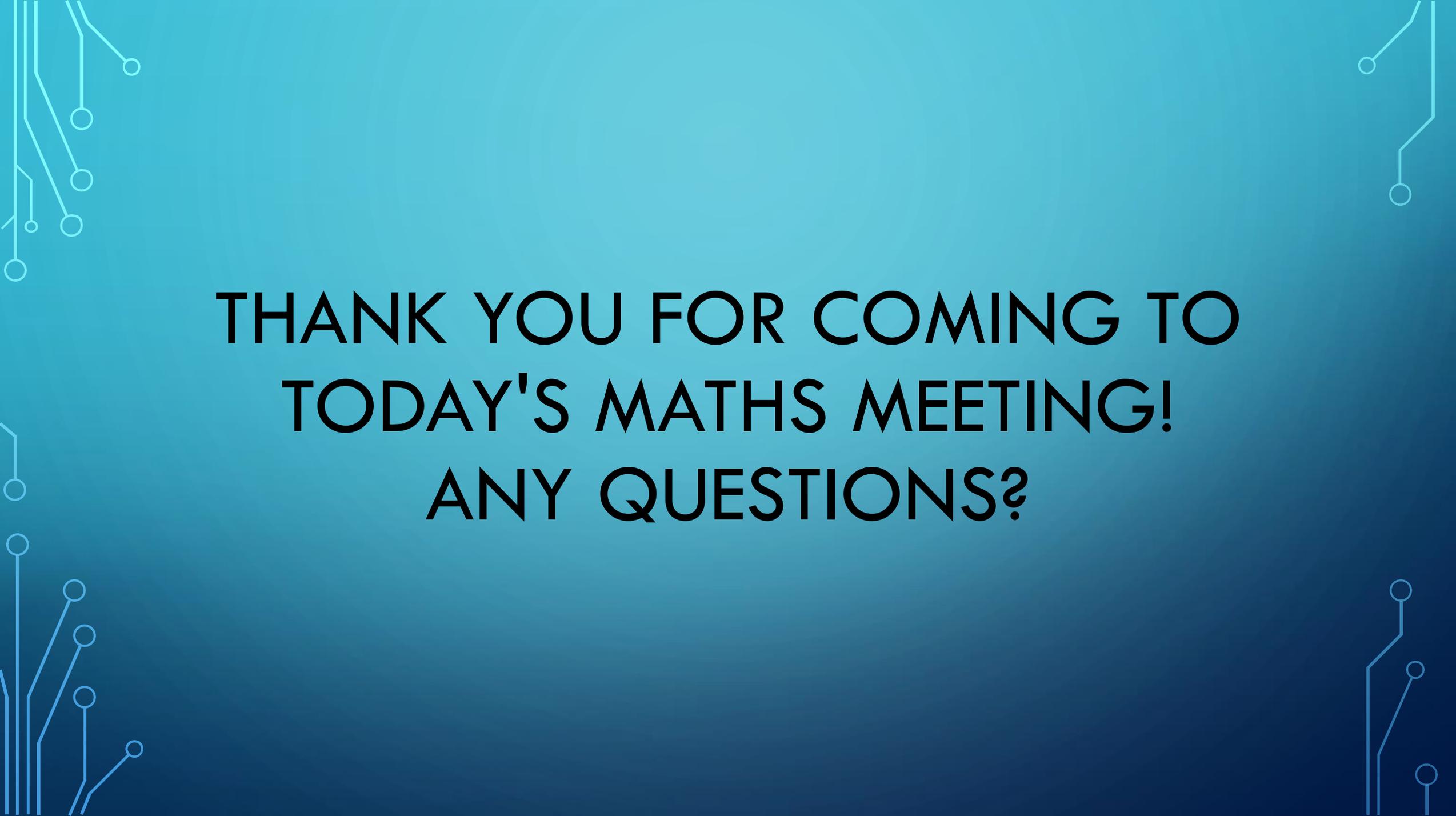
Was it bigger than, smaller than, how many more is it?

- Finding Numbers on your walk to school: Door numbers, speed signs, Bus numbers

Counting songs

- <https://www.bbc.co.uk/teach/school-radio/articles/zn67kmn>

See more ideas on hand out.

The background is a gradient of blue, darker at the bottom. In the four corners, there are white line-art graphics resembling circuit boards or neural networks, with lines connecting to small circles.

**THANK YOU FOR COMING TO
TODAY'S MATHS MEETING!
ANY QUESTIONS?**