Challenge, Equality & Opportunity

# Year 2 Maths at Havannah First School

# Mastery – What is it?

Mastery in Maths is being able to understand and apply knowledge to different contexts and situations.

It can also be explaining thought processes, as well as, proving and giving reasons for answers.

This approach aims to broaden children's understanding of a concept, enabling them to use what they know in new situations.

# Stages of Mastery

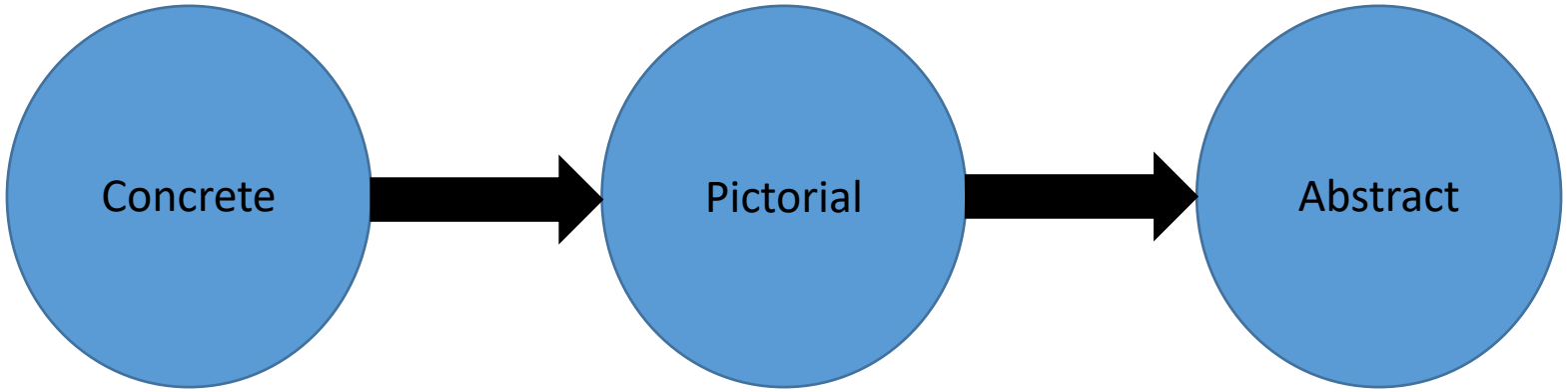
- **Fluency** in Maths happens when children can answer questions accurately using recall of Mathematical facts.

- **Reasoning** is when a child can explain what they have done and why, or prove that something is or isn't correct.

- **Problem solving** is applying their knowledge and understanding to multi-step problems.

# Stages of Teaching

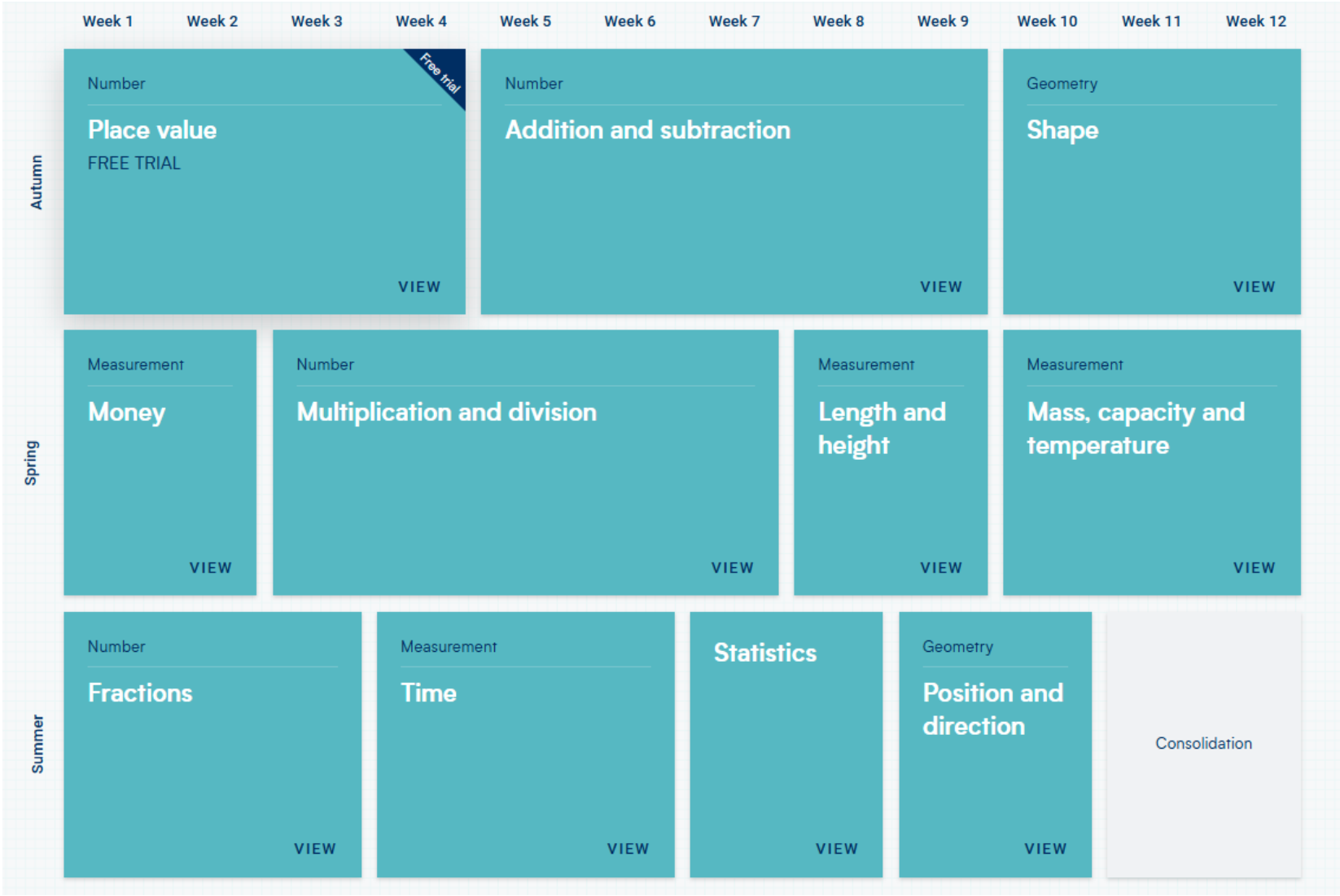
- Maths learning should follow a process, moving through each stage when the child is ready.
- If the child is moved too quickly through the concrete and pictorial stage of their learning, this could affect understanding in later years.



# How Maths is taught at Havannah

- In Key Stage One, Maths is taught **5 times in a week**.
- We follow the White Rose Maths Schemes of Learning, which support our school's mastery approach and are fully aligned with the National Curriculum.
- Number is central to our curriculum, and we spend significant time developing strong number skills. This builds secure foundations so children can confidently access all other areas of maths.
- Planning includes regular opportunities to revisit and strengthen previously learned skills.
- We aim for children to stay within their Key Stage to build a deep understanding and secure knowledge in each area of learning.
- The vast majority of children progress through the curriculum at a similar pace.
- Support and challenge are built into every lesson to ensure all children can succeed and make progress.

# Long Term Plan for Maths- Year 2



# Small Steps in Maths

| Core Curriculum | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| | **Number: Place Value**<br>• Numbers to 20<br>• Count objects to 100 by making 10s<br>• Recognise tens and ones<br>• Use a place value chart<br>• Partition numbers to 100 Write numbers to 100 in words<br>• Flexibly partition numbers to 100<br>• Write numbers to 100 in expanded form Small steps<br>• 10s on the number line to 100<br>• 10s and 1s on the number line to 100<br>• Estimate numbers on a number line<br>• Compare objects<br>• Compare numbers<br>• Order objects and numbers<br>• Count in 2s, 5s and 10s<br>• Count in 3s<br><br>**Number: Addition and Subtraction**<br>• Bonds to 10<br>• Fact families - addition and subtraction bonds within 20<br>• Related facts<br>• Bonds to 100 (tens)<br>• Add and subtract 1s<br>• Add by making 10<br>• Add three 1-digit numbers<br>• Add to the next 10<br>• Add across a 10<br>• Subtract across 10 Subtract from a 10 Subtract a 1-digit number from a 2-digit number (across a 10)<br>• 10 more, 10 less | **Number: Addition and Subtraction**<br>• Add and subtract 10s Add two 2-digit numbers (not across a 10)<br>• Add two 2-digit numbers (across a 10)<br>• Subtract two 2-digit numbers (not across a 10)<br>• Subtract two 2-digit numbers (across a 10) Mixed addition and subtraction<br>• Compare number sentences<br>• Missing number problems<br>**Geometry: Properties of Shape**<br>• Recognise 2-D and 3-D shapes<br>• Count sides on 2-D shapes<br>• Count vertices on 2-D shapes<br>• Draw 2-D shapes<br>• Lines of symmetry on shapes<br>• Use lines of symmetry to complete shapes Sort 2-D shapes<br>• Count faces on 3-D shapes<br>• Count edges on 3-D shapes<br>• Count vertices on 3-D shapes<br>• Sort 3-D shapes<br>• Make patterns with 2-D and 3-D shapes | **Measurement: Money**<br>• Count money – pence<br>• Count money – pounds (notes and coins)<br>• Count money – pounds and pence<br>• Choose notes and coins Make the same amount Compare amounts of money<br>• Calculate with money Make a pound<br>• Find change<br>• Two-step problems<br>**Number: Multiplication and Division**<br>• Recognise equal groups<br>• Make equal groups<br>• Add equal groups<br>• Introduce the multiplication symbol<br>• Multiplication sentences<br>• Use arrays<br>• Make equal groups – grouping<br>• Make equal groups – sharing<br>• The 2 times-table<br>• Divide by 2<br>• Doubling and halving<br>• Odd and even numbers | **Number: Multiplication and Division**<br>• The 10 times-table<br>• Divide by 10<br>• The 5 times-table<br>• Divide by 5<br>• The 5 and 10 times-tables<br><br>**Measurement: Length and Height**<br>• Measure in centimetres<br>• Measure in metres<br>• Compare lengths and heights<br>• Order lengths and heights<br>• Four operations with lengths and heights<br><br>**Measurement: Mass, Capacity and Temperature**<br>• Compare mass<br>• Measure in grams<br>• Measure in kilograms<br>• Four operations with mass<br>• Compare volume and capacity<br>• Measure in millilitres Measure in litres<br>• Four operations with volume and capacity<br>• Temperature | **Number: Fractions**<br>• Introduction to parts and whole<br>• Equal and unequal parts Recognise a half Find a half<br>• Recognise a quarter Find a quarter Recognise a third<br>• Find a third<br>• Find the whole<br>• Unit fractions<br>• Non-unit fractions<br>• Recognise the equivalence of a half and two-quarters Recognise three-quarters<br>• Find three-quarters Count in fractions up to a whole<br><br>**Measurement: Time**<br>• O'clock and half past<br>• Quarter past and quarter to<br>• Tell the time past the hour<br>• Tell the time to the hour<br>• Tell the time to 5 minutes<br>• Minutes in an hour<br>• Hours in a day | **Statistics**<br>• Make tally charts<br>• Tables<br>• Block diagrams<br>• Draw pictograms (1–1) Interpret pictograms (1–1)<br>• Draw pictograms (2, 5 and 10)<br>• Interpret pictograms (2, 5 and 10)<br><br>**Geometry: Position and Direction**<br>• Language of position Describe movement Describe turns<br>• Describe movement and turns<br>• Shape patterns with turns |

# What does Maths Mastery look like in our lessons?

- We break learning into small, manageable steps and ensure each step is mastered before moving on.
- Previous learning is regularly revisited to build fluency and confidence.
- We use visual representations and practical equipment to help children understand mathematical concepts.
- Pupils are given opportunities to reason, solve problems, and make connections, which helps them remember and apply their learning
- Every child receives the support or challenge they need to make progress and succeed.

# A typical Maths lesson at Havannah

**Each KS1 and 2 lesson typically follows the following format:**

**1. Starter activity** – Practice key skills and introduce important vocabulary for the lesson.

**2. Talk activity** – Discuss what children already know and build on prior knowledge.

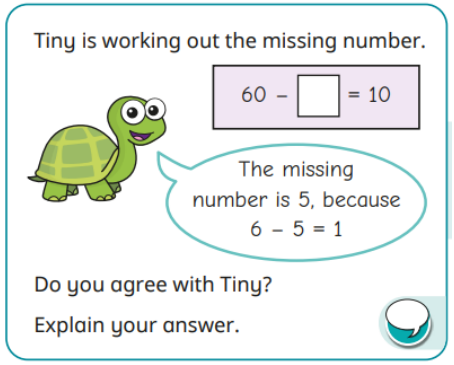
**3. Open questioning task -** Engage all learners through discussion of strategies.

**4. A range of questions which encourages reasoning/strategies** – "How do you know?", "What's the same and different?" etc.

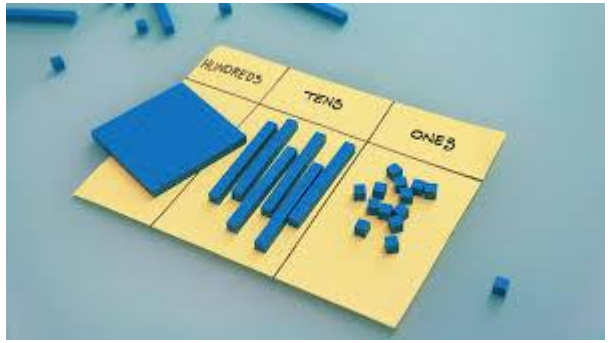
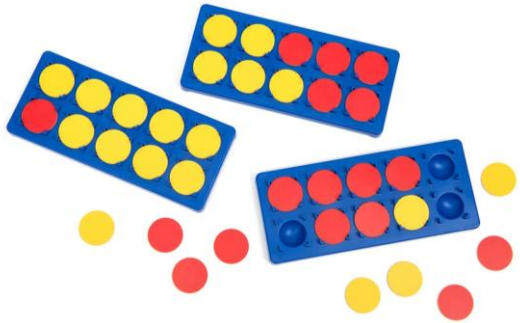
**5. Misconception question –** Explore common misconception related to the current step.

**6. Independent Practice –** Fluency, reasoning, and problem-solving tasks completed in books.

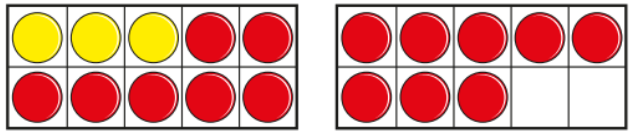
**7. Recap of lesson and discussion of problem- solving task.**



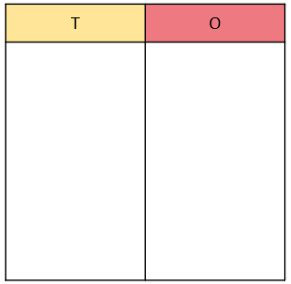
# Practical resources we use in school to support learning

| | | |
|---|---|---|
|  Numicon |   Base 10 |  Counters |
|  Ten frames and counters |  Cubes |  Rekenrek |

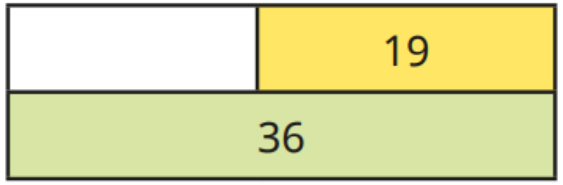
# Key Representations



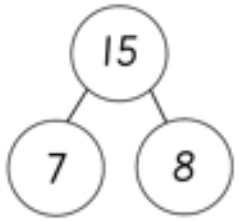
**Ten frame**



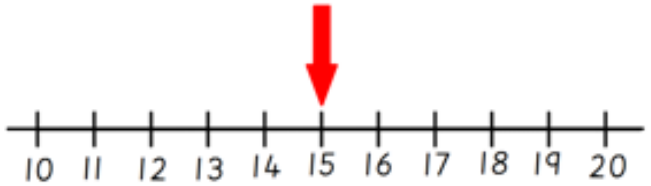

**Place value grid**




**Bar model**



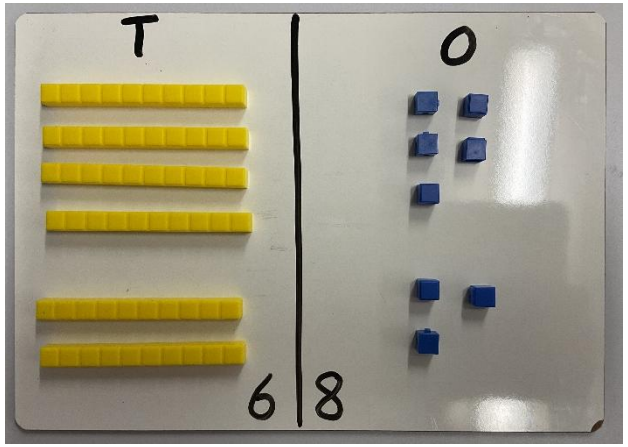
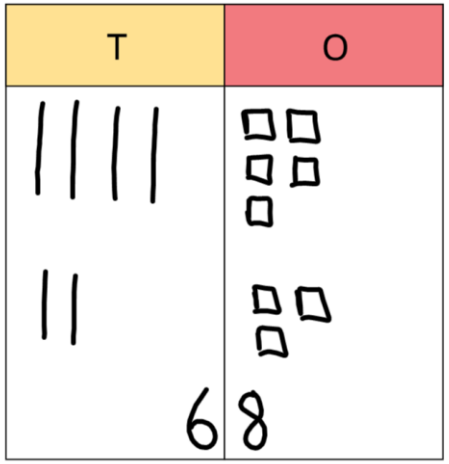
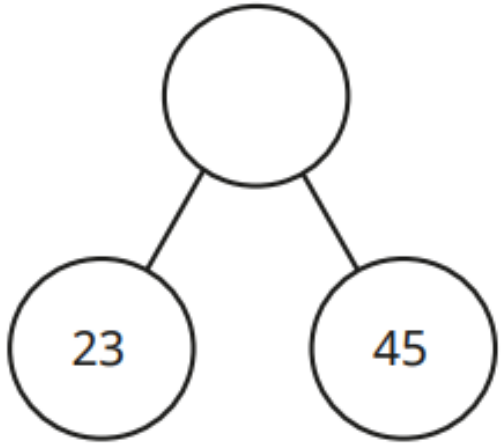

**Part whole model**



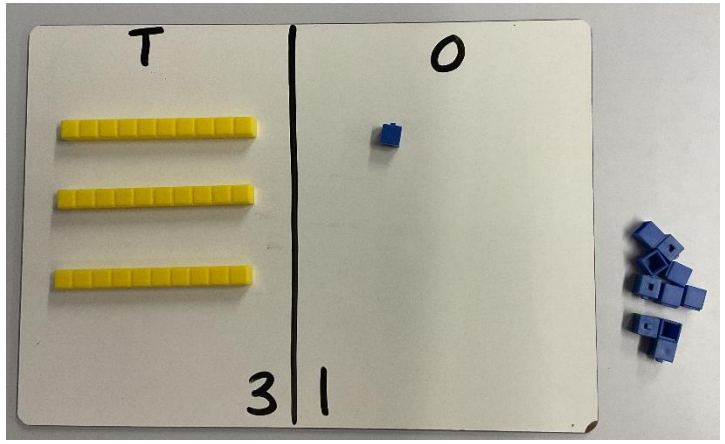
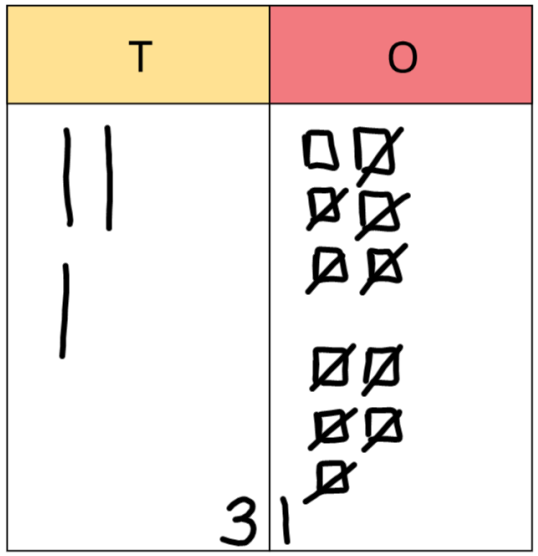
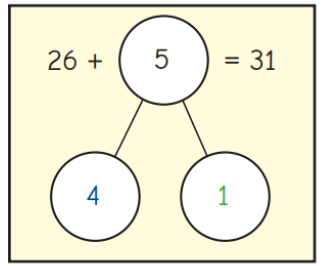
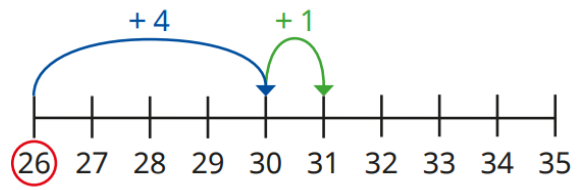

**Number line**

Embedded and understood in KS1 and built on in KS2

# Addition

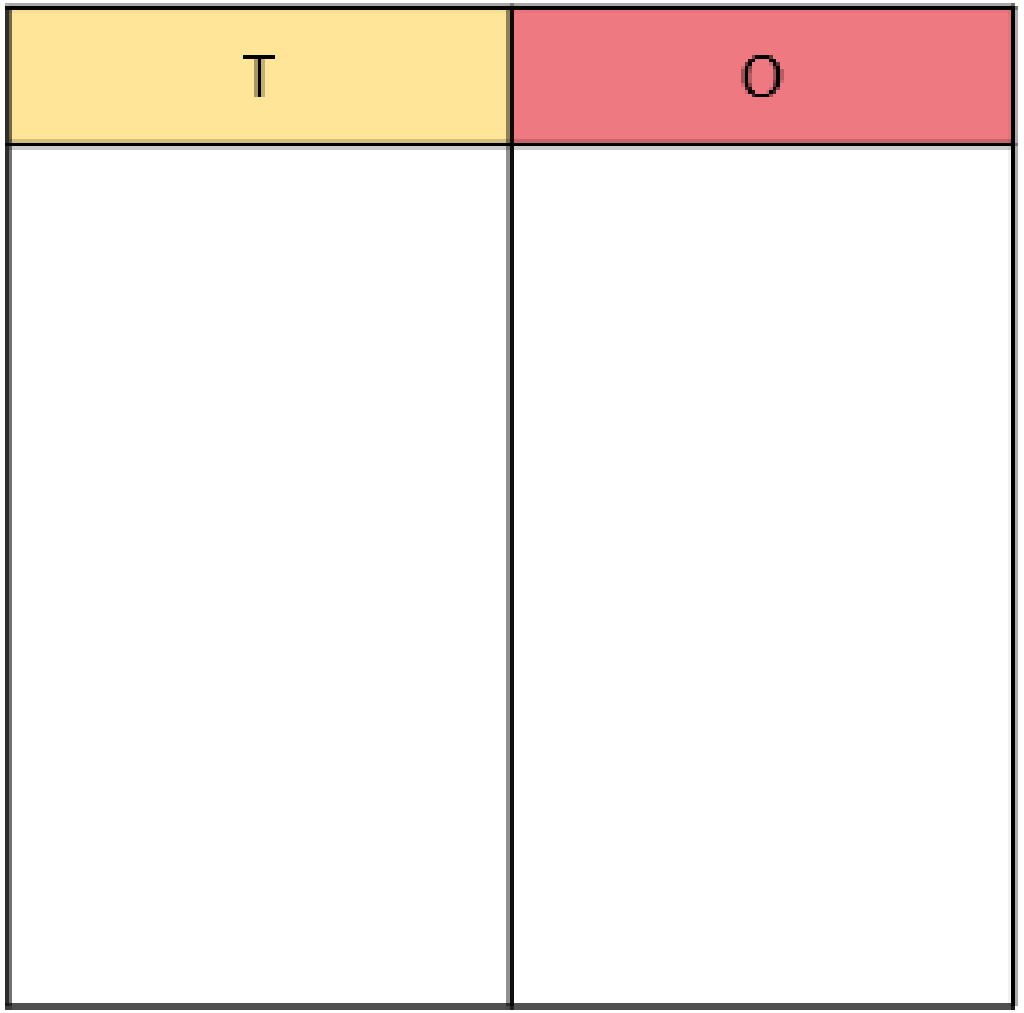
| Concrete | Pictorial | Abstract |
| --- | --- | --- |
| 45 + 23 =   | 45 + 23 = ____   | 45 + 23 =   |

# Addition- Adding across a ten

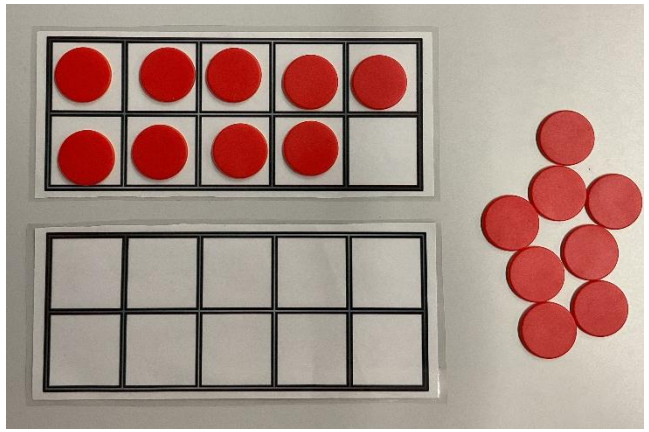
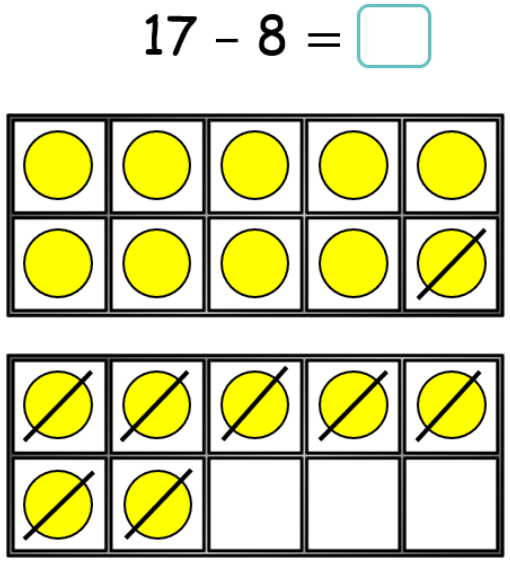
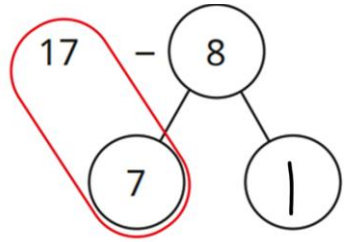
| Concrete | Pictorial | Abstract |
| --- | --- | --- |
| 26 + 5 =   | 26 + 5 = ____   | 26 + 5 =     |

# Addition- Adding across a ten

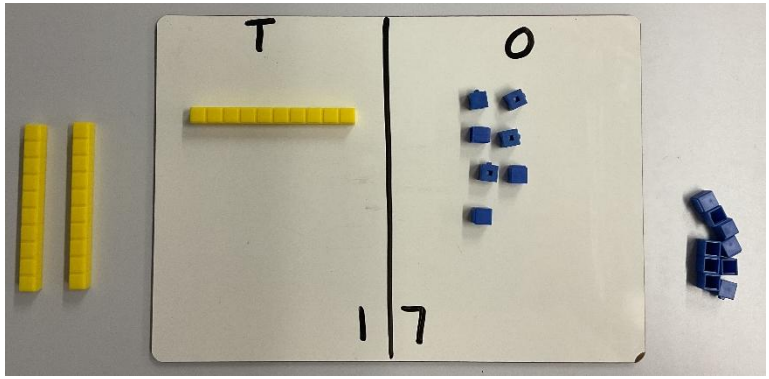
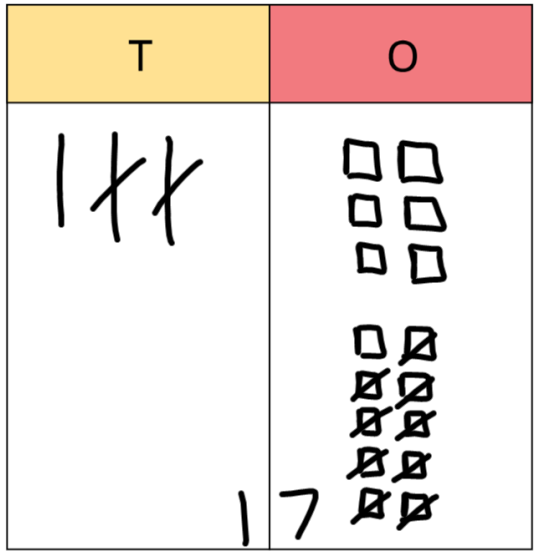
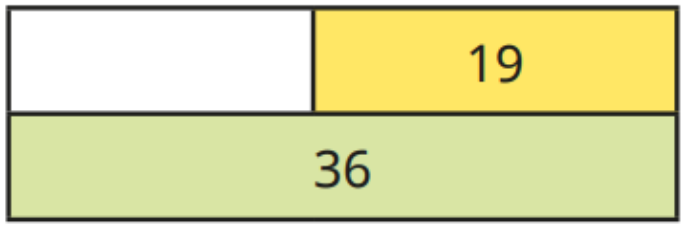
17 + 34 =



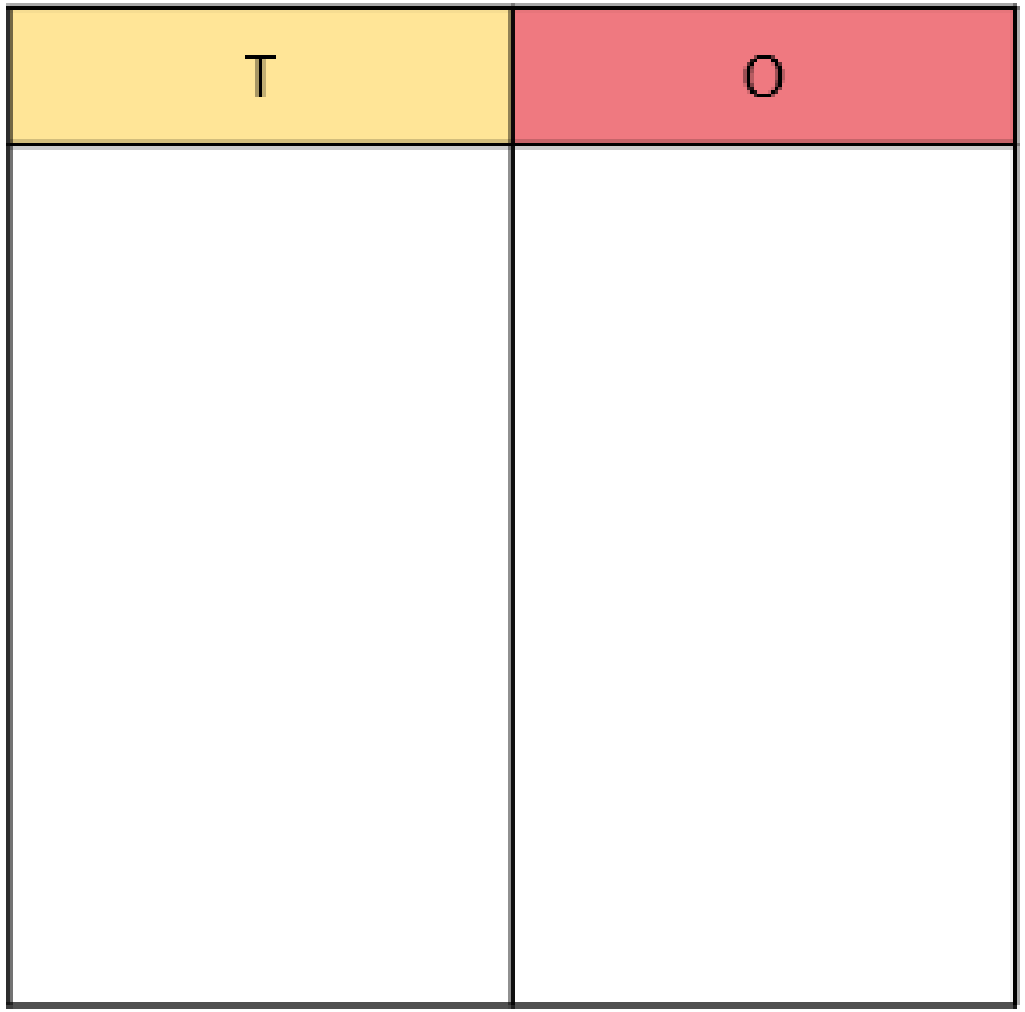
# Subtraction

| Concrete | Pictorial | Abstract |
| --- | --- | --- |
| 17 – 8 =  | 17 – 8 =  | 17 – 8 =   10 – 1 = 9 |

# Subtraction

| Concrete | Pictorial | Abstract |
| --- | --- | --- |
| 36 – 19 =   | 36 - 19 = ____   | 36 – 19 =   |

**a)** 23 − 6 = ☐

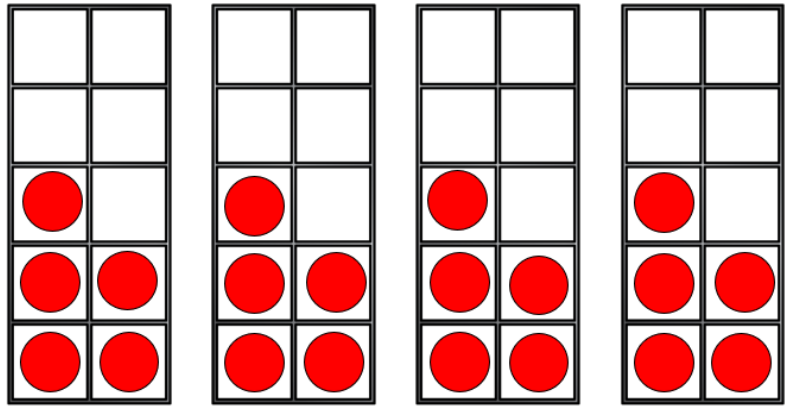


# Multiplication

There are _____ equal groups with _____ in each group.



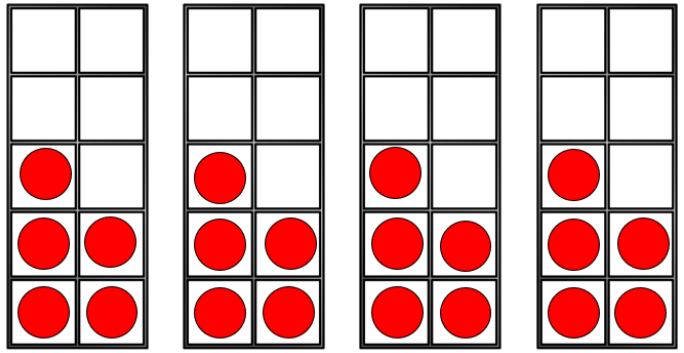
2 + 2 + 2 + 2 + 2 = 10



5 + 5 + 5 + 5 = 20

# Multiplication

There are _____ equal groups with _____ in each group.



$5 + 5 + 5 + 5 = 20$

$4 \times 5 = 20$

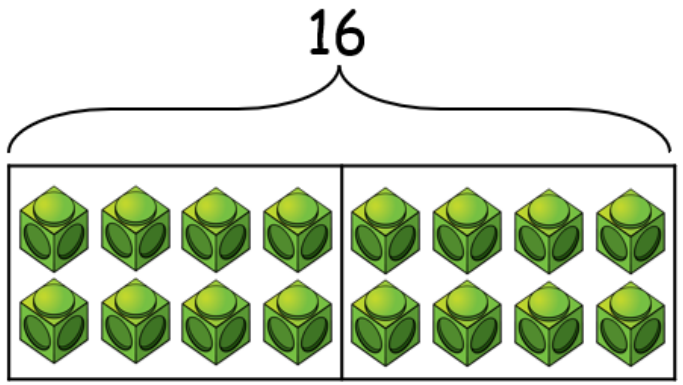
"4 lots of 5 is equal to 20"

"4 groups of 5 is equal to 20"

"4 times 5 is equal to 20"

# Division- Sharing

Share 16 cubes into 2 equal groups.




Complete the division.

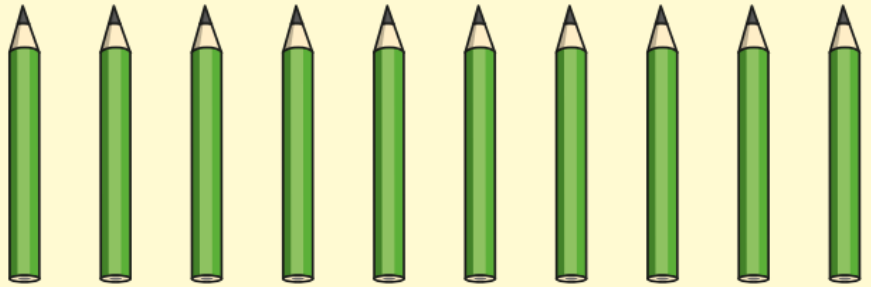
$16 \div 2 = 8$

total cubes

number of groups

amount in each group

Five children share 10 pencils equally.



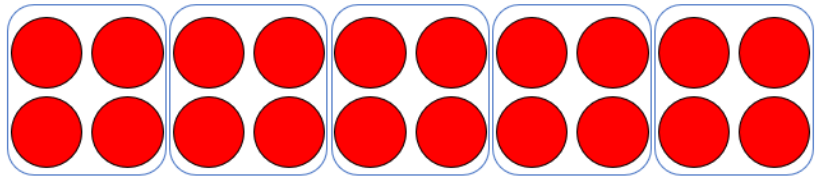
How many will each child get?
Complete the number sentence.

$\square \div \square = \square$

# Division- Grouping

Take 20 counters.

Put them into groups of 4



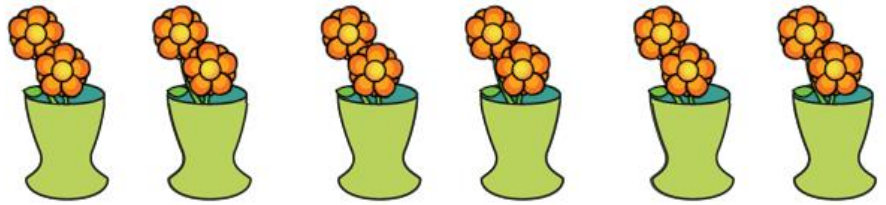
Complete the sentences.

There are 20 counters altogether.

I have put them into equal groups of 4

There are 5 groups.

$$20 \div 4 = 5$$



What division does it also show?

$$12 \div 2 = 6$$

12 flowers altogether

groups of 2

6 groups




# Helping your child at home…

**Use everyday maths:**

Maths is everywhere! You can help your child notice it in daily life – at dinner, shopping, cooking, or even travelling.
Encourage your child to notice numbers, shapes, and patterns in the world around them. This could also include doubling and halving numbers. Use simple maths talk every day to help your child explore numbers and patterns.

**Count, measure, and explore:**
Let your child help with measuring ingredients when cooking.
Count money or items while shopping and encourage children to work out how much change they would get.
Talk about time – reading an analogue clock and estimating how many minutes until events.
Explore fractions in everyday life – for example, sharing things into halves, thirds, or quarters.

**Play games:** Games are not only fun but help with maths skills
**Jigsaw puzzles** → build logical thinking and spatial awareness.
**Snakes and Ladders** → practice counting and numbers.

**Keep it simple and fun. Maths is part of everyday life, and little conversations can make a big difference!**

# Extra Resources

Find out more about our maths curriculum on the **school website** or at [www.whiterosemaths.com](http://www.whiterosemaths.com).

You can also download the **White Rose '1-Minute Maths' app**, which is free and excellent for building fluency in number facts.



Thank you for attending. If you have any questions, please don’t hesitate to get in touch with the class teacher or with Mr Burnett, our Maths Lead. You can also visit the curriculum section on our website and follow the links to Maths.