




MATHS AT GRANGE

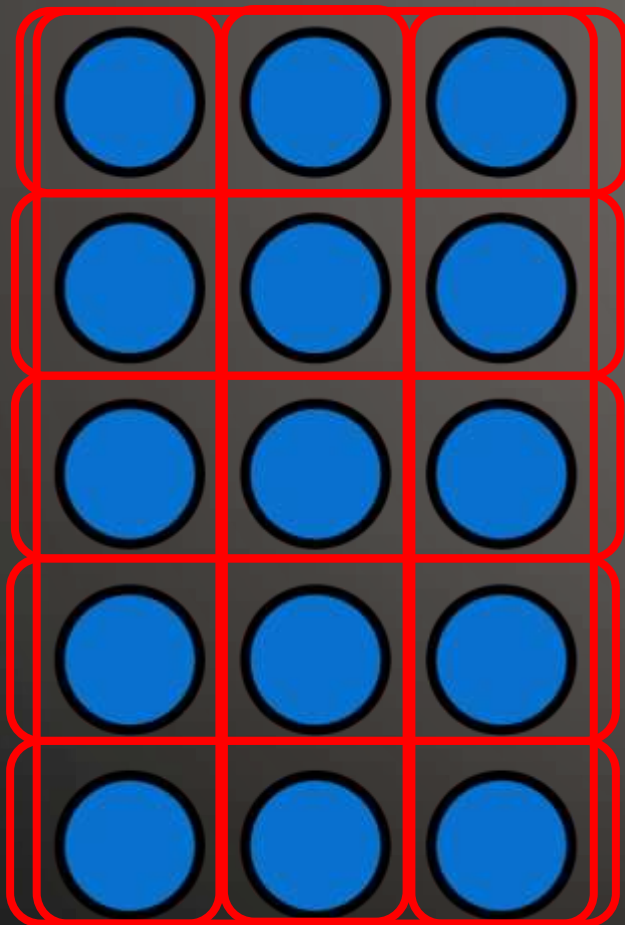


The background is a vibrant green with a repeating pattern of concentric circles. Scattered across this background are various colorful, rounded square tiles. Some tiles contain numbers: a red tile with '1', a blue tile with '11', an orange tile with '4', a yellow tile with '6', and an orange tile with '2'. Other tiles contain the multiplication symbol 'x'.

Times Tables

CHILDREN NEED TO KNOW THEIR TABLES BY END OF YEAR 4.

- Year 1 - Count in multiples of twos, fives and tens
- Year 2 - Recall and use multiplication and **division facts** for the **2, 5 and 10** multiplication tables
- Year 3 - Recall and use multiplication and **division facts** for the **3, 4 and 8** multiplication tables
- Year 4 - Recall multiplication and division facts for multiplication tables up to 12×12



$$5 \times 3 = 15$$

5 groups of 3

$$3 \times 5 = 15$$

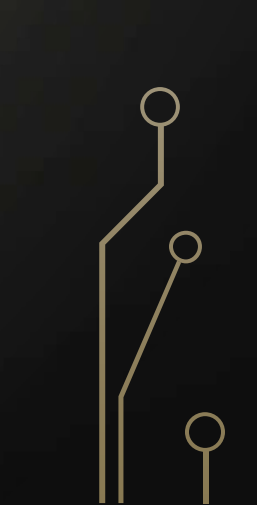

3 groups of 5

$$15 \div 5 = 3$$

$$15 \div 3 = 5$$



THIS YEAR, THE MULTIPLICATION TABLES CHECK 2026 IS SET TO BE ADMINISTERED BY SCHOOLS BETWEEN **MONDAY 1ST JUNE TO FRIDAY 12TH JUNE 2026.**



Whilst it may be tempting to teach 'rote learning' for the multiplication tables, it is important that this is avoided, as it leads to children simply being able to chant facts without any meaning, and reduces their ability to recall facts out of sequence

25 Questions

1) $5 \times 3 =$

5) $11 \times 4 =$

2) $6 \times 7 =$

6) $12 \times 7 =$

3) $8 \times 4 =$

7) $6 \times 12 =$

4) $7 \times 9 =$

8) $8 \times 9 =$

Links Across Maths

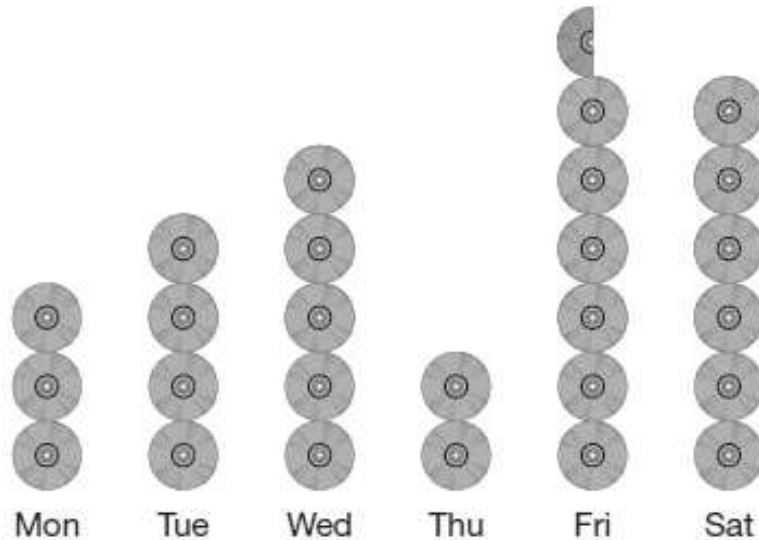
- Fractions is the most obvious area where learning times tables well is essential.
- Ratio
- Percentages
- However, every multiplication, division, long multiplication, short division and long division require speed and instant recall of times tables while at primary school. At secondary school the needs become even greater.
- Times tables are central to KS2 Maths and need to be embedded by Year 4 in order for pupils to practice and cement this skill. **Otherwise, pupils will struggle as they move up Key Stage 2 and prepare for their KS2 SATs and beyond.**

Ken thinks of a number.

He divides it by 3

The answer is 72

What number was Ken thinking of?



On **Monday**, 24 DVDs were sold.

How many DVDs were sold on **Friday**?

Here are six number cards.



Use **all six** cards to complete the three multiplications below.

$$24 = \boxed{} \times \boxed{}$$

$$28 = \boxed{} \times \boxed{}$$

$$30 = \boxed{} \times \boxed{}$$

Each card on the left matches one on the right.

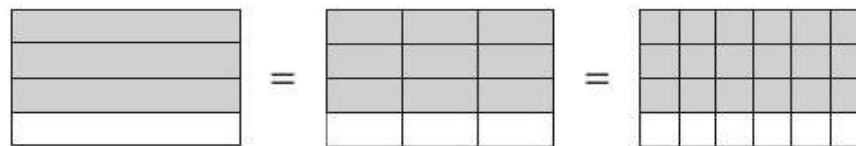
Draw lines to match the cards which are **equal** in value.

One has been done for you.

3×6	2×25
10×5	9×2
5×8	50×2
9×10	3×30
5×20	10×4

A line connects 3×6 to 9×2 .

These diagrams show three equivalent fractions.



Write the missing values.

$$\frac{3}{4} = \frac{9}{\boxed{}} = \frac{\boxed{}}{24}$$

MATHS MASTERY

Concrete -Pictorial- Abstract

- When children are introduced to a new concept they should have the opportunity to build competency.
- **Concrete**- Children are given the opportunity to use concrete objects and manipulatives to help them understand what they are doing.
- **Pictorial**- alongside this, children should use pictorial representations. These representations can then be used to help reason and problem solve.
- **Abstract**- both concrete and pictorial representations should support children's understanding of abstract methods.

The CPA Approach



CONCRETE -
using physical objects
to solve maths problems.

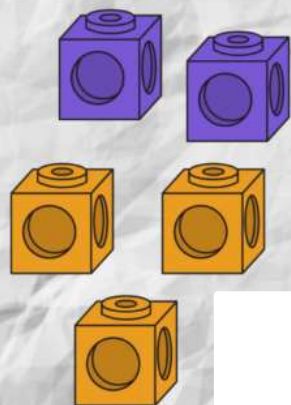


PICTORIAL -
using drawings
to solve maths problems.



ABSTRACT -
solving maths problems
using only numbers.

Concrete



Pictorial



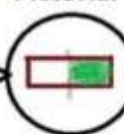
Abstract

$$3 + 2 = 5$$

Concrete

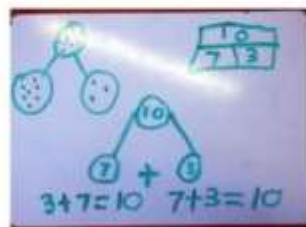


Pictorial



Abstract

$$\frac{1}{2}$$



Some examples of how CPA could work:

$$45 + 23$$

CONCRETE

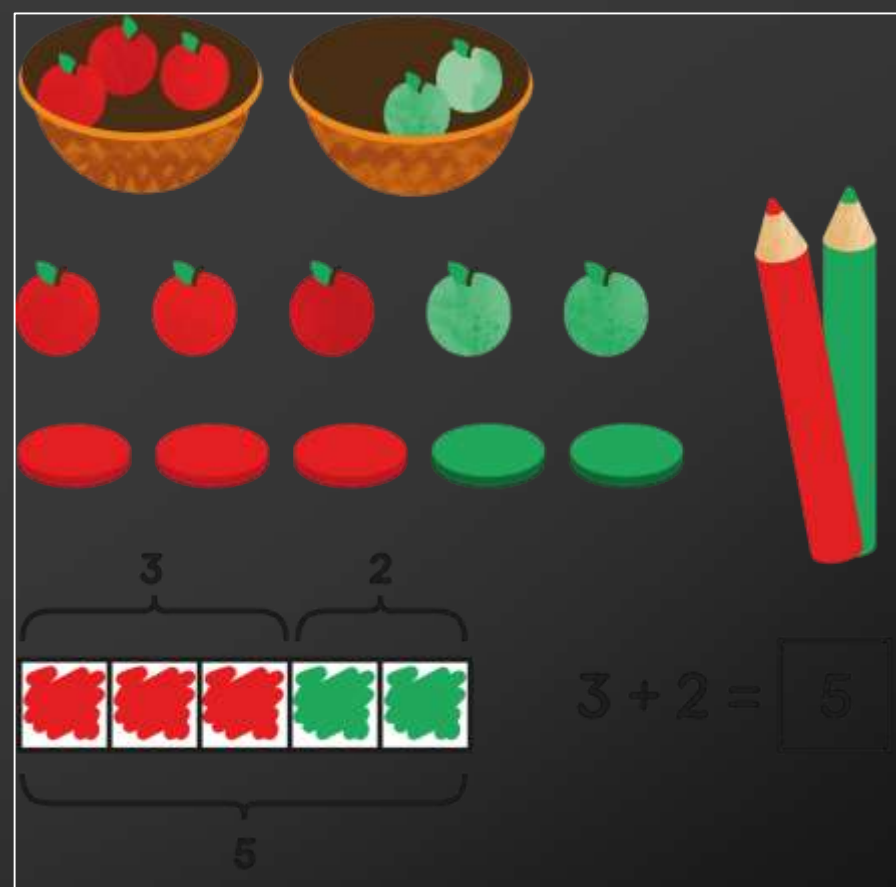


PICTORIAL

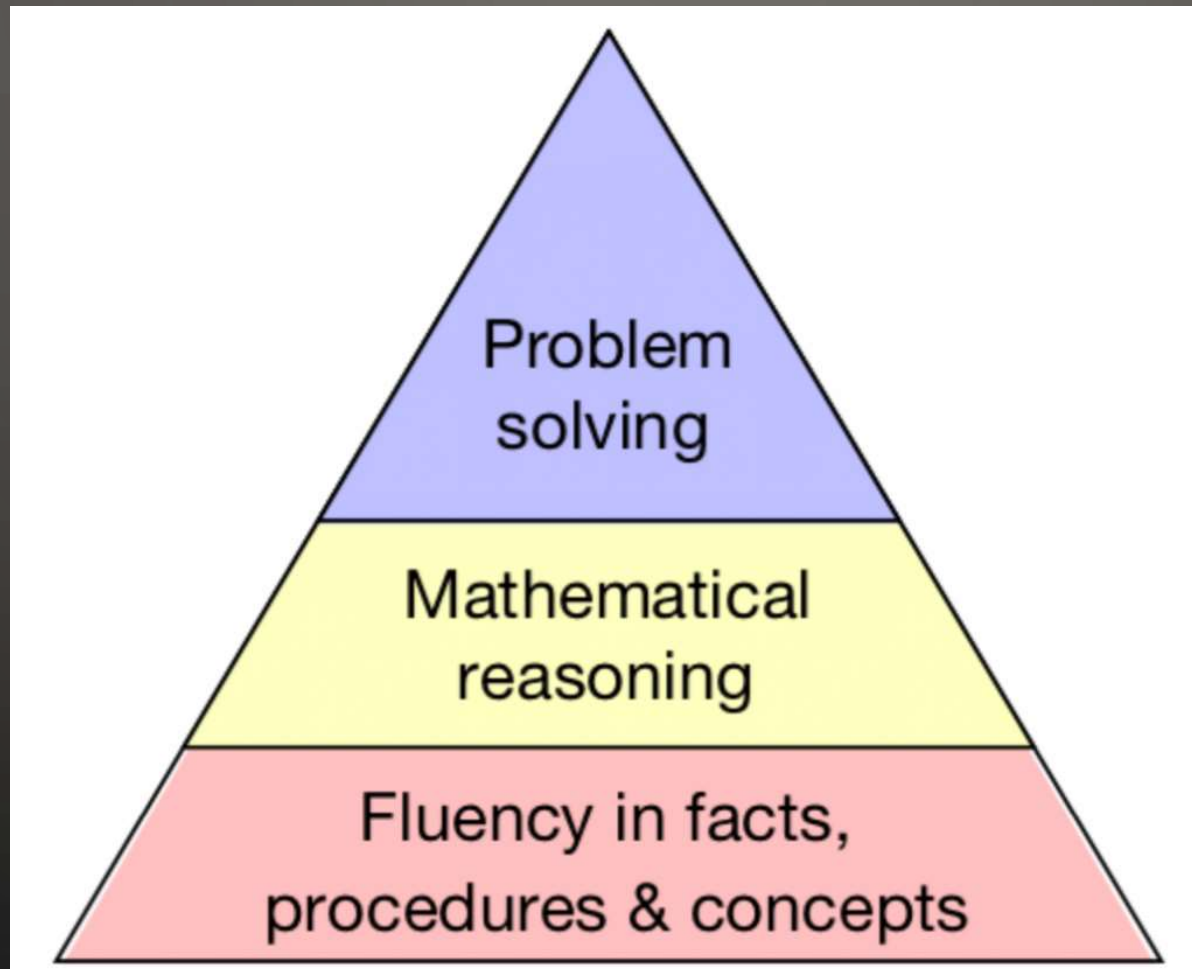


ABSTRACT

$$\begin{array}{r} 45 \\ + 23 \\ \hline 68 \end{array}$$




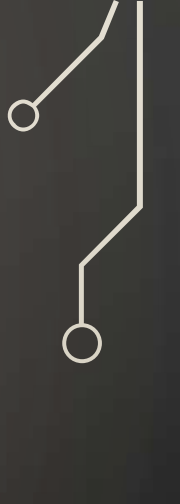

FLUENCY IS THE FOUNDATION FOR REASONING AND PROBLEM SOLVING





REASONING:

WHAT IS REASONING IN MATHS?

- Reasoning in maths is the process of applying logical thinking to a situation.
 - Because we teach a range of strategies, this gives children a solid base and skill level to use the correct problem solving strategy for a given question. They are encouraged to use their mathematical language and methods to describe the solution.
 - It is the "how do you know...?" or "why is the answer six and not seven?"
 - Mathematical reasoning is the bridge between fluency and problem solving. It allows pupils to use their fluency to accurately carry out the problem solving.
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WHAT IS PROBLEM SOLVING IN MATHS?

- It is a process or series of processes to solve mathematical problems. This follows, logic, reasoning and communication.
- Problem solving in maths is finding a way to apply knowledge and skills you have to answer unfamiliar types of problems.

8 The numbers have been ordered smallest to greatest...



1 ... 3 ... 4 ... ? ... 7 ... 8

Write a number that could go in the box. _____

Write a number that could not go in the box. _____

Year 3

Mathematics

- Compare & order numbers up to 1000.
- Read & write all numbers to 1000 in digits & words.
- Find 10 or 100 more/less than a given number.
- Count from 0 in multiples of 4, 8, 50 & 100.
- Recall & use multiplication & division facts for 3, 4, 8 tables.
- Recognise place value of any 3-digit number.
- Add & subtract:
 - 3-digit numbers & ones
 - 3-digit numbers & tens
 - 3-digit numbers & hundreds
- Add & subtract:
 - Numbers with up to 3-digits using written columnar method.
- Estimate and use inverse to check.
- Multiply:
 - 2-digit by 1-digit
- Count up/down in tenths.
- Compare & order fractions with same denominator.
- +/- fractions with same denominator with whole.
- Tell time using 12 and 24 hour clocks; and using Roman numerals.
- Tell time to nearest minute.
- Know number of days in each month and number of seconds in a minute.

Year 4

Mathematics

- Count backwards through zero to include negative numbers.
- Compare & order numbers beyond 1,000.
- Compare & order numbers with up to 2 decimal places.
- Read Roman numerals to 100.
- Find 1,000 more/less than a given number.
- Count in multiples of 6, 7, 9, 25 & 1000.
- Recall & use multiplication & division facts all tables to 12x12.
- Recognise place value of any 4-digit number.
- Round any number to the nearest 10, 100 or 1,000.
- Round decimals with 1 decimal place to nearest whole number.
- Add & subtract:
 - Numbers with up to 4-digits using written columnar method.
- Multiply:
 - 2-digit by 1-digit
 - 3-digit by 1-digit
- Count up/down in hundredths.
- Recognise & write equivalent fractions
- +/- fractions with same denominator.
- Read, write & convert time between analogue & digital 12 & 24 hour clocks.

Maths Lesson

Review

- Previous Lessons

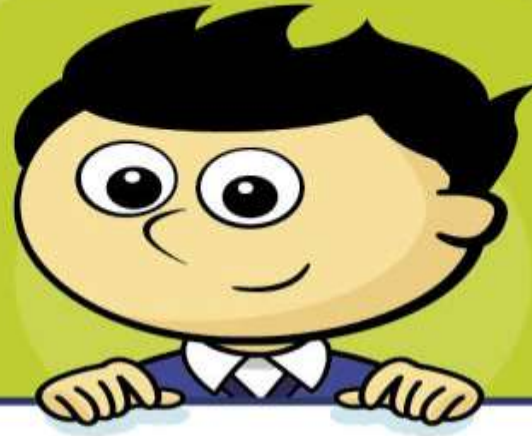
Fluency

- Arithmetic

Problem Solving

- Apply learning in different contexts

MULTIPLY BY
100



Get ready

Here is your starter.

1) Complete the sentences.

100 ones are equal to 1 _____

_____ tens are equal to 1 thousand

2) $4 \times 100 = \underline{\hspace{2cm}} \times 4$

3) $4 \times 100 = 10 \times 4 \times \underline{\hspace{2cm}}$

4) $100 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

1) Complete the sentences.

100 ones are equal to 1 hundred

100 tens are equal to 1 thousand

2) $4 \times 100 = \underline{100} \times 4$

3) $4 \times 100 = 10 \times 4 \times \underline{10}$

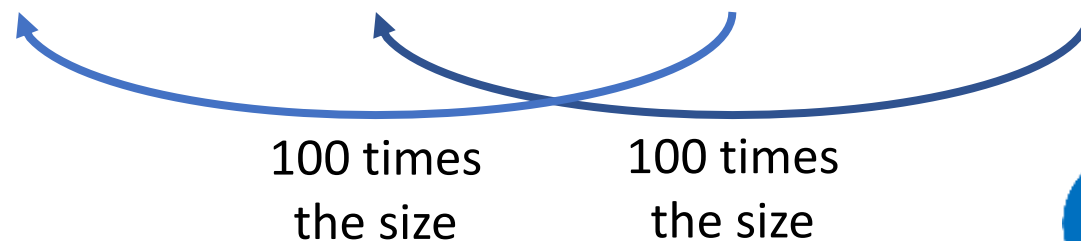
4) $100 \text{ cm} = \underline{1} \text{ m}$



Let's learn

Get ready for today's
new learning.

Thousands	Hundreds	Tens	Ones
		● ●	● ● ● ●



$$24 \times 100 = 2,400$$

Have a think

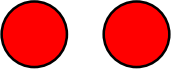
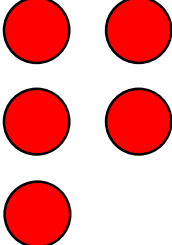
2,400 is 100 times the size of 24

Thousands	Hundreds	Tens	Ones
		3	8

$$38 \times 100 = 3,800$$

$$25 \times 100 = 2,000$$




Thousands	Hundreds	Tens	Ones
			

What mistake has Tiny made?

Have a think



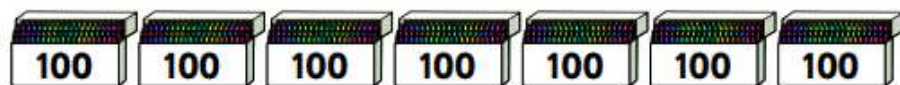
- 1 Use the base 10 to complete the calculations.


 $4 \times 1 \text{ hundred} = \boxed{}$ hundreds
 $4 \times 100 = \boxed{}$

- 2 Work out the multiplications.

- a) 2×100 c) 100×8 e) 100×10
 b) 4×100 d) 5×100 f) 20×100

- 3 There are 7 boxes of 100 crayons.



Which calculation works out the total number of crayons?

$100 + 7$

100×7

$7 + 100$

7×100

- 4 Match the pictures to the multiplications.

Work out the multiplications.



9×100

6×100

12×100



- 5 Work out the multiplications.

a) 5×1

5×10

50×10

5×100

b) 1×1

1×10

10×10

1×100

What do you notice?



- 6 Max uses a place value chart to work out 14×100

Th	H	T	O
		●	●●●●

$\times 100$

Th	H	T	O
●	●●●●		

I have noticed something!



$14 \times 100 = 1,400$

What has Max noticed?



- 7 Complete the calculations.

a) $32 \times 100 = \boxed{}$

b) $29 \times 100 = \boxed{}$

c) $100 \times 72 = \boxed{}$

d) $5 \times 7 \times 100 = \boxed{}$

e) $\boxed{} \times 100 = 6,500$

f) $100 \times \boxed{} = 3,000$



SENTENCE STEMS

Choose one of these sentence stems to help you explain your mathematical ideas.

I noticed that ____.

I predict that ____.

My first step is ____.

Another strategy
would be ____.

The answer is ____
because ____.

To prove my answer is
reasonable, I can ____.

I know the problem
is asking me to ____
because ____.

I can prove my
answer by ____.

I think ____
because ____.

The most efficient
strategy would be ____.

My strategy is the
same/different than
yours because ____.

I want to add to what
____ said about ____.

A Maths definition
that I learnt today
was ____.

Next time I solve a
problem like this, I
will ____.

I learnt ____
when ____.

____ idea reminds me
of ____.

I agree/disagree with your
answer because ____.

I think that makes sense/doesn't make
sense because ____.

I developed the skill
of ____.

I can show this idea
by ____.

A new Maths
concept I learned
today was ____.

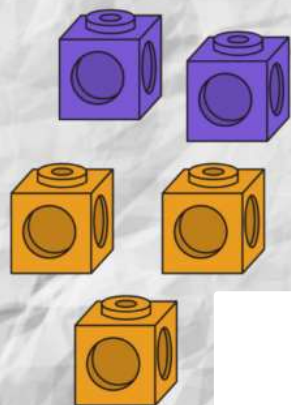
Something that is
important to remember
is ____.

____ is important
because ____.

What would happen
if ____?

I still have a question about ____.

Concrete



Pictorial



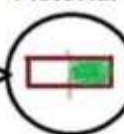
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Concrete



Pictorial



Abstract

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CONCRETE

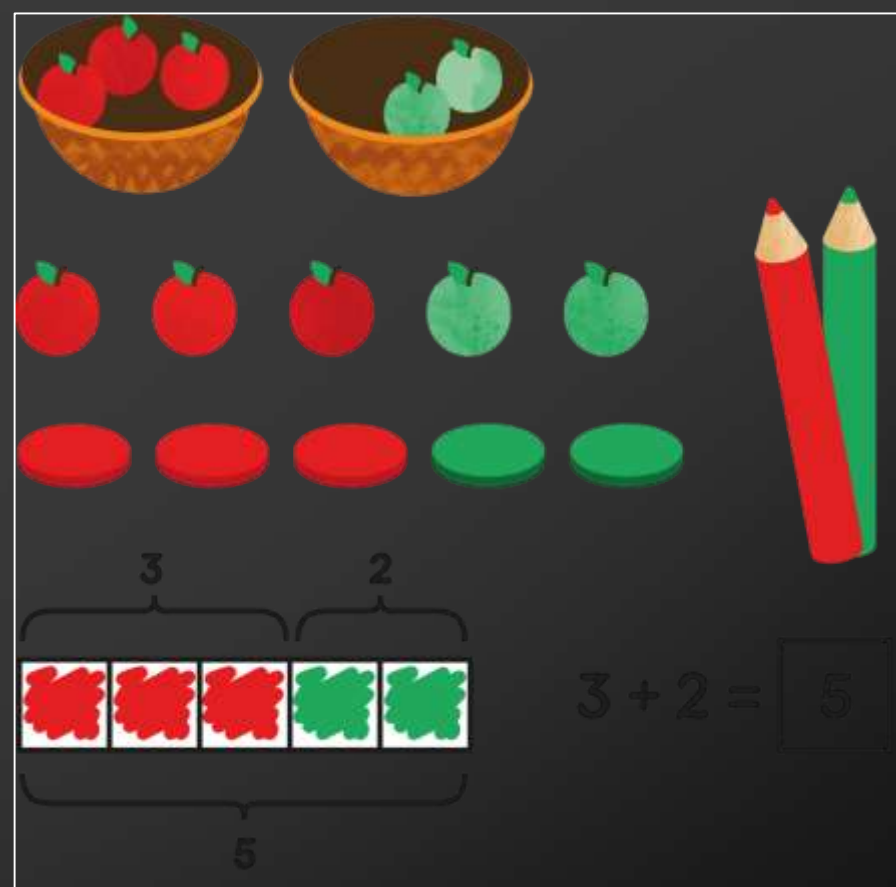


PICTORIAL





ABSTRACT

$$\begin{array}{r} 45 \\ + 23 \\ \hline 68 \end{array}$$





SUPPORTING AT HOME

- Encourage children with their times tables
 - Speak to your child's teacher to understand areas where they need support
 - Regularly support with mental strategies
 - Encourage your child to **explain their reasoning** when giving answers
 - Encourage the use of concrete resources at home
- 
- 



PARENT TEACHER ASSOCIATION

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If it takes a village to raise a child...it takes
a community of devoted parents to help
keep a school flourishing.