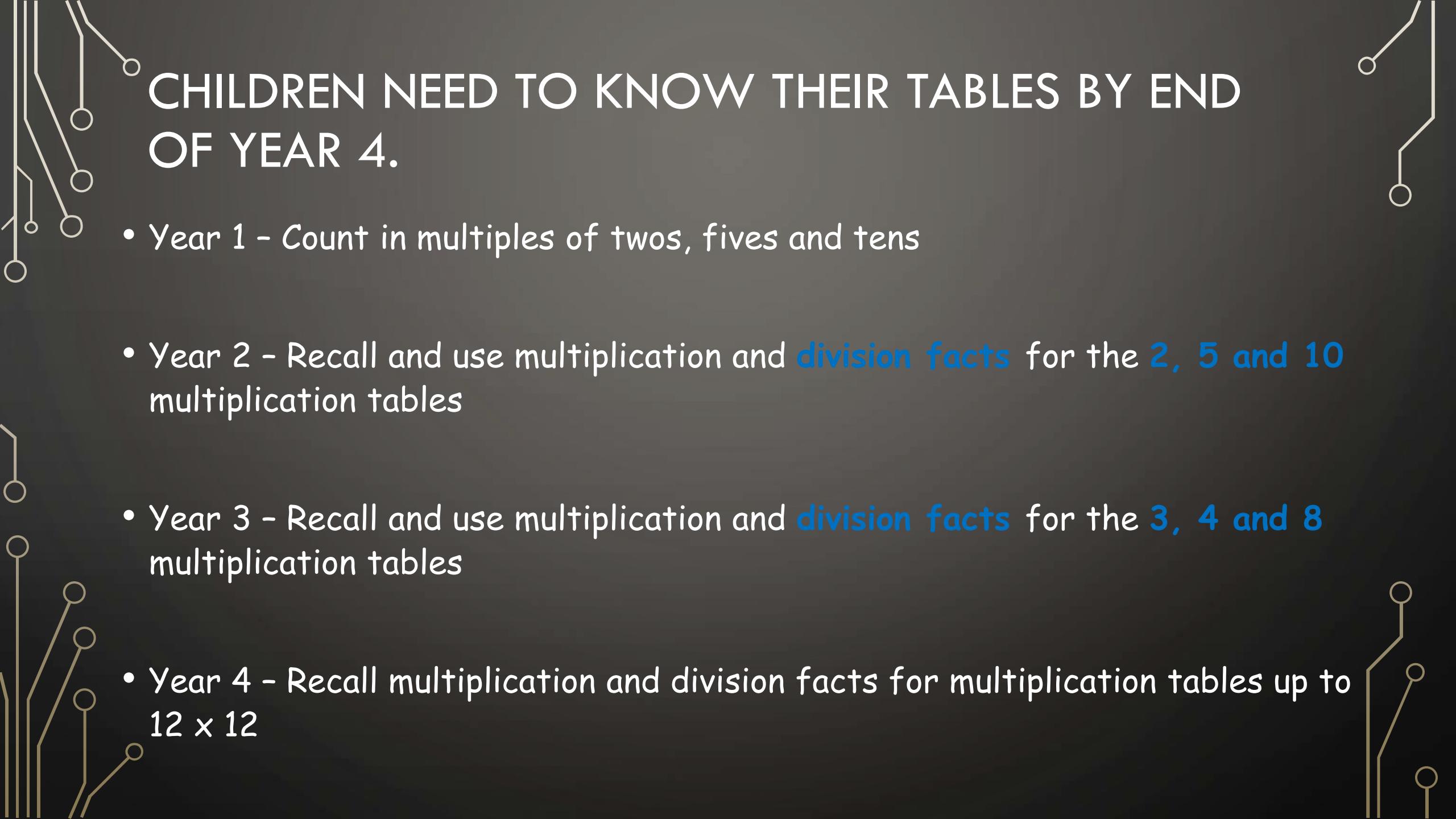




# MATHS AT GRANGE

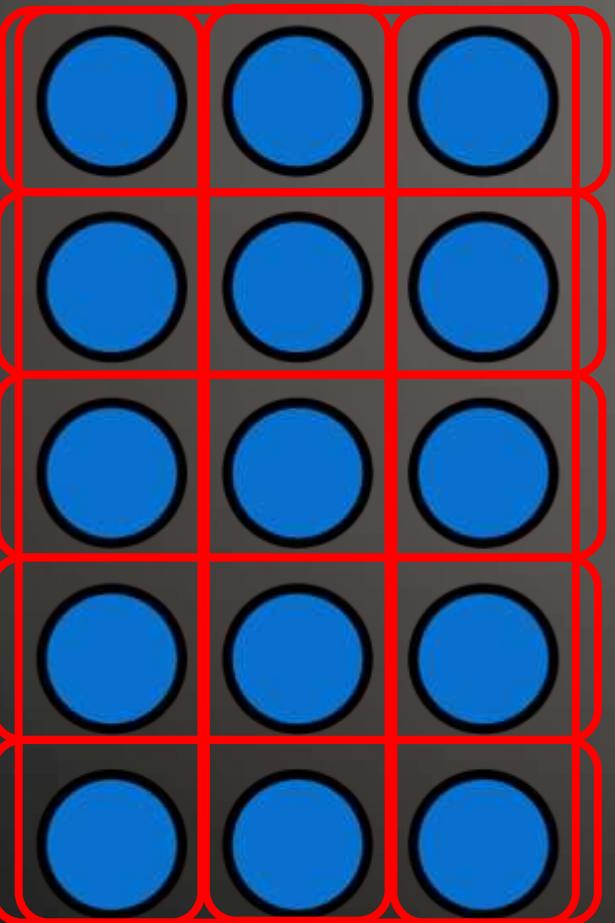


# Times Tables



# 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  $12 \times 12$



$$5 \times 3 = 15$$

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?

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.

$3 \times 6$

$2 \times 25$

$10 \times 5$

$9 \times 2$

$5 \times 8$

$50 \times 2$

$9 \times 10$

$3 \times 30$

$5 \times 20$

$10 \times 4$

Mon

Tue

Wed

Thu

Fri

Sat

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

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

Here are six number cards.

3

4

5

6

7

8

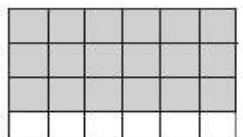
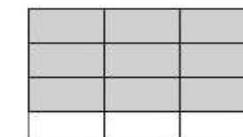
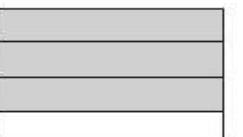
Use **all six** cards to complete the three multiplications below.

$24 = \boxed{\phantom{0}} \times \boxed{\phantom{0}}$

$28 = \boxed{\phantom{0}} \times \boxed{\phantom{0}}$

$30 = \boxed{\phantom{0}} \times \boxed{\phantom{0}}$

These diagrams show three equivalent fractions.



Write the missing values.

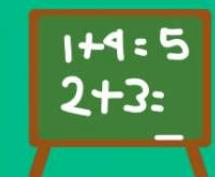
$$\frac{3}{4} = \frac{9}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{24}$$

# 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

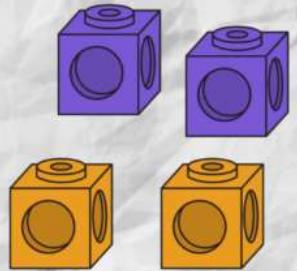


**CONCRETE** -  
using physical objects  
to solve maths problems.

**PICTORIAL** -  
using drawings  
to solve maths problems.

**ABSTRACT** -  
solving maths problems  
using only numbers.

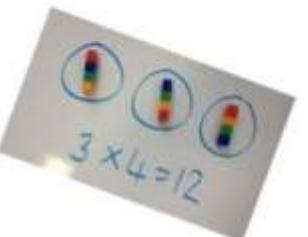
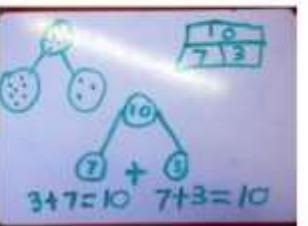
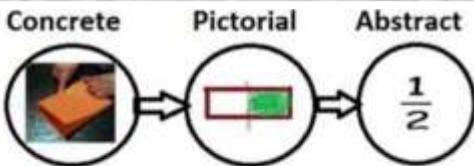
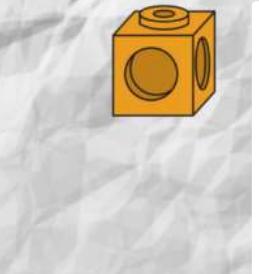
## Concrete



## Pictorial

$$\rightarrow \begin{array}{c} 5 \\ \hline 3 & 2 \end{array} \rightarrow 3 + 2 = 5$$

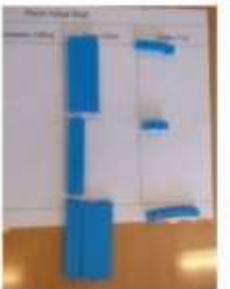
## Abstract



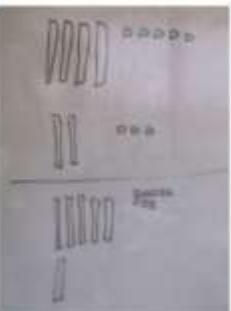
Some examples of how CPA could work:

CONCRETE

$$45 + 23$$

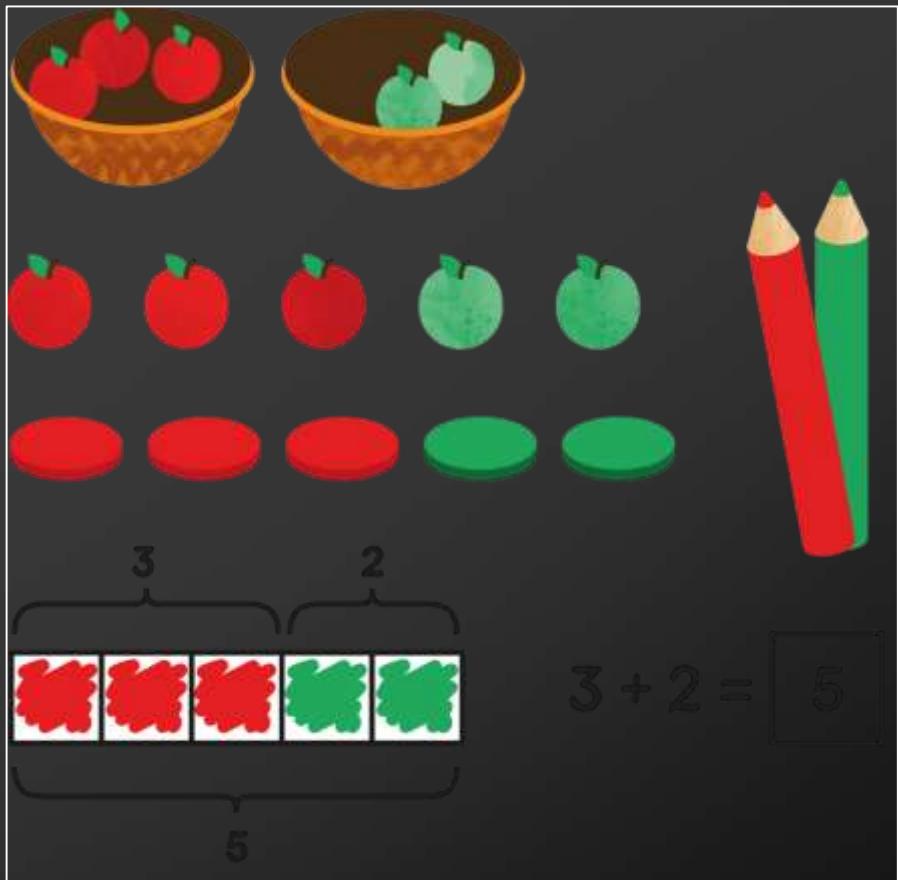


PICTORIAL

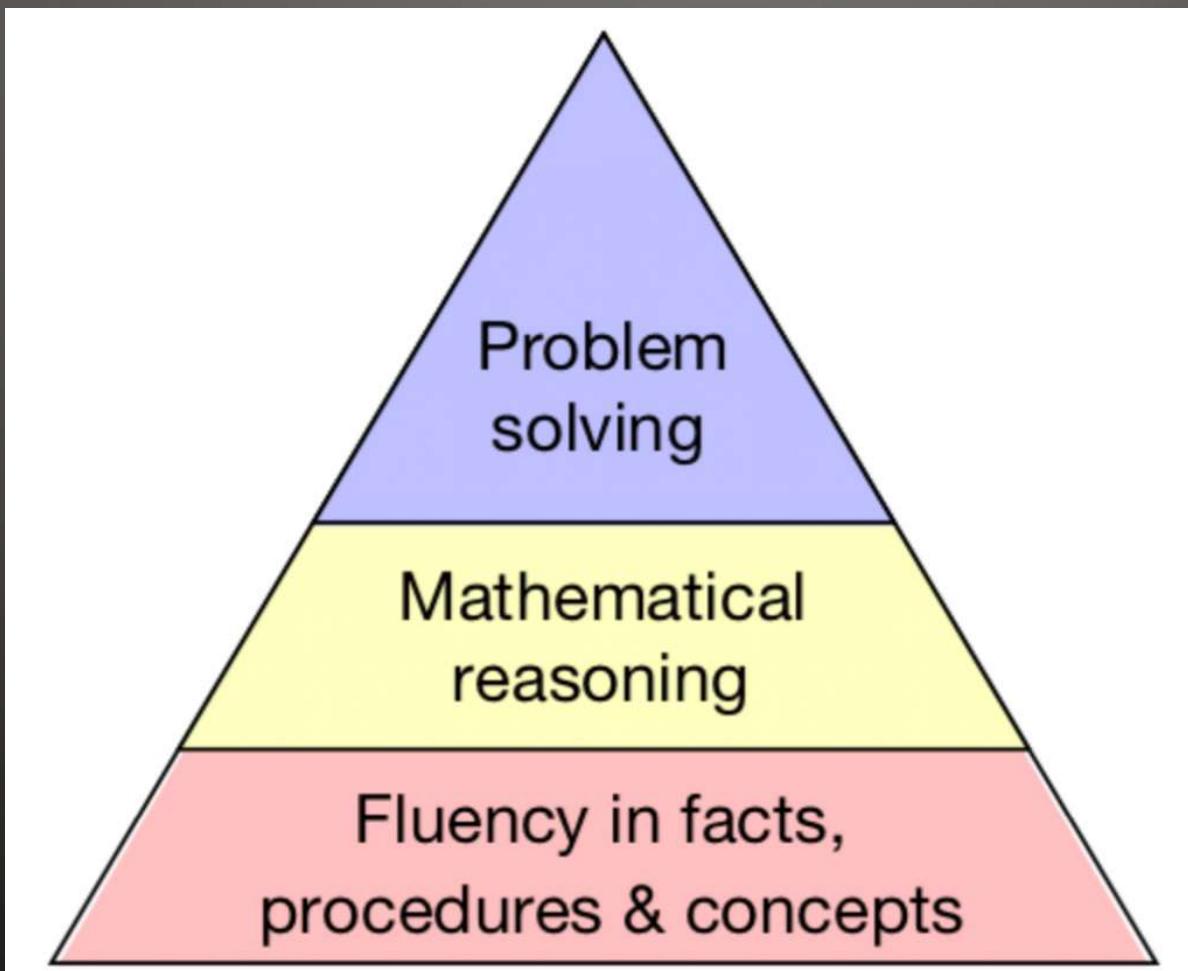


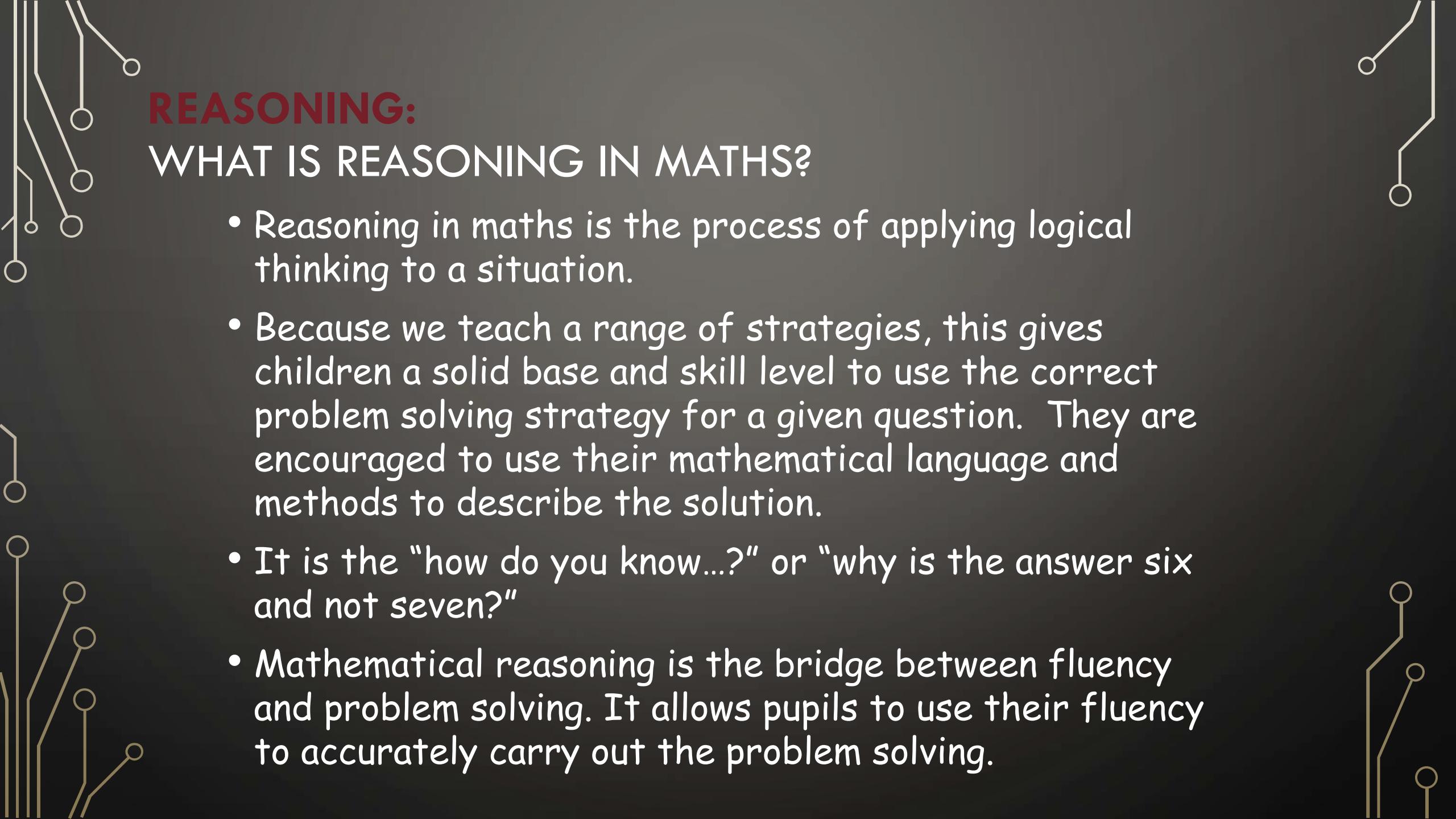
ABSTRACT

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



# 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.

# 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

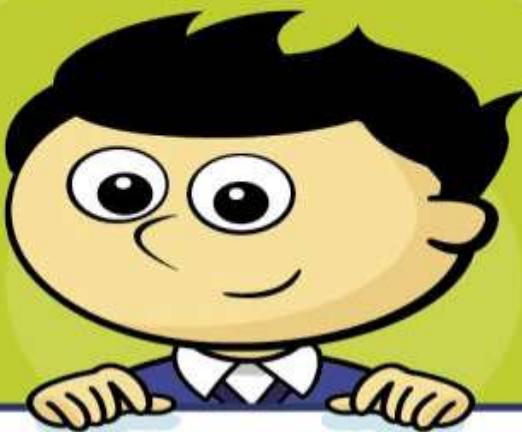
Fluency

Problem  
Solving

- Arithmetic

- 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)  $4 \times 100 = \underline{\quad} \times 4$

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

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

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
		2 yellow circles	2 yellow circles

100 times  
the size

100 times  
the size

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



Have a think

2,400 is 100 times the size of 24

Thousands	Hundreds	Tens	Ones
		0	8

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

$$25 \times 100 = 2,500$$



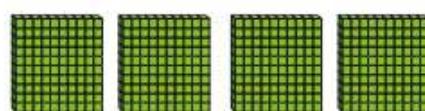
Thousands	Hundreds	Tens	Ones
2	0	0	5

What mistake has Tiny made?

Have a think



1 Use the base 10 to complete the calculations.



$$4 \times 1 \text{ hundred} = \boxed{\phantom{00}} \text{ hundreds}$$
$$4 \times 100 = \boxed{\phantom{00}}$$



2 Work out the multiplications.

a)  $2 \times 100$

c)  $100 \times 8$

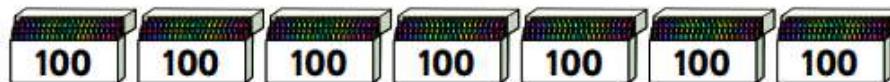
e)  $100 \times 10$

b)  $4 \times 100$

d)  $5 \times 100$

f)  $20 \times 100$

3 There are 7 boxes of 100 crayons.



Which calculation works out the total number of crayons?

$100 + 7$

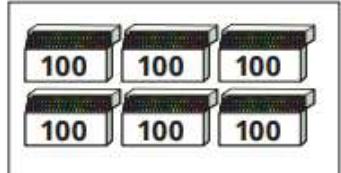
$100 \times 7$

$7 + 100$

$7 \times 100$

4 Match the pictures to the multiplications.

Work out the multiplications.



$9 \times 100$

$6 \times 100$

$12 \times 100$

5 Work out the multiplications.

a)  $5 \times 1$

b)  $1 \times 1$

$5 \times 10$

$1 \times 10$

$50 \times 10$

$10 \times 10$

$5 \times 100$

$1 \times 100$

What do you notice?



6 Max uses a place value chart to work out  $14 \times 100$

Th	H	T	O
		●	● ● ●

$\times 100$

Th	H	T	O
●	● ● ●		

$14 \times 100 = 1,400$



What has Max noticed?

7 Complete the calculations.

a)  $32 \times 100 = \boxed{\phantom{000}}$

d)  $5 \times 7 \times 100 = \boxed{\phantom{000}}$

b)  $29 \times 100 = \boxed{\phantom{000}}$

e)  $\boxed{\phantom{000}} \times 100 = 6,500$

c)  $100 \times 72 = \boxed{\phantom{000}}$

f)  $100 \times \boxed{\phantom{00}} = 3,000$



# 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 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 \_\_\_\_.

I still have a question about \_\_\_\_.

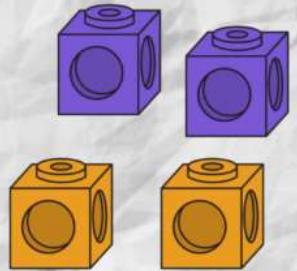
I agree/disagree with your answer because \_\_\_\_.

Something that is important to remember is \_\_\_\_.

\_\_\_\_ is important because \_\_\_\_.

What would happen if \_\_\_\_?

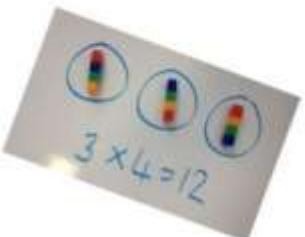
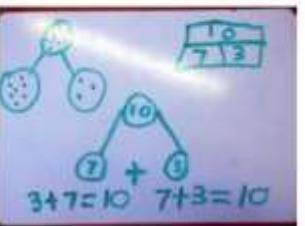
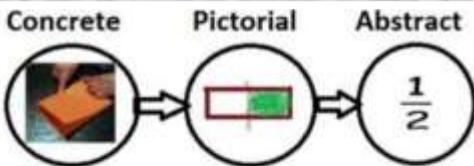
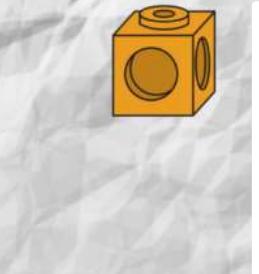
## Concrete



## Pictorial

$$\rightarrow \begin{array}{c} 5 \\ \hline 3 & 2 \end{array} \rightarrow 3 + 2 = 5$$

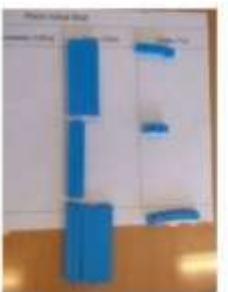
## Abstract



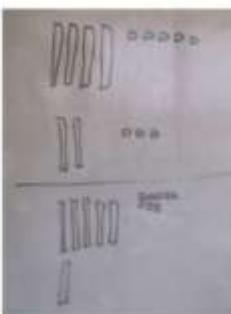
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$$45 + 23$$

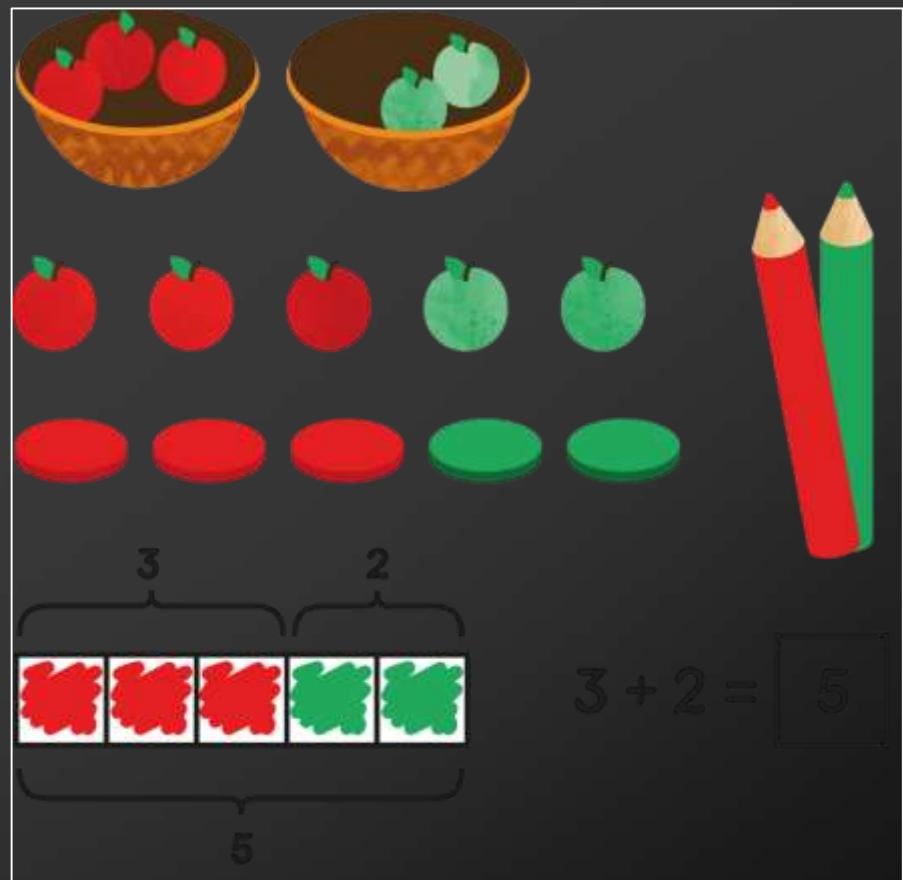


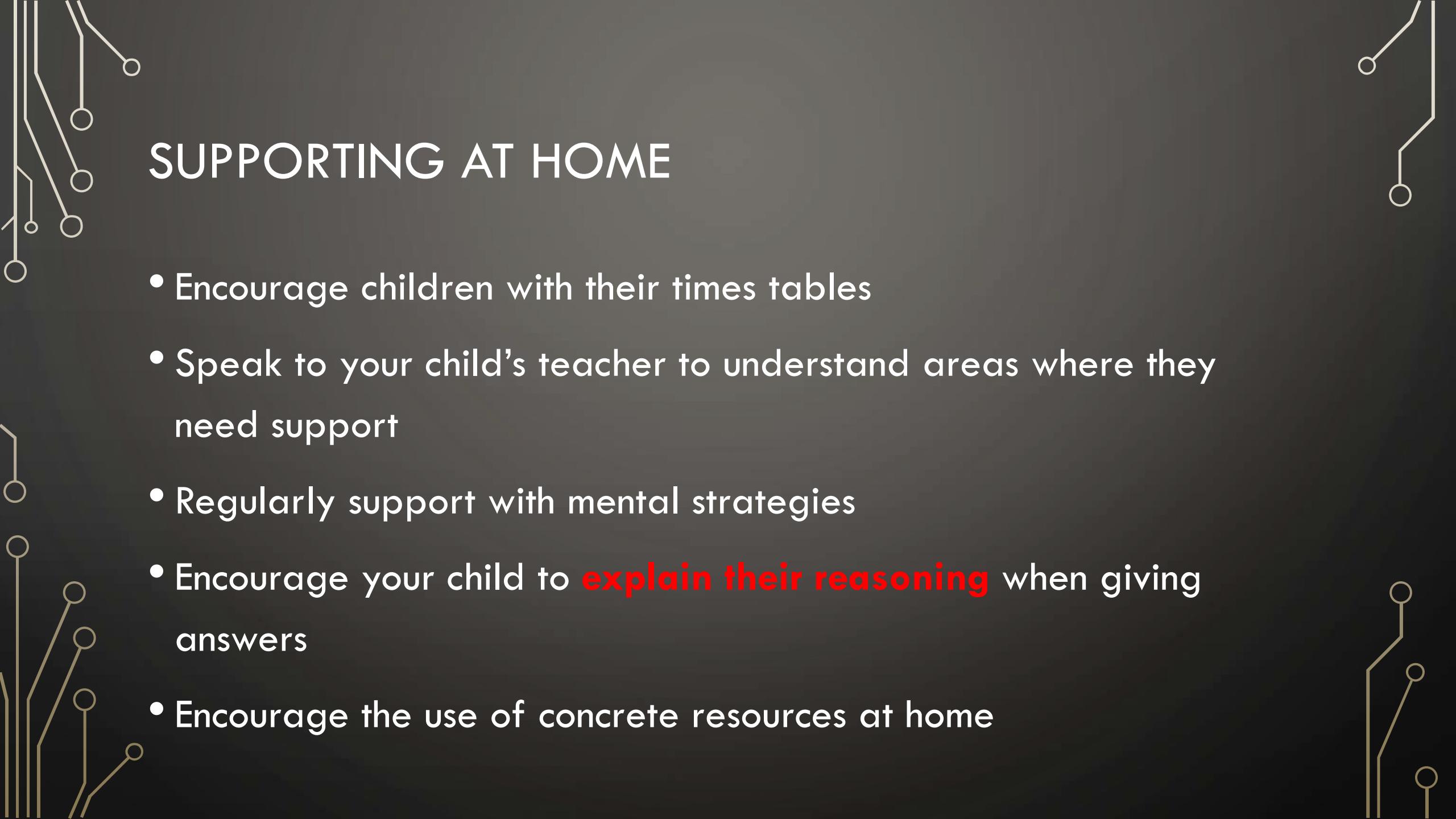
PICTORIAL



ABSTRACT

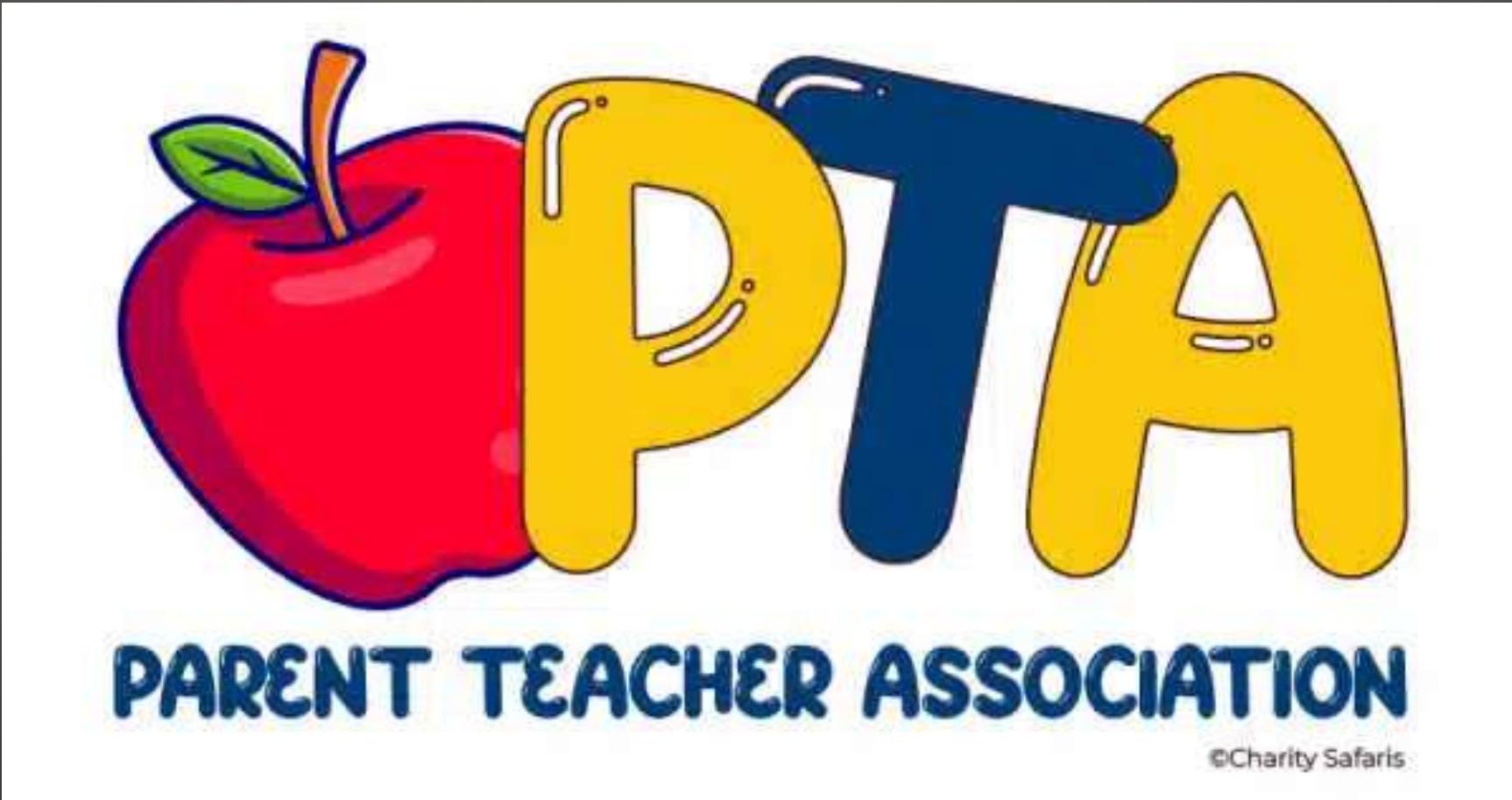
$$\begin{array}{r} 45 \\ + 23 \\ \hline 68 \end{array}$$





## 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



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