



KS1 Maths (Years 1 and 2)

Parent Workshop

Session Objectives

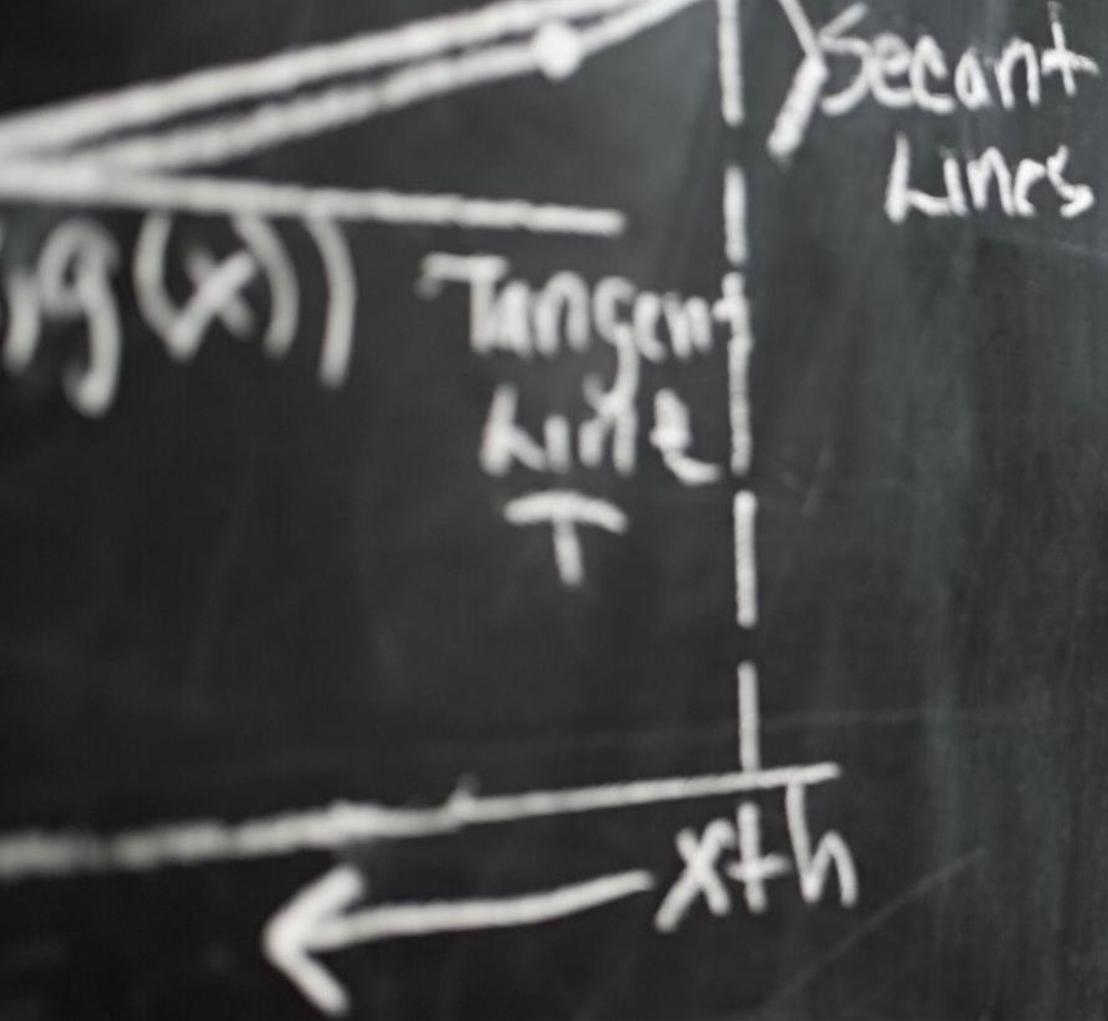
- To show how skills progress from Early Years, through Years 1 and 2, to Year 3.
- To demonstrate the four core methods and the progression within them
- Give you practical strategies to support your child



Equipment

- On your table you should have:
- Handout 1- presentation
- Handout 2- progression overview
- Handout 3- Calculation Policy
- Whiteboard, pen and eraser (if needed)
- Other Mathematics equipment





$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

$$f(x) = \lim_{h \rightarrow 0} \frac{(x+h)^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{x^2 + 2xh + h^2 - x^2}{h}$$

$$= \lim_{h \rightarrow 0} \frac{2xh + h^2}{h}$$

$$= \lim_{h \rightarrow 0} h(2x + h)$$

$$= 2x$$

Why does Early Maths Matter?

AGE RANGE

**KEY
BRAIN DEVELOPMENT**

MATHS SKILLS

0-2 years

Innate quantity perception

Basic comparisons, early math talk

3-5 years

Formation of mental number line

Counting, subitising, pattern recognition

6-8 years

Strengthening executive functions

Fluency, problem-solving, abstraction

During Year 1 and Year 2

YEAR GROUP	KEY FOCUS
Year 1	Number bonds, simple addition/subtraction Concrete and pictorial approach
Year 2	Place value, introduction to multiplication Concrete, pictorial and some abstract elements
Year 3	Fluency, problem-solving, reasoning

Handout 1- Progression Grid

Primary Progression – Place Value



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting	<ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 100 in numerals; count in multiples of twos, fives and tens <p>Autumn 1 Autumn 4 Spring 2 Summer 4</p>	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward <p>Autumn 1</p>	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <p>Autumn 1 Autumn 3</p>	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 count backwards through zero to include negative numbers <p>Autumn 1 Autumn 4</p>	<ul style="list-style-type: none"> count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 count forwards and backwards with positive and negative whole numbers, including through zero <p>Autumn 1</p>	
Place Value: Represent	<ul style="list-style-type: none"> identify and represent numbers using objects and pictorial representations read and write numbers to 100 in numerals read and write numbers from 1 to 20 in numerals and words. <p>Autumn 1 Autumn 4 Spring 2 Summer 4</p>	<ul style="list-style-type: none"> read and write numbers to at least 100 in numerals and in words identify, represent and estimate numbers using different representations, including the number line <p>Autumn 1</p>	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words <p>Autumn 1</p>	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value <p>Autumn 1</p>	<ul style="list-style-type: none"> read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit read Roman numerals to 1000 (M) and recognise years written in Roman numerals. <p>Autumn 1</p>	<ul style="list-style-type: none"> read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit <p>Autumn 1</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Use PV and Compare	<ul style="list-style-type: none"> given a number, identify one more and one less <p>Autumn 1 Autumn 4 Spring 2 Summer 4</p>	<ul style="list-style-type: none"> recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs <p>Autumn 1</p>	<ul style="list-style-type: none"> recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 <p>Autumn 1</p>	<ul style="list-style-type: none"> find 1000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 <p>Autumn 1</p>	<ul style="list-style-type: none"> (read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit <p>Autumn 1</p>	<ul style="list-style-type: none"> (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit <p>Autumn 1</p>
Place Value: Problems & Rounding		<ul style="list-style-type: none"> use place value and number facts to solve problems. <p>Autumn 1</p>	<ul style="list-style-type: none"> solve number problems and practical problems involving these ideas <p>Autumn 1</p>	<ul style="list-style-type: none"> round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers <p>Autumn 1</p>	<ul style="list-style-type: none"> interpret negative numbers in context round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above <p>Autumn 1</p>	<ul style="list-style-type: none"> round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above <p>Autumn 1</p>

Primary Progression – Addition & Subtraction



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Recall, Represent, Use	<ul style="list-style-type: none"> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs represent and use number bonds and related subtraction facts within 20 	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<ul style="list-style-type: none"> estimate the answer to a calculation and use inverse operations to check answers 	<ul style="list-style-type: none"> estimate and use inverse operations to check answers to a calculation 	<ul style="list-style-type: none"> use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	
	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Calculations	<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero <p style="text-align: center;">Autumn 2 Spring 1</p>	<ul style="list-style-type: none"> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations <p style="text-align: center;">Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Solve Problems	<ul style="list-style-type: none"> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ <p style="text-align: center;">Autumn 2 Spring 1</p>	<ul style="list-style-type: none"> solve problems with addition and subtraction: <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p style="text-align: center;">Autumn 2</p>	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <p style="text-align: center;">Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Recall, Represent, Use		<ul style="list-style-type: none"> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot <p style="text-align: center;">Autumn 4 Spring 1</p>	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables <p style="text-align: center;">Autumn 3</p>	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations <p style="text-align: center;">Autumn 4 Spring 1</p>	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) <p style="text-align: center;">Autumn 4</p>	<ul style="list-style-type: none"> identify common factors, common multiples and prime numbers use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. <p style="text-align: center;">Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Calculations		<ul style="list-style-type: none"> calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs 	<ul style="list-style-type: none"> write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods 	<ul style="list-style-type: none"> multiply two-digit and three-digit numbers by a one-digit number using formal written layout 	<ul style="list-style-type: none"> multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 	<ul style="list-style-type: none"> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers
			Autumn 4 Spring 1	Autumn 3 Spring 1	Spring 1	Autumn 4 Spring 1 Summer 1

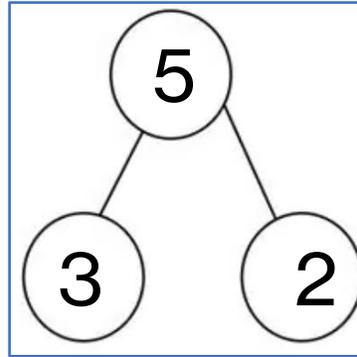
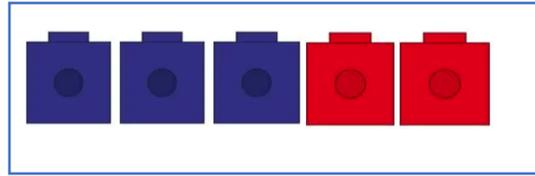
Handout 2- Calculation Policy



Calculation Policy

Concrete- Pictorial- Abstract Approach

The CPA approach is a highly effective way of teaching mathematics that helps children build a deep understanding of concepts. It moves through three stages: starting with hands-on experiences, then using visual representations, and finally progressing to formal mathematical symbols. This structured progression ensures that pupils develop confidence and fluency in their learning.



$$3 + 2 = 5$$

Concrete

- Children use physical objects (e.g., counters, cubes, beads) to understand mathematical concepts.
- This stage helps them see and touch what numbers represent.

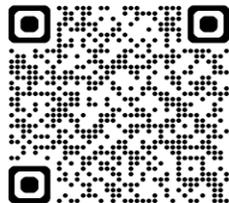
Pictorial

- Children move to drawing pictures or using visual representations (e.g., diagrams, bar models) of the objects.
- This bridges the gap between hands-on experience and symbolic understanding.

Abstract

- Children use numbers and symbols (e.g., $4 + 3 = 7$) without physical or visual aids.
- This is the formal stage where they apply concepts using mathematical notation.

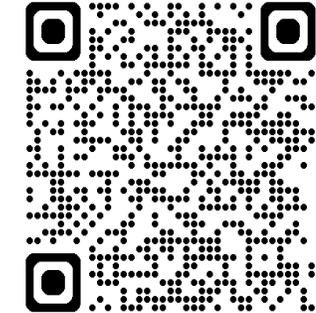
Further information:



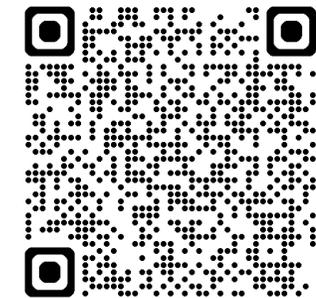
[Link: What is the CPA approach? | White Rose Education](#)

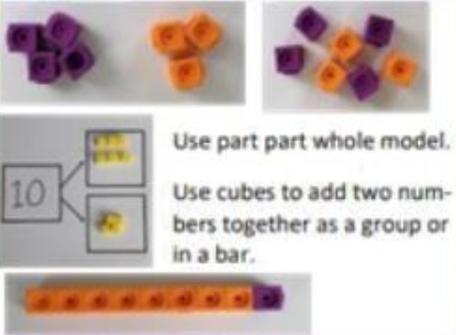
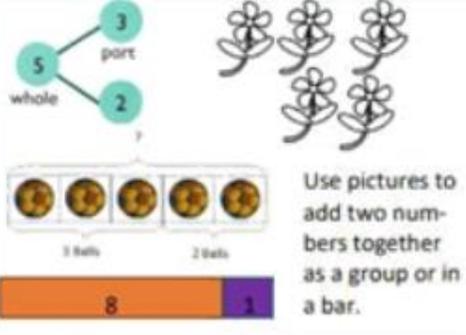
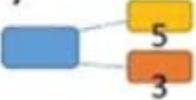
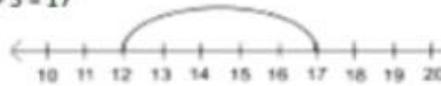
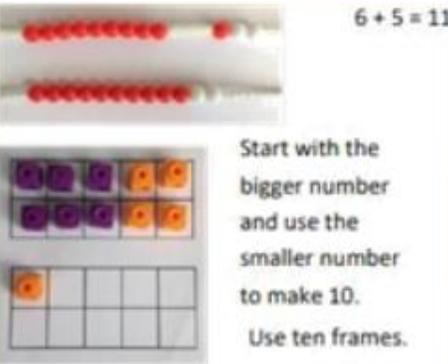
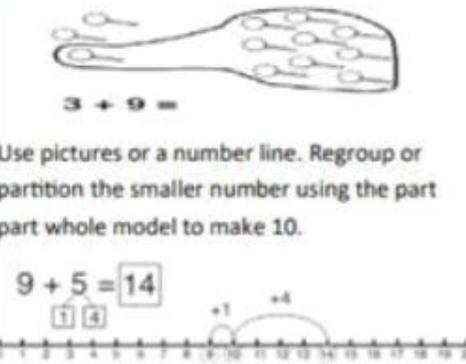
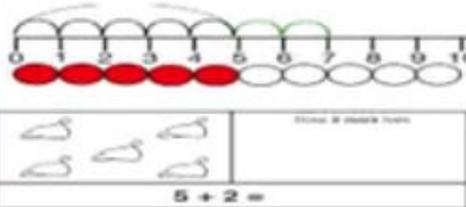
Year 1 Addition

Further information:
[Link- Adding and subtracting explained - Year 1 Maths - BBC Bitesize](#)



[Link- STEM Addition and Subtraction at Year 1 and Year 2 Resource Collection](#)



Objective & Strategy	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part- whole model	 <p>Use part part whole model.</p> <p>Use cubes to add two numbers together as a group or in a bar.</p>	 <p>Use pictures to add two numbers together as a group or in a bar.</p>	$4 + 3 = 7$  <p>Use the part-part whole diagram as shown above to move into the abstract.</p> $10 = 6 + 4$
Starting at the bigger number and counting on	 <p>Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.</p>	$12 + 5 = 17$  <p>Start at the larger number on the number line and count on in ones or in one jump to find the answer.</p>	$5 + 12 = 17$ <p>Place the larger number in your head and count on the smaller number to find your answer.</p>
Regrouping to make 10. <i>This is an essential skill for column addition later.</i>	 <p>Start with the bigger number and use the smaller number to make 10.</p> <p>Use ten frames.</p>	 <p>Use pictures or a number line. Regroup or partition the smaller number using the part part whole model to make 10.</p> $9 + 5 = 14$	$7 + 4 = 11$ <p>If I am at seven, how many more do I need to make 10. How many more do I add on now?</p>
Represent & use number bonds and related subtraction facts within 20	 <p>2 more than 5.</p>	 $5 + 2 =$	<p>Emphasis should be on the language</p> <p>'1 more than 5 is equal to 6.'</p> <p>'2 more than 5 is 7.'</p> <p>'8 is 3 more than 5.'</p>

1

3

5

2

4

0

6

8

9

7

**The Key
Operations**

Counting and Number Bonds

Counting and number bonds are the basics of maths – everything else builds on these skills.

Helps children add and subtract quickly without always using fingers.

Makes problem-solving easier because they understand how numbers work together.

Prepares them for learning in the future (multiplication, division, fractions).

Used in everyday life – money, time, measuring.

Year 1 - Counting and number bonds

In Year 1, children learn to count forwards and backwards up to 100, including counting in steps of 2, 5, and 10. They learn how to find one more and one less than a given number.

Alongside counting, they develop number bond knowledge by learning pairs of numbers that make 10 and using related subtraction facts, such as $10 - 7 = 3$. They also begin to add and subtract numbers up to 20.

Year 2 - Counting and number bonds



In Year 2, children build on their counting skills by counting in steps of 2, 5, and 10 from any number, both forwards and backwards. They learn to understand place value by recognising tens and ones and comparing and ordering numbers up to 100.

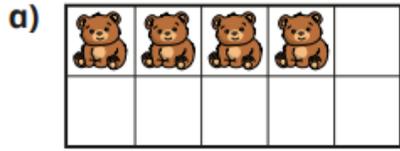


For number bonds, they recall addition and subtraction facts to 20 fluently and use these to work out related facts up to 100.

Year 1 - Counting

Counting objects

1 How many teddy bears are there?



There are teddy bears.

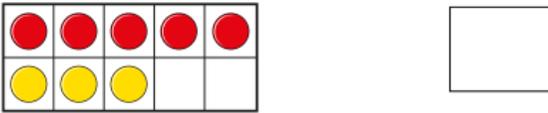
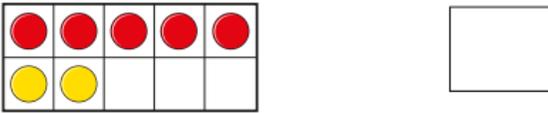
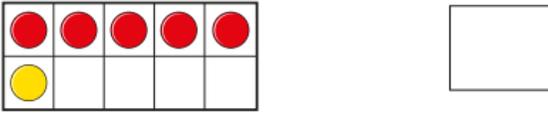
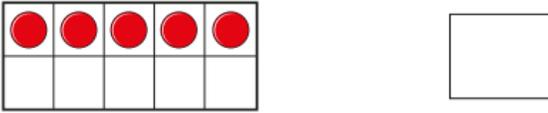


There are teddy bears.

How did you count them?

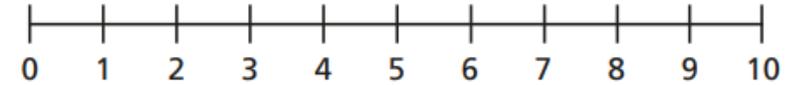
Ten frames and counters

1 Mo uses counters to count on from 5
What numbers are they? Fill in the boxes.

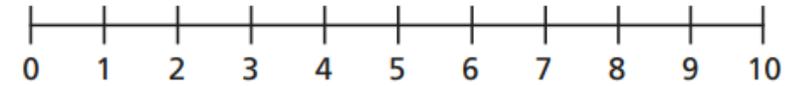


Number lines

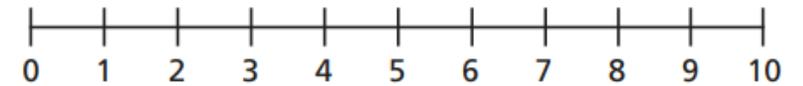
1 a) Circle the number 2



b) Circle 1 less than 5



c) Circle a number greater than 8

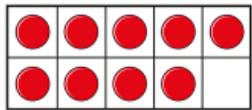


Year 2 - Counting

Numbers to 20

2 What numbers are shown?

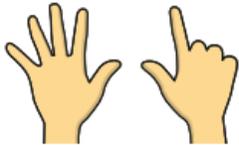
a)



numeral

word _____

b)



numeral

word _____

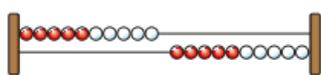
c)



numeral

word _____

d)



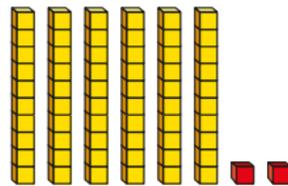
numerals

word _____

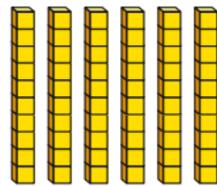
Numbers to 100 using base 10

3 What numbers are shown?

a)

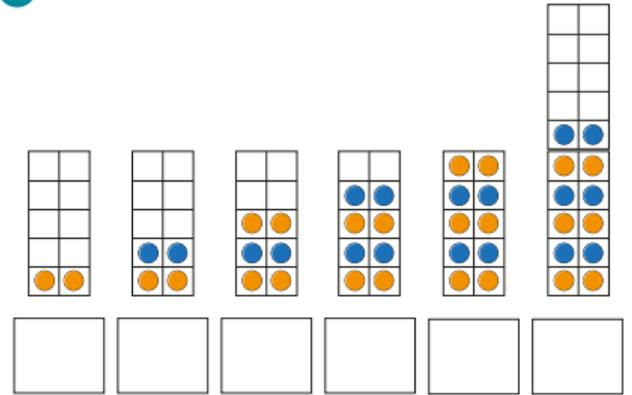


b)

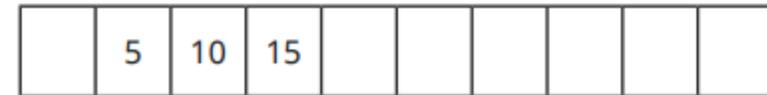


Counting in steps of 2, 5, 10

1 What numbers are shown?



4 Complete the number tracks.



Year 1 – Number bonds

Number bonds within 10

1 Find three different ways to make 4



$$\square + \square = 4$$

$$\square + \square = 4$$

$$\square + \square = 4$$

2 Find three different ways to make 6

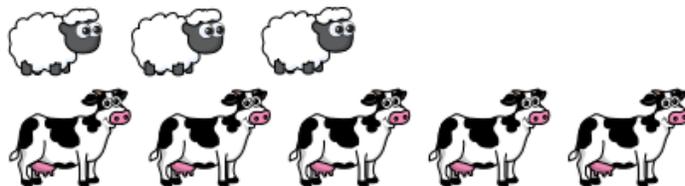
$$\square + \square = 6$$

$$\square + \square = 6$$

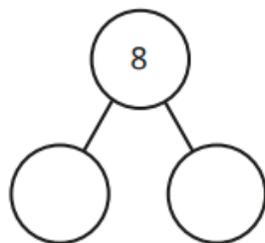
$$\square + \square = 6$$

Fact families

1 There are 8 animals in a field.



Complete the part-whole model and the fact family.



$$\square + \square = 8$$

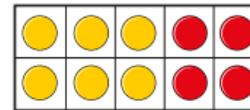
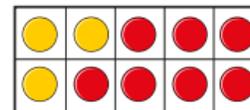
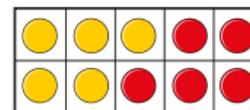
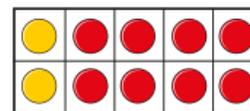
$$\square + \square = 8$$

$$8 - \square = \square$$

$$8 - \square = \square$$

Number bonds to 10

1 Match the ten frames to the number sentences.



$$3 + 7 = 10$$

$$6 + 4 = 10$$

$$2 + 8 = 10$$

$$5 + 5 = 10$$

Year 2 – Number bonds

Related facts

3 Fill in the missing numbers in the related facts.

a) $1 + 2 = 3$

$$10 + 20 = \square$$

b) $7 + 2 = 9$

$$70 + 20 = \square$$

c) $4 + 6 = \square$

$$\square + 60 = 100$$

d) $1 + 8 = \square$

$$\square + 10 = 90$$

e) $3 + 4 = \square$

$$30 + \square = 70$$

f) $8 + \square = 8$

$$\square + 80 = 80$$

Number bonds to 100

2 a) Write six different number bonds to 10

$$\square + \square = 10 \quad \square + \square =$$

$$\square + \square = 10 \quad \square + \square =$$

$$\square + \square = 10 \quad \square + \square =$$

b) Write six different number bonds to 100

Use your answer to part a) and related facts to help you.

$$\square + \square = 100$$

In Year 2, we help children move towards mental strategies by:

- Using known facts to work out new ones.

- Partitioning numbers into tens and ones for easier addition/subtraction.

- Bridging through 10 to simplify calculations - For example, $8 + 7 \rightarrow$ make 10 first ($8 + 2 = 10$, then add 5).

- Encouraging use of fact families and inverse operations - Understanding that addition and subtraction are linked helps check answers mentally.

Concrete, Pictorial and Abstract Approach

Children move through these stages to help them *really understand* maths, not just memorise answers.

Think of it as:

 **touch it** → **see it** → **write it**

Why is CPA so important?

- ✓ Builds strong understanding
- ✓ Helps children explain their thinking
- ✓ Supports different learning styles
- ✓ Reduces “guessing” in maths
- ✓ Builds confidence

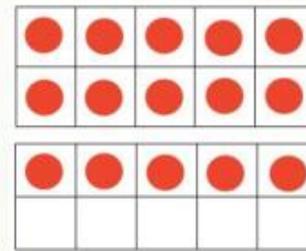
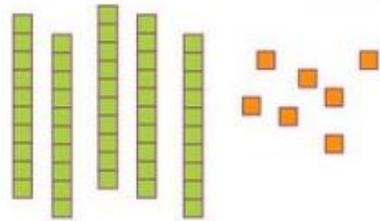
Children may move **back and forth** between stages – that’s normal and healthy learning.

CPA

➔ Concrete



➔ Pictorial



➔ Abstract

five

5

$$3 + 2 = 5$$

1 - Concrete (Hands-on learning)

 **This is learning using real objects.**

Children use items they can touch and move, such as:

- Counters
- Cubes
- Coins
- Toys
- Fingers!

Example: 2 + 1

A child might put out **2 counters**, then **add 1 more** and count them all.

 This helps children understand *what numbers actually mean*, not just what they look like.

2 - Pictorial (Seeing it)

 **Now children draw pictures or look at images instead of using real objects.**

They might:

- Draw circles
- Use dots
- See simple diagrams in books

Example: 2 + 1

The child draws **two circles**, then **one more**, and counts them.

 This step acts as a bridge between real objects and numbers.

3 - Abstract (Numbers and symbols)

 This is where children use numbers and maths symbols.

Example:

$$2 + 1 = 3$$

 Because they've already used objects and pictures, the numbers now *make sense*.

Lets have a go...

Example 1: Number bonds to 5

Concrete (Hands-on)

Activity:

- Get **5 objects** off the table
- Move some into **two groups** - for example:
- 2 in one hand and 3 in the other

Say together: "2 and 3 make 5"

Try all combinations:

- 0 and 5
- 1 and 4
- 2 and 3

 Children can *see and feel* the total staying the same.

Pictorial (Pictures)

Draw or look at pictures showing the groups.

Example drawing:

- Draw **5 circles**
- Colour **2 red** and **3 blue**

Ask:

- "How many altogether?"
- "How many in each group?"

 This links the real objects to visual thinking.



Abstract (Numbers)

Now write the number sentence:

$$2 + 3 = 5$$

Or:

$$5 = 2 + 3$$

✓ The child understands *why* it works.

Parent tip 💡 At home, try saying:

- "Show me with objects"
- "Can you draw it?"
- "Now write the number sentence"

This follows CPA naturally without pressure.

Place value

Partitioning for calculation

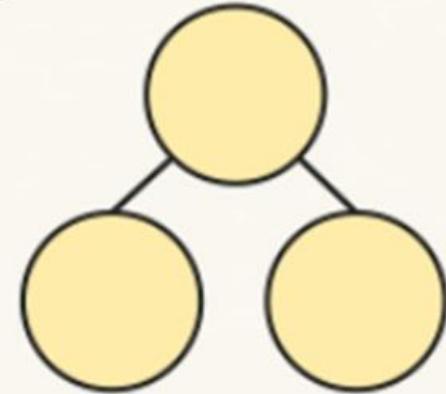
a) 48



b) 63



c) 59



What is partitioning?

- Partitioning in maths is the process of breaking numbers into smaller, more manageable parts to simplify calculation and enhance understanding of place value. It is particularly useful for addition and subtraction. It also allows children to recognise the value of each number based on its position in a number.



Examples of partitioning

Here are some examples of how you would see partitioning within maths lessons.

Base
10

Place value
counters

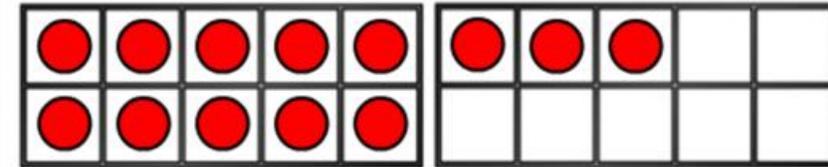
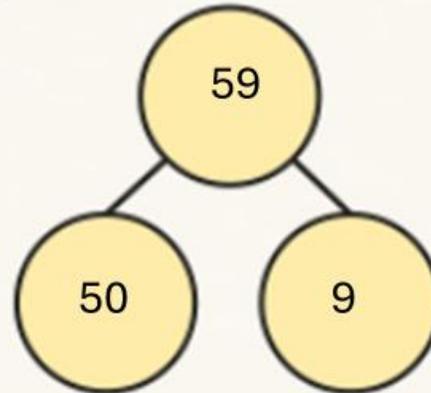
Part whole
model

Ten
frame

a) 48

b) 63

c) 59



Y1 partitioning

- In year 1 we focus on teaching the children how to partition numbers into tens and ones so that they have a full understanding of the value of each digit. It is helpful for calculation and even understanding difference between numbers e.g greater and smaller.



Example from a lesson

- Currently in Year 1 our focus is on numbers to 20. The children are learning to recognise their numbers to 20 and the value of each digit.

The children are using the pictures of Base 10 to help them understand the value of each digit.



Complete the sentences.

14 has ten and ones.

15 has ten and ones.

16 has ten and ones.

Y2 partitioning

- Partitioning in Year 2 becomes slightly more advanced. Compared to Year 1 where the children are partitioning into tens and ones to understand the value, Year 2 are using their partitioning knowledge for addition and subtraction with 2-digit numbers. Children use their learning of partitioning numbers to help them with their calculations.

$$\begin{array}{r} 34 + 12 = 30 + 10 \\ \quad \quad \quad 4 + 2 \end{array}$$

Children will have partitioned the numbers into tens and ones to help with their calculation.

The smaller parts allows it to be easier for the children to understand and solve individually.

Example from a lesson

What addition is shown?

Complete the sentences to work out the answer.



Base 10 used a visual to help the children partition.

Children should understand that '4 tens' equals 40 and '2 tens' equals 20. However, the base 10 is there to support.

$$\boxed{3} \text{ ones} + \boxed{1} \text{ one} = \boxed{4} \text{ ones}$$

There are $\boxed{4}$ ones altogether.

$$\boxed{4} \text{ tens} + \boxed{2} \text{ tens} = \boxed{6} \text{ tens}$$

There are $\boxed{6}$ tens altogether.

$$\boxed{43} + \boxed{21} = \boxed{64}$$

4. Multiplication and Division/ Sharing

Year 1

- Step 1 Count in 2s
- Step 2 Count in 10s
- Step 3 Count in 5s
- Step 4 Recognise equal groups
- Step 5 Add equal groups
- Step 6 Make arrays
- Step 7 Make doubles
- Step 8 Make equal groups – grouping

Year 2

- Step 1 Recognise equal groups
- Step 2 Make equal groups
- Step 3 Add equal groups
- Step 4 Introduce the multiplication symbol
- Step 5 Multiplication sentences
- Step 6 Use arrays
- Step 7 Make equal groups – grouping
- Step 8 Make equal groups – sharing
- Step 9 The 2 times-table
- Step 10 Divide by 2
- Step 11 Doubling and halving
- Step 12 Odd and even numbers
- Step 13 The 10 times-table
- Step 14 Divide by 10
- Step 15 The 5 times-table
- Step 16 Divide by 5
- Step 17 The 5 and 10 times-tables

Example- working with the 2s

These examples can be adapted to ANY times table.

Think and Pair- When might we see twos in real-life?

PAIRS IN REAL LIFE



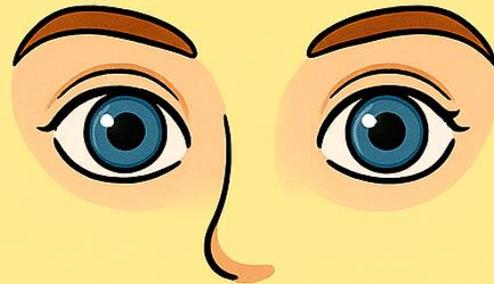
Shoes



Earrings



Gloves



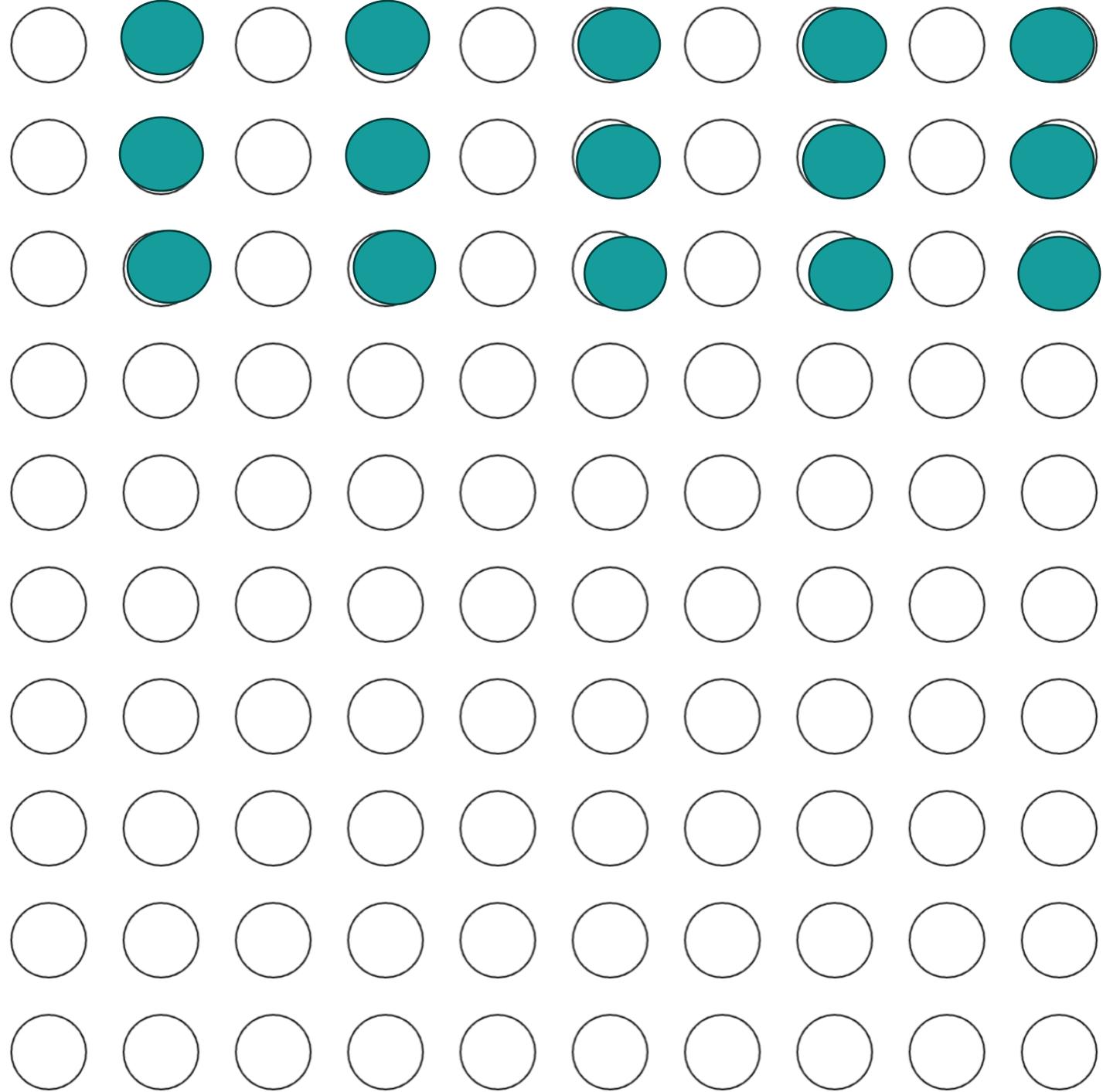
Eyes



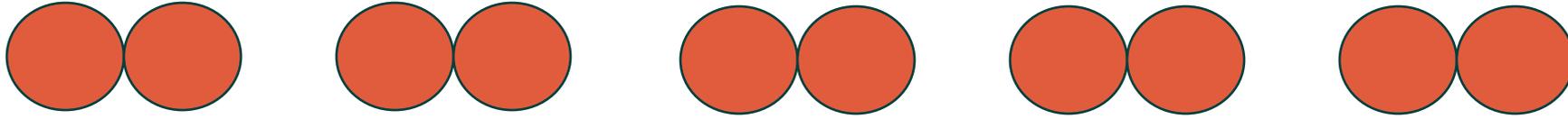
Salt and Pepper

Draw ideas in your books.

**Shade every
2nd circle**



Questions to discuss:
When did you notice the pattern?
What have you shaded?
What can we say about these numbers?
Can you write the numbers on, stopping at 24?



There are _____ equal groups

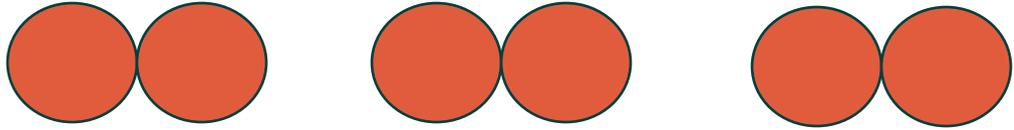
with _____ in each group

there are _____ altogether.

Number of groups _____

Group size _____

Practise
speaking
with your
partner.



There are _____ equal groups

with _____ in each group

there are _____ altogether.

Number of groups _____

Group size _____

Practise
speaking
with your
partner.



There are _____ equal groups

with _____ in each group

there are _____ altogether.

Number of groups _____

Group size _____

Practise
speaking
with your
partner.



There are _____ equal groups

with _____ in each group

there are _____ altogether.

Number of groups _____

Group size _____

Practise
speaking
with your
partner.



There are _____ equal groups

with _____ in each group

there are _____ altogether.

Number of groups _____

Group size _____

Practise
speaking
with your
partner.



There are _____ equal groups

with _____ in each group

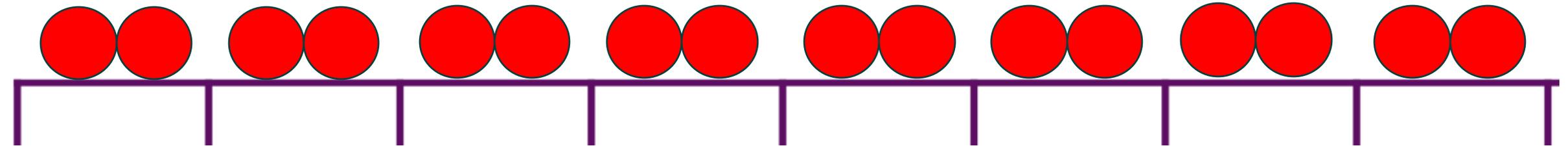
there are _____ altogether.

Number of groups _____

Group size _____

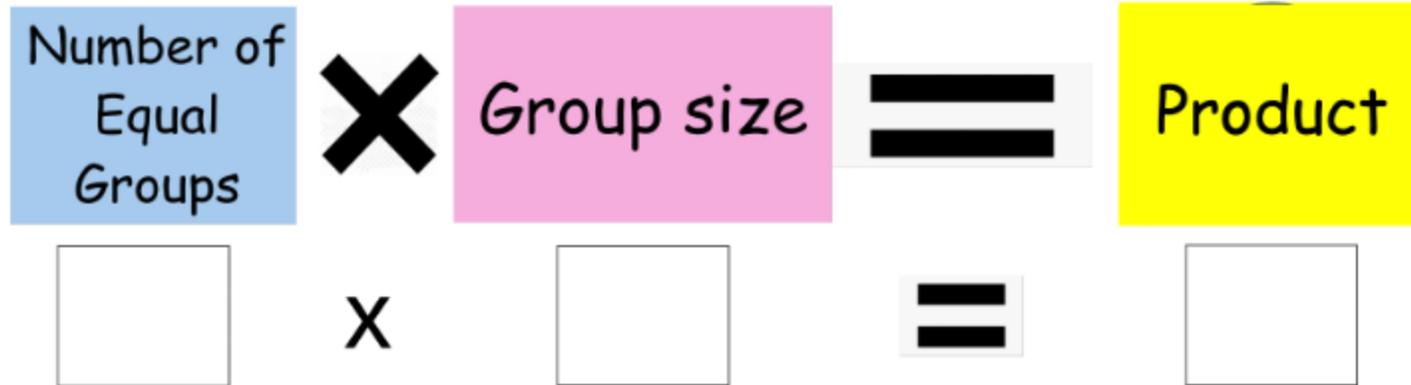
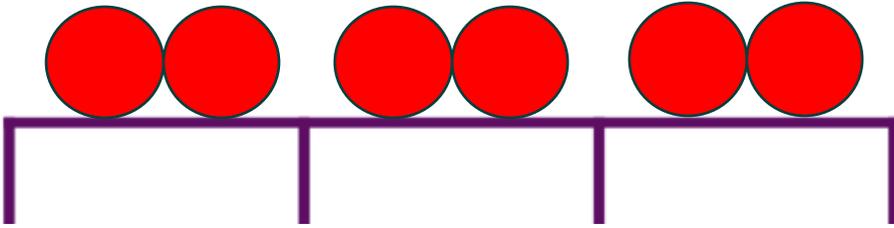
Practise
speaking
with your
partner.

What is this showing?

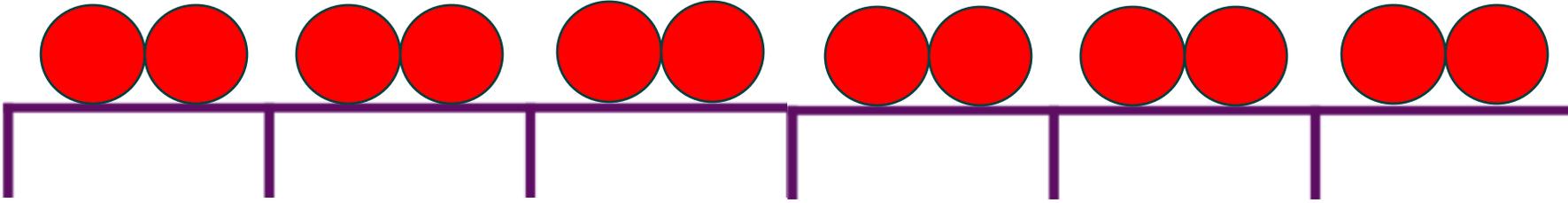


Number of Equal Groups	×	Group size	=	Product
<input type="text"/>	x	<input type="text"/>	=	<input type="text"/>

What is this showing?

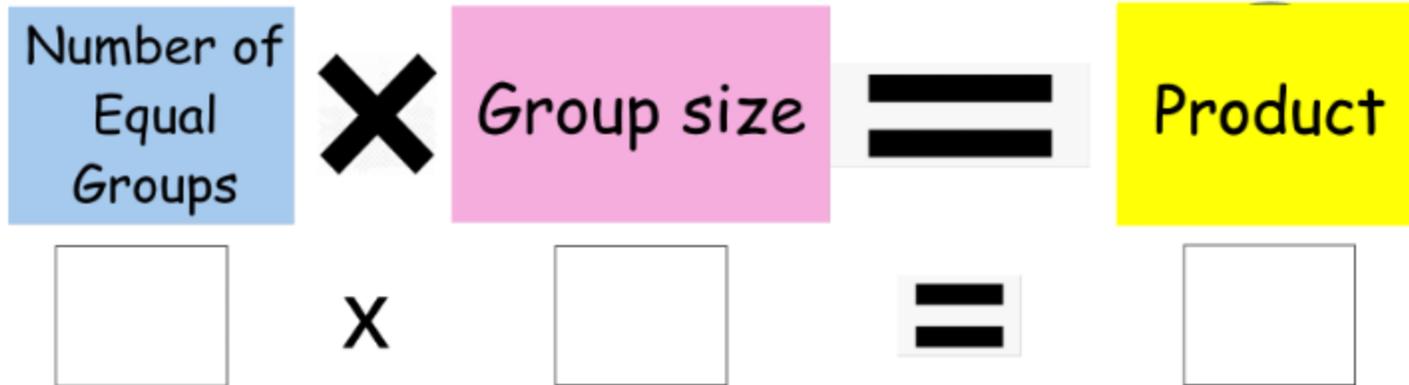
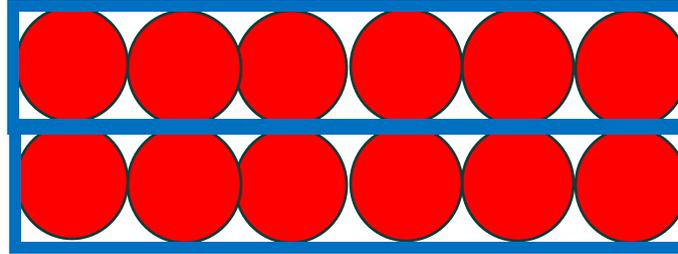
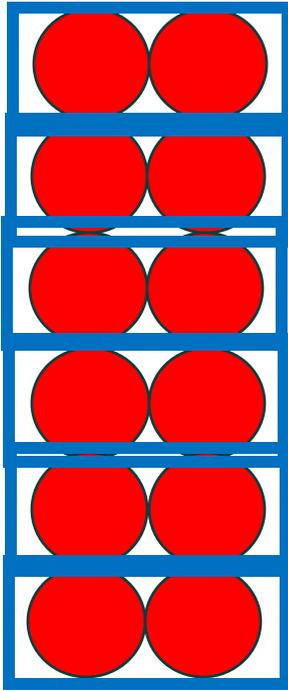


What is this showing?

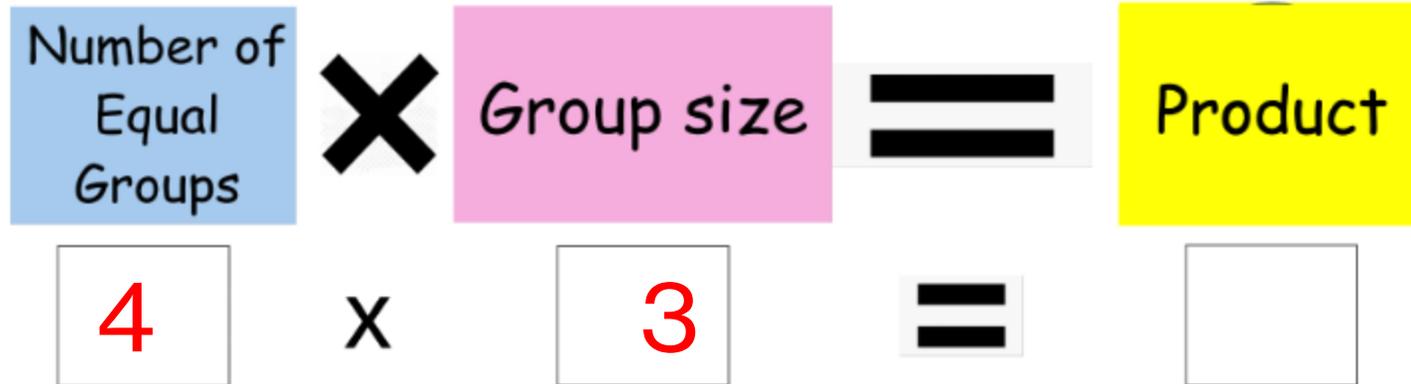
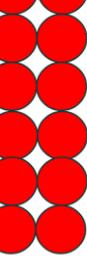


Number of Equal Groups	×	Group size	=	Product
<input type="text"/>	x	<input type="text"/>	=	<input type="text"/>

What is this showing?



Draw an array:



Year 1 Example Questions

- How many socks are there in total?

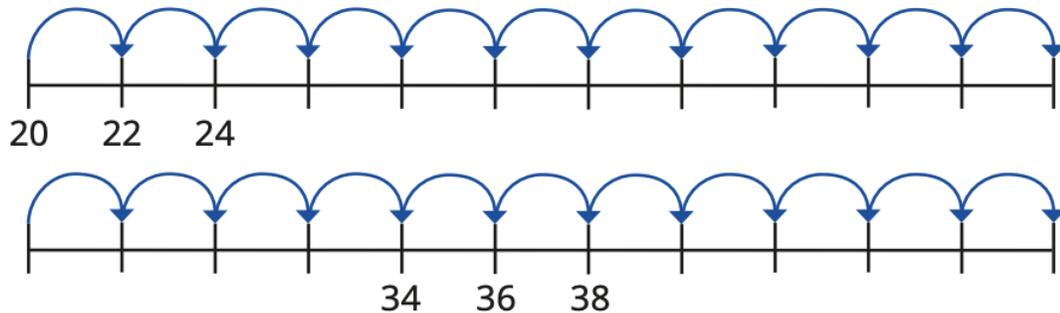


There are _____ socks in total.

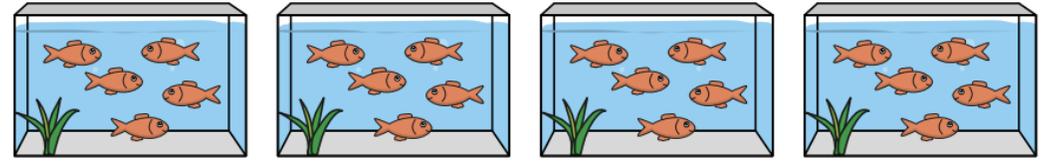
- Continue to colour in 2s on the grid. What do you notice?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- Complete the number lines by counting in 2s.



- How many fish are there?



There are _____ fish in each tank.

There are _____ tanks.

There are _____ fish altogether.

- How many grapes are there?



- Continue to count in 5s on the grid.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

What patterns can you see?

Ann counts the number of fingers she can see.

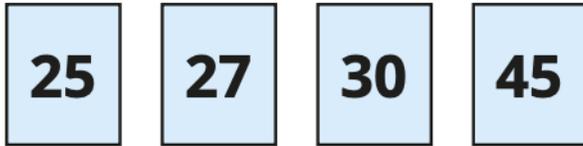


She counts 20 fingers.

How many hands can she see?

4

Ron has some number cards.



I am counting in 5s from zero.

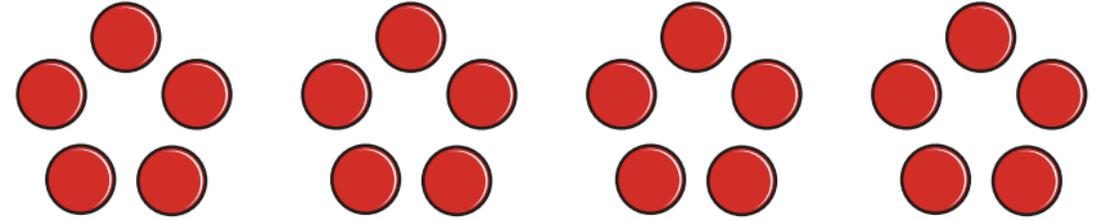
Which numbers will Ron say?

How do you know?



25, 30, 45

Tiny makes a flower pattern with counters.



If I make 9 flowers, I will use 46 counters.

How do you know that Tiny is incorrect?

46 does not have a 0 or 5 in the ones column.



Take children into the playground. As a class, count how many children there are.

Ask children to get into groups of three. Are all the groups equal?

What other equal groups can they get into?



Provide children with 20 counters or cubes. Ask them to put them into equal groups. How many different sets of equal groups can they make?

Repeat with other numbers of counters or cubes.



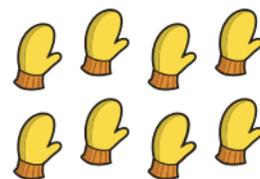
Show children a picture of a gingerbread person and explain that each one needs three buttons.



Give the children 15 buttons and ask how many gingerbread people they can give buttons to.

What if they had 18/21/24 buttons?

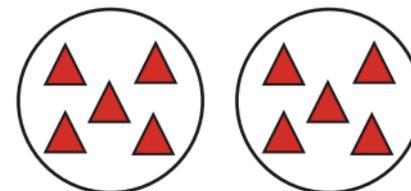
- Circle groups of 2 mittens and complete the sentence.



There are _____ groups of 2 mittens.

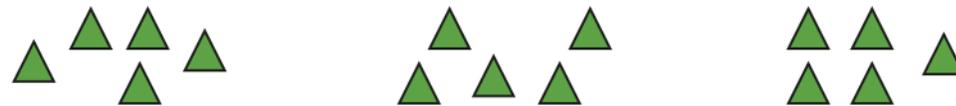
If you had 10 mittens, how many equal groups of 2 mittens could you make?

- Complete the sentences to match the pictures.



There are _____ altogether.

There are _____ equal groups of _____



_____ has been sorted into _____ equal groups of _____

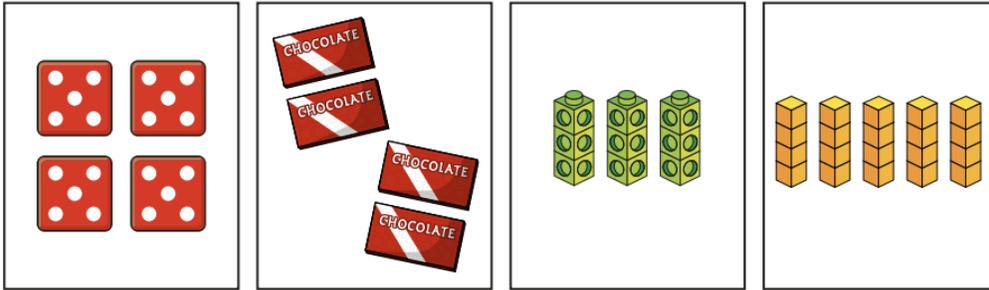
- Draw a picture to match the sentence.

20 has been sorted into 4 equal groups of 5

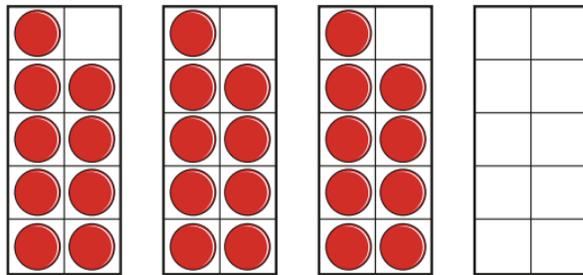
Year 2 Example Questions

Key learning

- Match the pictures to the labels.



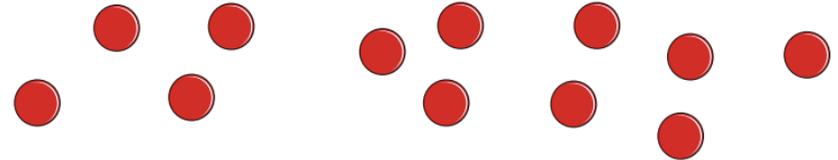
- Complete the ten frames to show equal groups.



Complete the sentence to describe the groups.

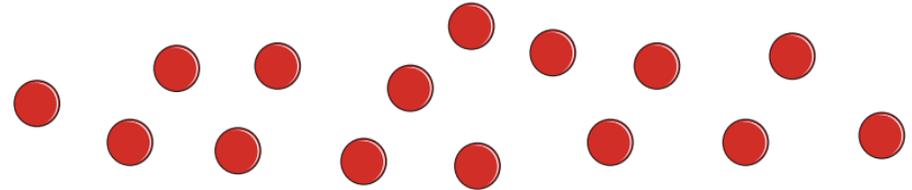
There are _____ equal groups with _____ in each group.

- Put 12 counters into different equal groups.



What do you notice?

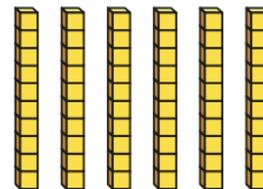
- Use 15 counters.



- ▶ Make 3 groups of 5
- ▶ Make 5 groups of 3

What is the same about the groups? What is different?

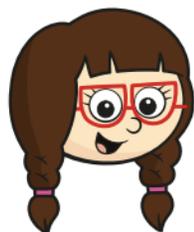
- Complete the sentences to describe the equal groups.



There are _____ equal groups of 10

There are _____ tens.

Jo puts some counters into equal groups.



There are 12 counters in total.

What could the addition and multiplication number sentences be?

multiple possible answers, e.g.

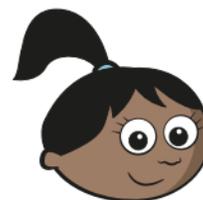
$$6 + 6 = 12$$

$$2 \times 6 = 12$$

$$4 + 4 + 4 = 12$$

$$3 \times 4 = 12$$

Sam and Ron are talking about multiplication stories.



Sam

There are 4 trees with 3 birds in each tree.

Write an addition and a multiplication for Sam's story.

$$3 + 3 + 3 + 3$$

$$4 \times 3$$

$$5 + 5 + 5 + 5 + 5 + 5$$

The multiplication for my story is 6×5



Ron

What is the addition for Ron's story?
What could Ron's story be?



$$3 + 3 + 3 = 3 \times 3$$

Is Tiny correct?

How do you know?

Draw a picture to help you.



Yes

picture showing 3 groups of 3

Key learning

- Take 15 counters.



- Put them into groups of 3
- Complete the sentences.

There are 15 counters.

The counters are in groups of _____

There are _____ groups.

- There are 20 buckets.

- Circle groups of 5
How many groups did you circle?
- Complete the number sentence.

$20 \div 5 =$ _____

Does it matter how you circle the groups of 5?



- Ben has 12 cookies and some plates.

He puts 3 cookies on each plate.

How many plates does Ben have?

Use cubes or counters to show your answer.

- Ann has 20 pencils.

She wants to put 10 pencils in each pot.

Complete the sentences to show how many pots Ann needs.
You could draw a picture to help you.

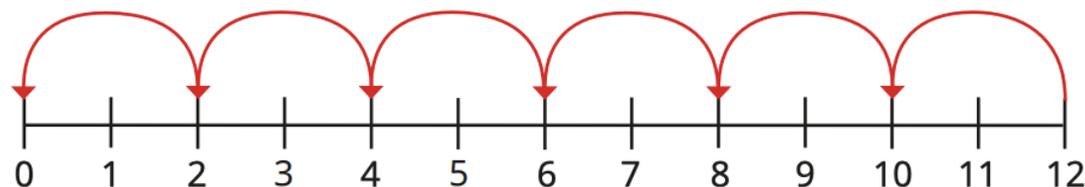
There are _____ pencils altogether.

There are _____ pencils in each pot.

There are _____ pots.

_____ \div _____ = _____

- Tom uses a number line to work out how many equal groups of 2 he can make from 12



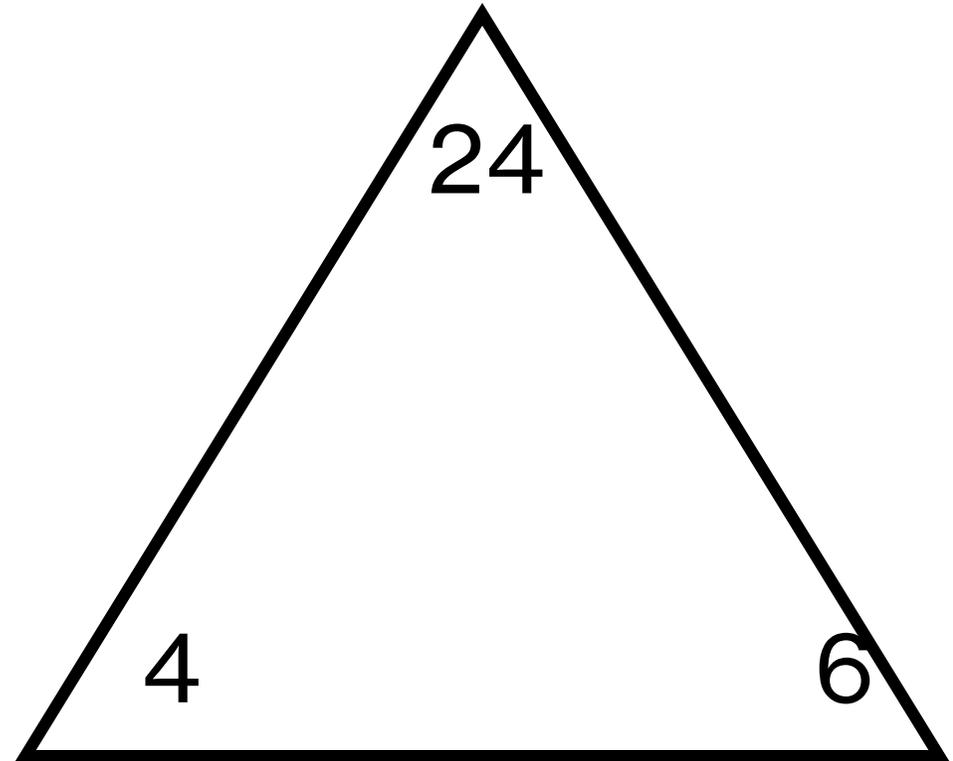
- Complete the sentences.

12 is made up of _____ equal groups of _____

$12 \div 2 =$ _____

- Use a number line to work out $15 \div 3$

Practicing Multiplication Facts



[Timestables.co.uk](https://www.timestables.co.uk)

Learn the times tables here!

Home Support Strategies

You don't need worksheets!

- Use everyday objects
- Encourage drawing maths
- Talk about numbers out loud

Helpful questions to ask:

- "Can you show me with objects?"
- "Can you draw it?"
- "How do you know?"

There are all sorts of ways you can have fun exploring maths with your child in everyday life.

Whenever your child uses maths in activities or play, explain that they're using maths.

This helps them to realise how much we all use maths every day.

- we've listed just a few ideas to get you thinking about numbers with your children. Some ideas that work almost anywhere include:
- Talk about time. For example, get your child to work out what time you need to leave the house to get to school on time.
- Talk about the shape and size of objects. Look online for interesting facts, like tallest and shortest people, or biggest and smallest buildings etc.
- Collect information and create a tally chart – for example to find out the family's favourite animal or fruit etc.

- **Around the house**



Cooking. Measure ingredients and set the timer together. Get your child to work out how much more food you will need if extra people are coming for dinner.

- When you are sharing food like pizza or cake, ask your child to help you share it equally between the number of people eating.
- Solve problems at home. For example, ask your child how many apples to buy at the shop and why, or how long it will take you to get to Gran's house if you go to the library on the way.

Out and about



Go on a shape hunt. How many circles, squares, rectangles or triangles can your child find? Are they 2D or 3D?

Try getting them to look for patterns and symmetry.

Ask your child to give you directions to a local landmark or an important place. Get them to work out how long each stage of the journey takes.

Use sticks for shape challenges – for instance, how many triangles can they make with 9 sticks?

Explore the local area. Ask your child to guess how many buildings are on the street, how far it is to the nearest river, or how many dogs and cats live in your town.

Ask for the reasons behind their answers.

Any questions, comments or feedback?

Thank you for coming!