




# Progression of skills

## Multiplication and Division

# How do we teach Maths at St Catherine's?

- ▶ White Rose Maths
  - ▶ Follow a CPA approach
  - ▶ Modelling/ guided and independent practice My turn your turn/ I do, we do, you do approach.
  - ▶ Flashback 4 – Starter activities encourage children to know more and remember more– Recap of learning yesterday, last week, last topic, last half term.– Making links
  - ▶ Vocabulary/ full sentence answers– embodies and communicates concepts, emphasis on key vocabulary.
- 

# Year 1

- ▶ Summer term
- ▶ Children use pictures, manipulatives and number lines to support their counting.
- ▶ Counting on a hundred square supports children to see the similarities between the numbers.

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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

How many flowers are there altogether?



There are \_\_\_\_ flowers in each bunch.

There are \_\_\_\_ bunches.

There are \_\_\_\_ flowers altogether.

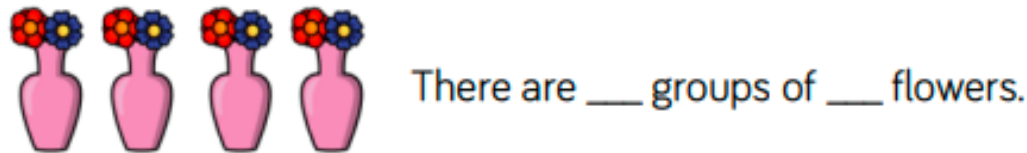
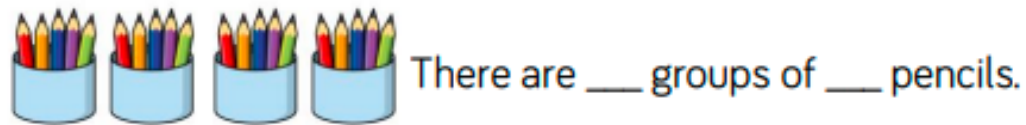
Use a 0-100 bead string to count in tens.

Can we count forwards and backwards in tens?



# Making equal groups

- ▶ Using stories which link to pictures and concrete manipulatives to explore making equal groups.



- ▶ Recognise and explain how they know when they are equal or not.
- ▶ Children see equal groups that are arranged differently so they understand that the groups look different but can still be equal in number.

- Children use equal groups to find a total. They focus on counting equal groups of 2, 5 and 10 and explore this within 50.

How many apples are there? Complete the sentences.



$$5 + 5 + 5 + 5 = \underline{\quad}$$

There are        apples.

There are        groups of        apples which is equal to       



How many fingers altogether?



$$5 + 5 + 5 = \underline{\quad}$$

- Linking to real life, for example animal legs, wheels, flowers in vases etc.
- Stem sentences alongside number sentences can help children link the calculation with the situation. Children have the opportunity to say their sentences aloud.

Use concrete materials or pictures to complete the questions.

Alex has 4 equal groups.

Show me what Alex's groups could look like.

Whitney has 3 unequal groups.

Show me what Whitney's groups could look like.

Eva and Whitney are making equal groups of bread rolls.



We need one more group to make 40

We need 10 more rolls to make 40



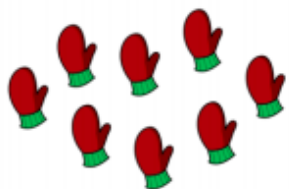
Whitney

Who do you agree with? Explain why.

# Grouping

- ▶ Children start with a given total and make groups of an equal amount. They record their understanding in sentences, not through formal division at this stage.
- ▶ Children can develop their understanding of equal groups by also being exposed to numbers which do not group equally.

How many equal groups of 2 can you make with the mittens?



There are \_\_\_\_ groups of 2 mittens.

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

Complete the table. Use equipment to help you.

Representation	Description
	There are ____ altogether. There are ____ equal groups of ____
	There are ____ altogether. There are ____ equal groups of ____
	15 has been sorted into 3 equal groups of 5
	____ has been sorted into ____ equal groups of ____



# Sharing equally

- ▶ Children use 1:1 correspondence to share concrete objects into equal groups. Children also need to be given the opportunity to see when a number of objects cannot be shared equally into equal groups.

Share the muffins equally between the two plates.  
Complete the sentence.

\_\_\_ cakes shared equally between 2 is \_\_\_



Collect 20 cubes. Use hoops to represent your friends.

Can you share the cubes between 5 friends?

20 shared between 5 equals \_\_\_

Can you share the cubes between 2 friends?

20 shared between 2 equals \_\_\_

Can you share the cubes between 10 friends?

20 shared between 10 equals \_\_\_

# Year 2

- Children describe equal groups using stem sentences to support them. It is important that children know which groups are equal and unequal, and why they are equal or unequal.

Complete the sentences.

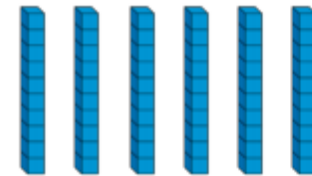


There are \_\_\_\_ equal groups with \_\_\_\_ in each group.

There are \_\_\_\_\_ baguettes altogether.

- Children should be able to make equal groups to demonstrate their understanding of the word ‘equal’.

The Base 10 shows six equal groups with ten in each group.  
There are six tens.

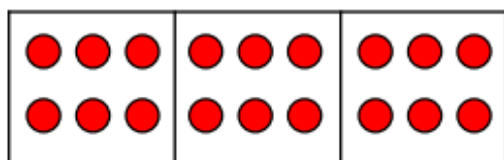


How else can you represent these as equal groups?



- Children begin to connect equal groups to repeated addition. Adding three one digit numbers together.
- Children are introduced to the multiplication symbol for the first time. They should link repeated addition and multiplication together.

Complete the sentences to describe the equal groups.



$$\underline{\quad} + \underline{\quad} + \underline{\quad} = 18$$

$$\underline{\quad} \times \underline{\quad} = 18$$

There are     equal groups with     in each group.

There are three    .

Complete:

Three 2s	Draw It	Addition	Multiplication
There are 3 equal groups with 2 in each group.			



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \text{ lots of } 3 = \underline{\quad}$$

$$\underline{\quad} \text{ multiplied by } \underline{\quad} = 12$$

How many wheels are there on five bicycles?



If there are 14 wheels, how many bicycles are there?

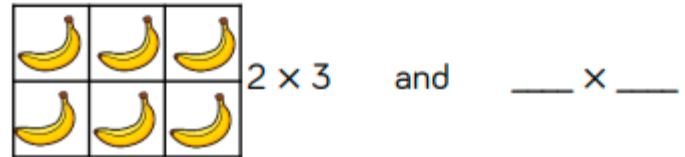
- ▶ Children explore arrays to see the commutativity of multiplication facts e.g.  $5 \times 2 = 2 \times 5$
- ▶ The use of the array could be used to help children calculate multiplication statements.
- ▶ The multiplication symbol and language of 'lots of' should be used interchangeably.

On the image, find  $2 \times 5$  and  $5 \times 2$



Can you represent this array using another object?

Complete the number sentences to describe the arrays.



With 12 cubes, how many different arrays can you create?

Once you have created your array complete:


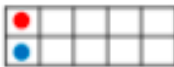

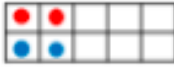


$$\underline{\quad} \times \underline{\quad} = \underline{\quad} \times \underline{\quad}$$

# Doubling

Children explore doubling with numbers up to 20.

Children show and explain what doubling means using concrete and pictorial representations.

‘Double \_\_\_ is \_\_\_\_’

Build	Represent	Add	Double
		$1 + 1 = 2$	Double 1 is 2
		$2 + 2 = \underline{\quad}$	Double 2 is $\underline{\quad}$
		$3 + 3 = \underline{\quad}$	Double 3 is $\underline{\quad}$
		$\underline{\quad} + \underline{\quad} = \underline{\quad}$	Double 4 is $\underline{\quad}$

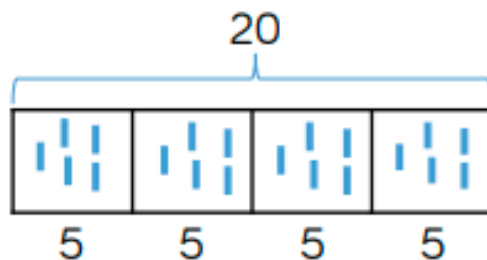
# Sharing

- Children divide by sharing objects into equal groups.
- Begin using concrete manipulatives, then move on to pictorial representations.
- Children will be introduced to the ' $\div$ ' symbol. They will begin to see the link between division and multiplication.

24 children are put into 4 equal teams.  
How many children are in each team?

Can you use manipulatives to represent the children to show how you found your answer?

Ron draws this bar model to divide 20 into 4 equal groups.  
How does his model represent this?  
He writes  $20 \div 4 = 5$



How many do you have to begin with?

How many equal groups are you sharing between?

How many are in each group?

How do you know that you have shared the objects equally?

# Grouping

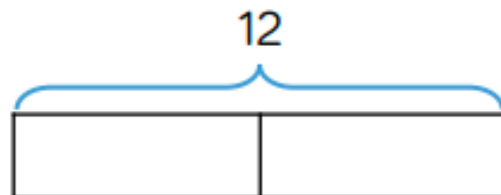
- Children divide by making equal groups. They then count on to find the total number of groups. They need to do this using concrete manipulatives and pictorially in a variety of contexts. They need to recognise the link between division, multiplication and repeated addition.

Mo and Tommy have 12 sweets between them. They share them equally. How many sweets does each child get?

There are \_\_\_ sweets altogether.

There are \_\_\_ groups.

There are \_\_\_ in each group.



Complete the bar model and write a calculation to match.

Pencils come in packs of 20  
We need to put 5 in each pot.  
How many pots will we need?

There are \_\_\_ pencils altogether.

There are \_\_\_ pencils in each pot.

There are \_\_\_ pots.



# Year 3

- ▶ Children use their understanding of repeated addition to represent a two-digit number multiplied by a one-digit number with concrete manipulatives.
- ▶ They use the formal method of column multiplication alongside the concrete representation.
- ▶ Recall and use multiplication and division facts for the 3, 4, 8 multiplication tables.
- ▶ Children begin exploring multiplication with no exchange and then move on to with exchange.

Complete the calculations to match the place value counters.

Tens	Ones
	
	
	
	

$$\square + \square + \square + \square = \square$$

$$\square \times \square = \square$$



- ▶ Solve problems, including missing number problems, involving multiplication and division.

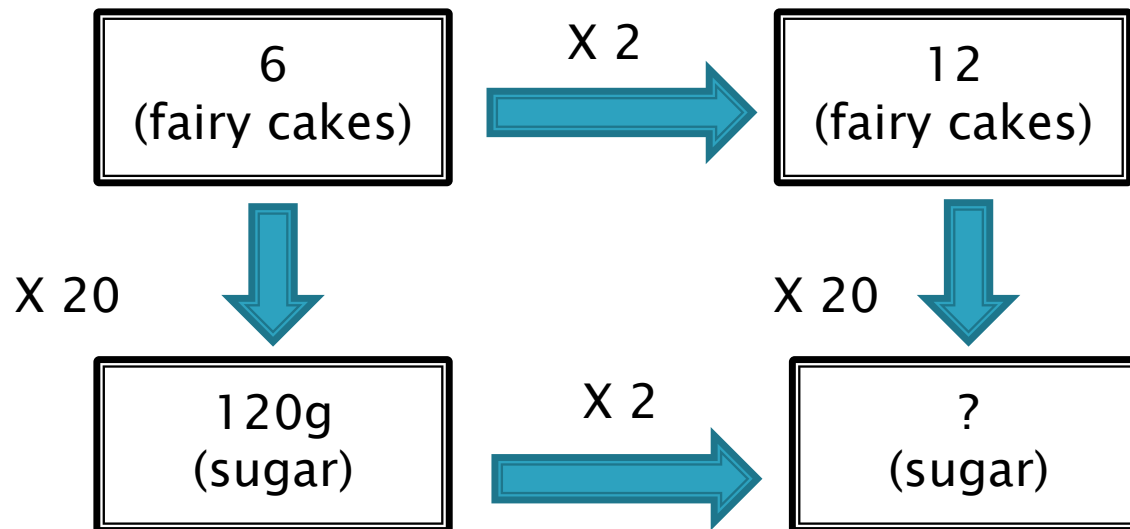
Fill in the blanks.

$$3 \times \underline{\quad} = 6$$

$$\underline{\quad} \times 2 = 20$$

$$\underline{\quad} = 8 \times 2$$







E.g. To make 6 fairy cakes a recipe says you need 120g butter, 90g flour, 5 eggs, 120g sugar. If you wanted to make 12 cakes, how much sugar would you need?



# Worded problems

There are 21 coloured balls on a snooker table.

How many coloured balls are there on 3 snooker tables?

Tens	Ones
	
	
	

# Activity

There are 24 children in each class. How many children are there in 4 classes. Represent using using Base 10 and place value counters.

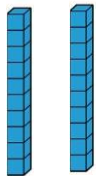

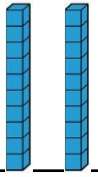

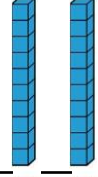

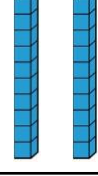
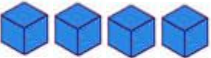


Draw pictorially.

Tens	Ones

# Answers

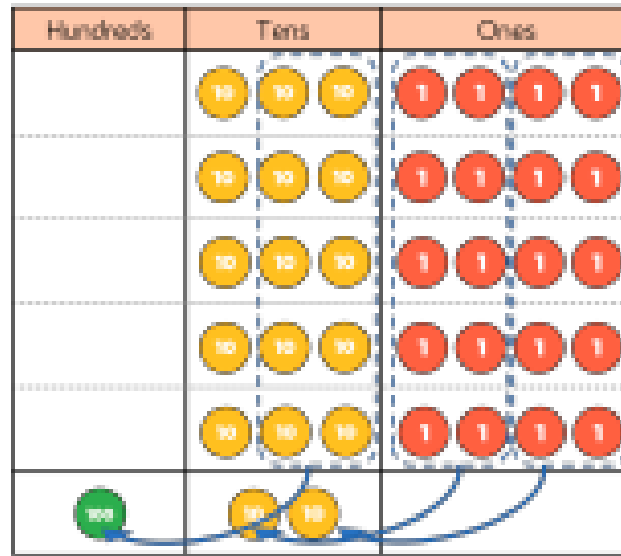
There are 24 children in each class. How many children are there in 4 classes.

Tens	Ones
	
	
	
	

Tens	Ones
	
	
	
	

	T	O
	2	4
x		4
	9	6
	1	

Multiplying  
2 digit by a  
one digit  
number

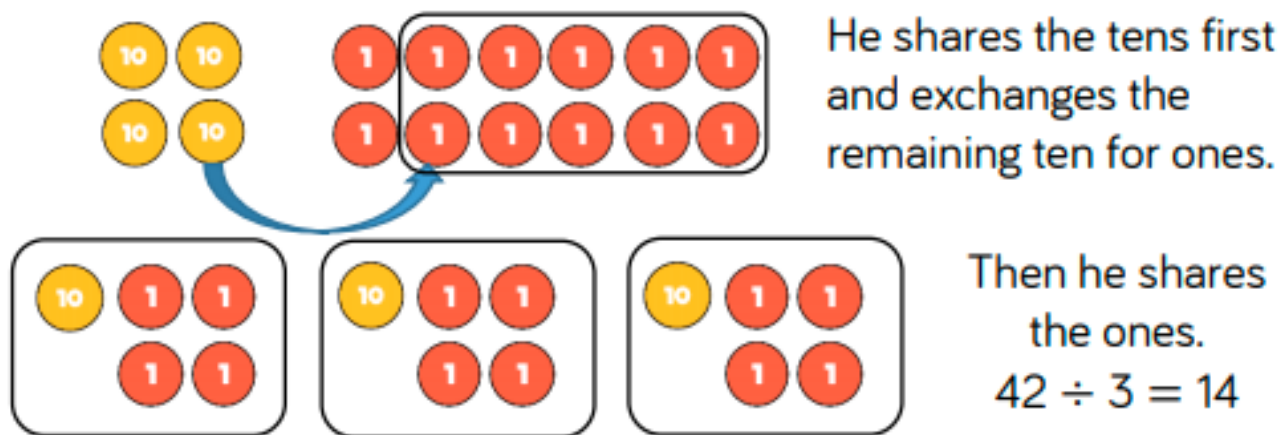
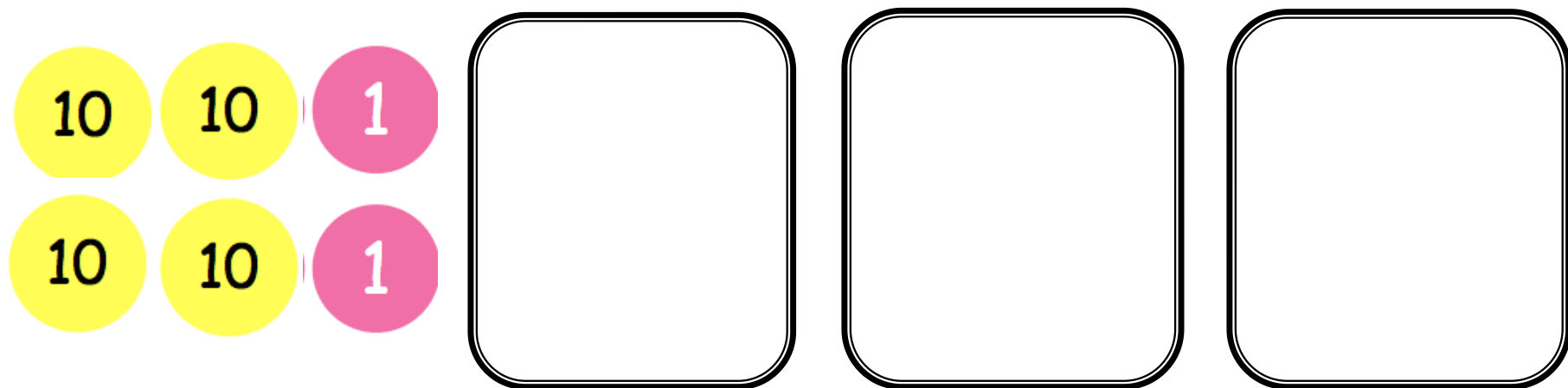


	T	O
	3	4
x		5
1	7	0
1	2	

Children divide 2-digit numbers by a 1-digit number and sharing into equal groups.

They divide numbers that do not involve exchange or remainders. It is important that children divide the tens first and then the ones.

Ron uses place value counters to divide 42 into three equal groups.





Children move onto solving division problems with a remainder. Links are made between division and repeated subtraction, which builds on learning in Year 2.

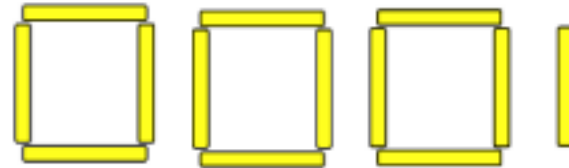
How many squares can you make with 13 lollipop sticks?

There are \_\_\_ lollipop sticks.

There are \_\_\_ groups of 4

There is \_\_\_ lollipop stick remaining.

$13 \div 4 = \underline{\hspace{1cm}}$  remainder  $\underline{\hspace{1cm}}$



Use this method to see how many triangles you can make with 38 lollipop sticks.

Tommy uses repeated subtraction to solve  $31 \div 4$



$$31 \div 4 = 7 \text{ r } 3$$

# Example

Use place value counters to work out  $37 \div 3$ .

Tens	Ones
	 
	 
	 



# Activity

Use place value counters to work out  $94 \div 4$

Did you need to exchange any tens for ones?

Is there a remainder?



Tens	Ones

Tens	Ones
10 10	1
10 10	1
10 10	1
10 10	1



Tens	Ones
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1
10 10	1 1 1



Exchange 1 ten  
for 10 ones

# Year 4

- ▶ Children should know all times tables up to the **12 times table**. ( $12 \times 12$ )
- ▶ Use place value to multiply and divide mentally: including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.

E.g.  $25 \times 0$

$347 \times 1$

$765 \div 1$

$5 \times 3 \times 2$

# Multiply by 10

- Children need to be able to visualise and understand making a number ten times bigger and that 'ten times bigger' is the same as 'multiply by 10'.

Use place value counters to calculate:

- Using the language 'ten lots of'

$10 \times 3$

$4 \times 10$

$12 \times 10$

- Commutative law–  $10 \times 3$  and  $3 \times 10$  are equal.

# Multiply by 100

- ▶ Children build on multiplying by 10 and see links between multiplying by 10 and multiplying by 100.

Use a place value grid and counters to calculate:

$7 \times 10$

$63 \times 10$

$80 \times 10$

$7 \times 100$

$63 \times 100$

$80 \times 100$

$3 \times \text{[3 tens rods]} = \text{___ tens} = \text{___}$

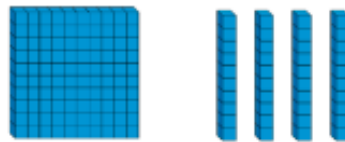
$3 \times \text{[3 hundred grids]} = \text{___ hundreds} = \text{___}$

# Divide by 10, 100

Use  $<$ ,  $>$  or  $=$  to make each statement correct.

$3,600 \div 10$	<input type="text"/>	$3,600 \div 100$
$2,700 \div 100$	<input type="text"/>	$270 \div 10$
$4,200 \div 100$	<input type="text"/>	$430 \div 10$

Use Base 10 to divide 140 by 10  
Explain what you have done.



While in Wonderland, Alice drank a potion and everything shrank. All the items around her became ten times smaller! Are these measurements correct?

Item	Original measurement	After shrinking
Height of a door	220 cm	2,200 cm
Her height	160 cm	16 cm
Length of a book	340 mm	43 mm
Height of a mug	220 mm	?

Can you fill in the missing measurement?

Can you explain what Alice did wrong?

Write a calculation to help you explain each item.

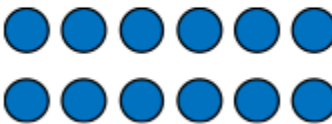


- Recognise and use factor pairs and commutativity in mental calculations.

A **factor pair** is a set of two numbers we multiply to get a product.

Complete the factor pairs for 12

  $1 \times \square = 12$

  
 $\square \times 6 = 12$

  $\square \times \square = 12$

- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
- Solve problems, including missing number problems, involving multiplication and division.

No carrying	Extra digit	Carrying	Zeros	Ext																																																																																				
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Building on their knowledge of the 1, 2 and 10 times-tables, children explore the 11 and 12 times-tables through partitioning.

They use Base 10 equipment to build representations of the times-tables and use them to explore the inverse of multiplication and division statements.

Use Base 10 to build the 12 times-table. e.g.

 $3 \times 12 = \square$

Complete the calculations.

$12 \times 5 = \square \quad 5 \times 12 = \square \quad 48 \div 12 = \square \quad 84 \div 12 = \square$

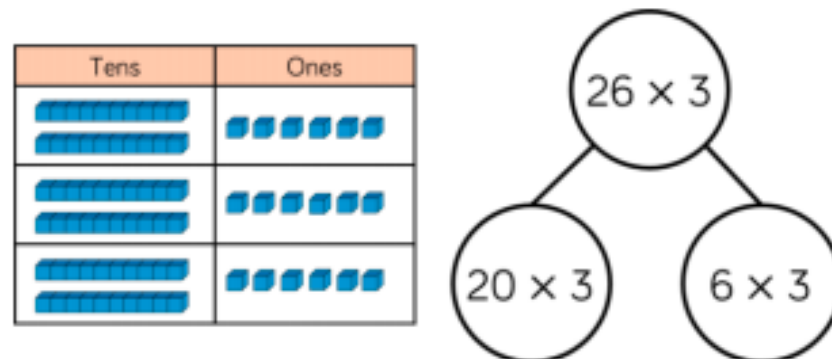
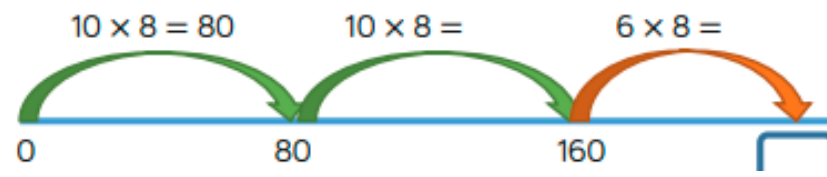
$12 \times \square = 120 \quad 12 \times \square = 132 \quad \square \div 12 = 8 \quad \square = 9 \times 12$

Children use a variety of informal written methods to multiply a two-digit and a one-digit number.

Children develop their mental multiplication by exploring different ways to calculate.

They partition two-digit numbers into tens and ones in order to multiply one and two-digit numbers.

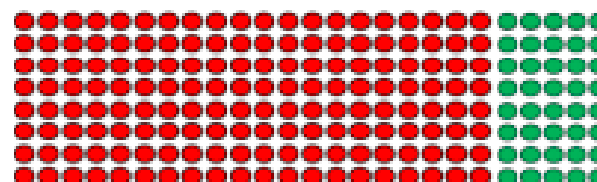
There are 8 classes in a school.  
Each class has 26 children.  
How many children are there altogether?  
Complete the number line to solve the problem.



Class 4 are calculating  $25 \times 8$  mentally.

$$25 \times 8 = 20 \times 8 + 5 \times 8$$

$$= 160 + \square = \square$$



Children build on previous steps to represent a three-digit number multiplied by a one-digit number with concrete manipulatives.

Hundreds	Tens	Ones
100 100		1 1 1
100 100		1 1 1
100 100		1 1 1

	H	T	O
	2	0	3
x			3

Write the multiplication represented by the counters and calculate the answer using the formal written method.

Hundreds	Tens	Ones
100 100 100	10 10 10 10 10 10 10 10	
100 100 100	10 10 10 10 10 10 10 10	

## Divide 2 digits by 1 digit

Children divide 2-digit numbers by a 1-digit number by partitioning into tens and ones and sharing into equal groups. They divide numbers that involve exchanging between the tens and ones.

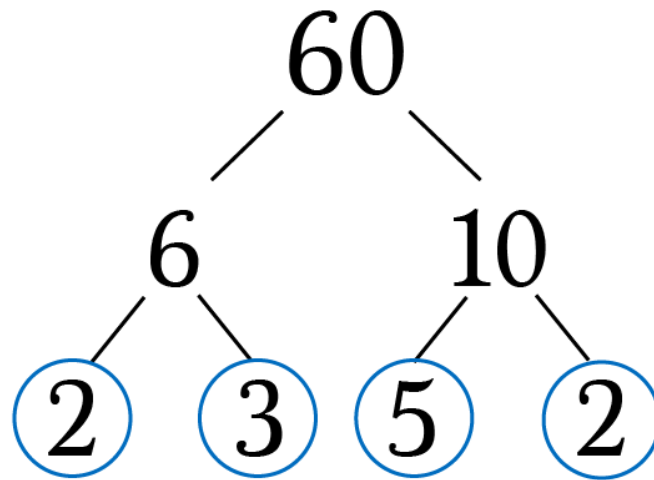
Children apply their previous knowledge of dividing 2-digit numbers to divide a 3-digit number by a 1-digit number.

# Year 5

- ▶ Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers up to  $12 \times 12$ .

E.g. find the common factors of 75 and 90 = 1, 3, 5, 15, 25, 75.

- ▶ Know and use the vocabulary of prime numbers, prime factors (a number that divides only by itself and 1, e.g. 2, 3, 5, 7, 11...) and composite (non-prime) numbers.



**Prime factors**– A factor of a number that is prime.

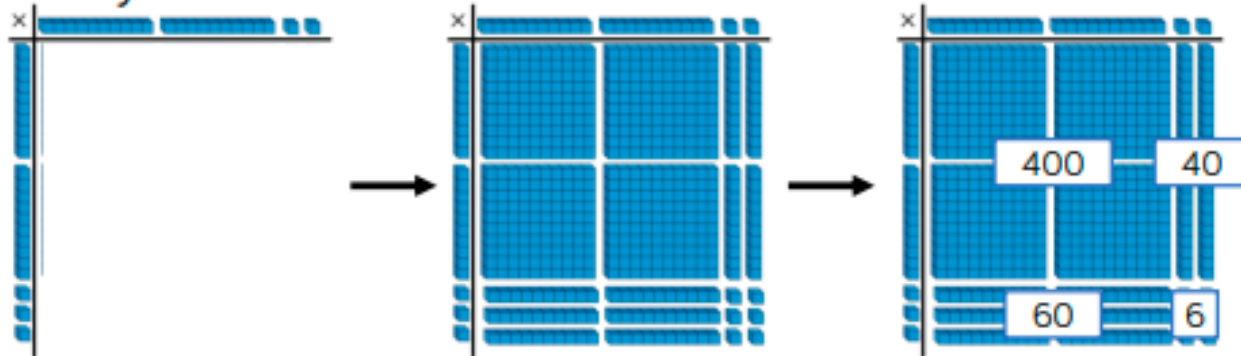
**Composite numbers**– Non– prime numbers e.g. 4, 6, 8, 9 etc.

- ▶ 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 of squared (<sup>2</sup>) and cubed (<sup>3</sup>).



Children use Base 10 to represent the area model of multiplication, which will enable them to see the size and scale linked to multiplying.

Whitney uses Base 10 to calculate  $23 \times 22$

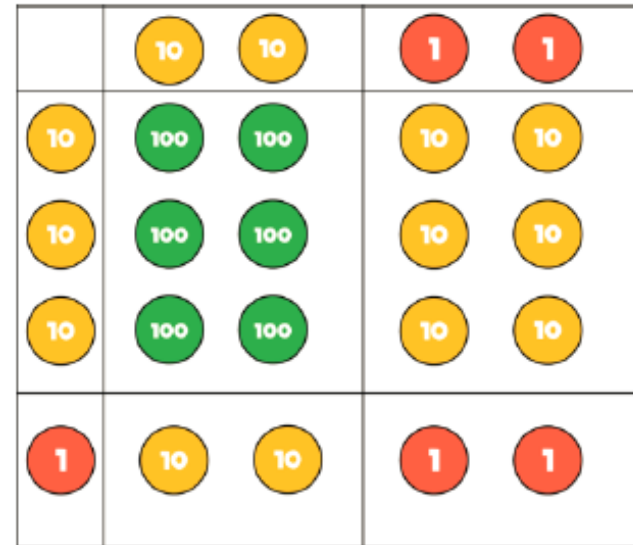
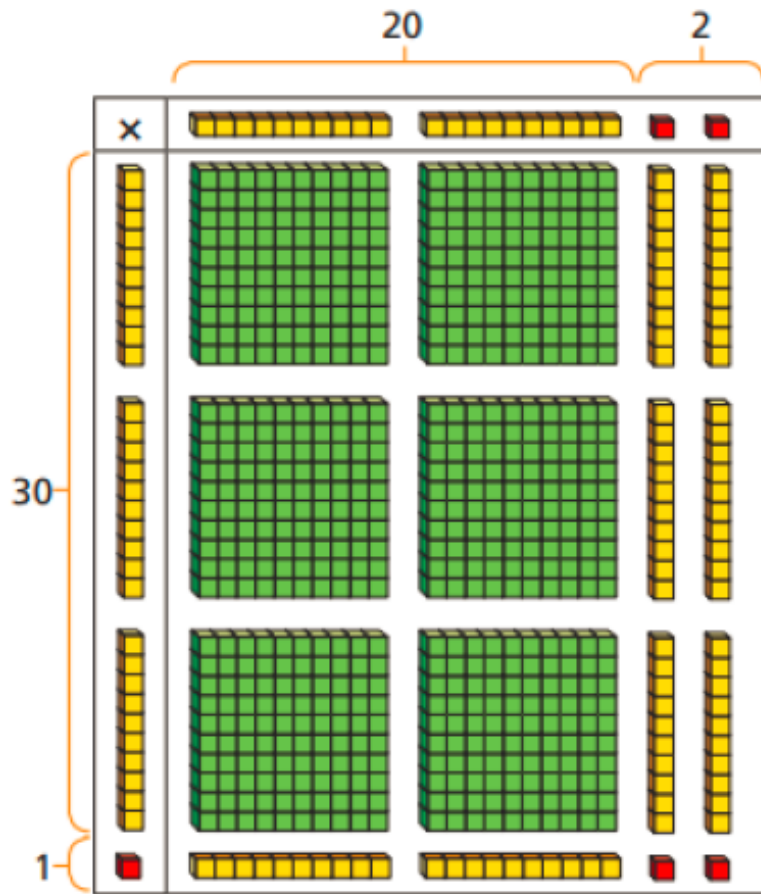


Rosie adapts the Base 10 method to calculate  $44 \times 32$

×	10	10	10	10	1	1	1	1
10	100	100	100	100	10	10	10	10
10	100	100	100	100	10	10	10	10
10	100	100	100	100	10	10	10	10
1	10	10	10	10	1	1	1	1
1	10	10	10	10	1	1	1	1

×	40	4
30	1,200	120
2	80	8

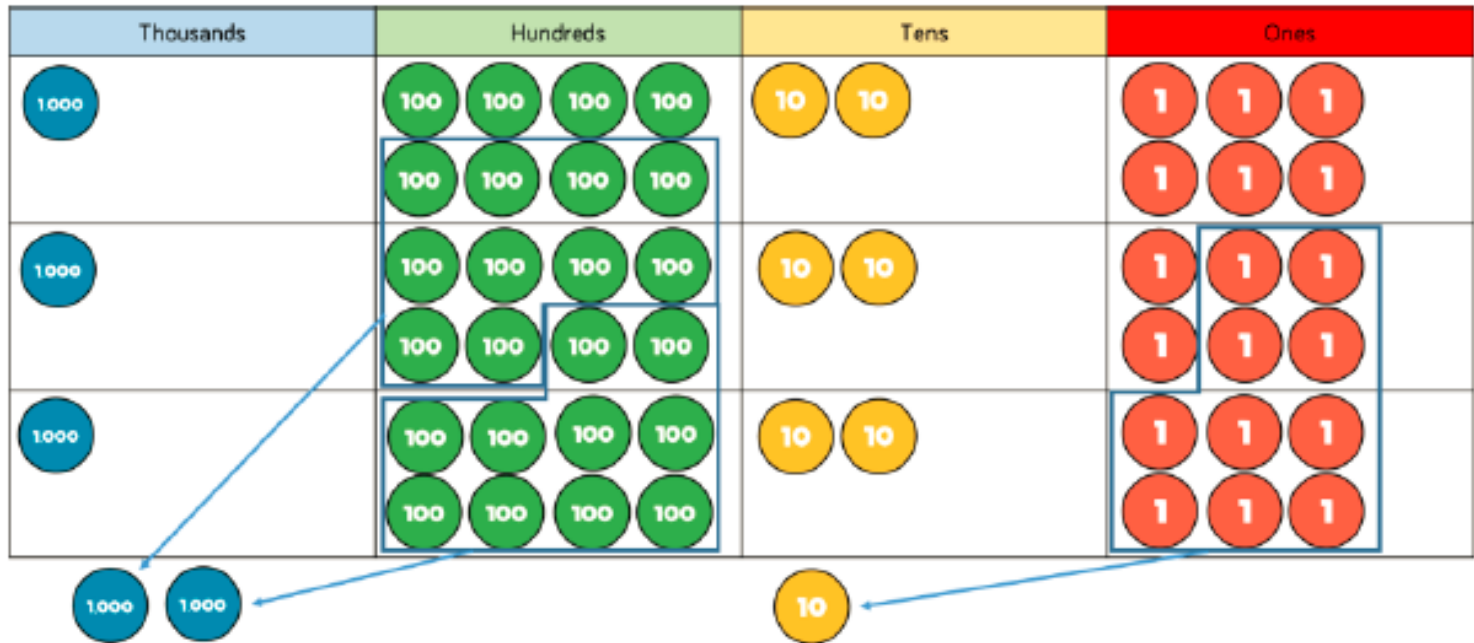
# Multiply 2-digit numbers by 2-digit numbers



×	20	2
30	600	60
1	20	2

	H	T	O
		2	2
×		3	1
		2	2
	6	6	0
	6	8	2

$$22 \times 31 = 682$$

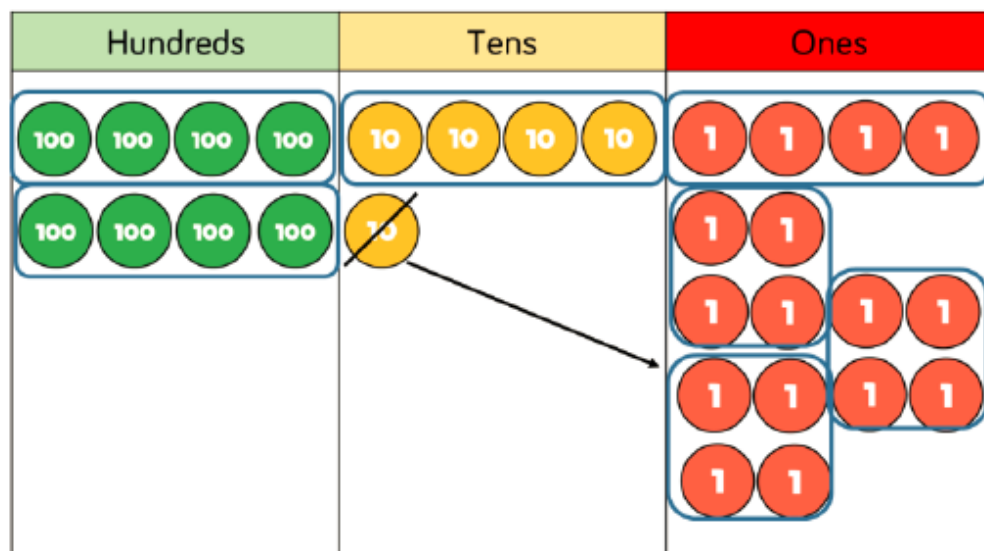


- ▶ Multiply numbers up to 4 digits by a one- or two-digit number.

$$1,826 \times 3 = 5,478$$

	Th	H	T	O
	1	8	2	6
x				3
	5	4	7	8
	2		1	

- ▶ 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.



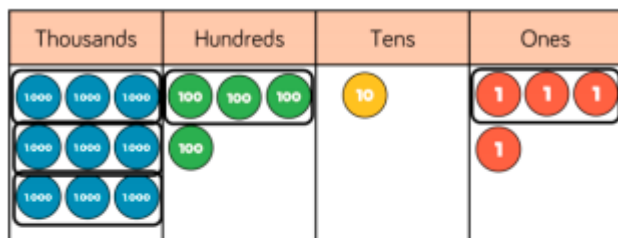
		2	1	4
	4	8	5	<sup>1</sup> 6

- ▶ Multiply and divide whole numbers and those involving decimals by 10, 100, 1000.
- ▶ Solve problems involving addition, subtraction, multiplication and division and a combination of these including understanding the meaning of the equals sign.

E.g.  $5 \times 2 = 12 - 2$

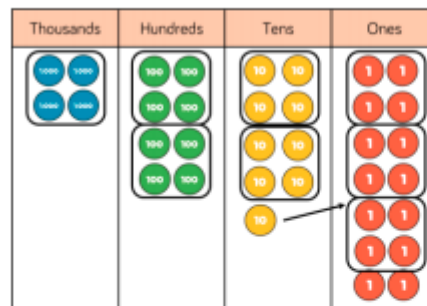
$36 \div 4 = 5 + 4$

Explain and correct the working.



	3	1	0	1
3	9	4	1	4

Here is a method to solve 4,894 divided by 4 using place value counters and short division.



	1	2	2	3	
4	4	8	9	4	r2

Use this method to calculate:

$6,613 \div 5$

$2,471 \div 3$

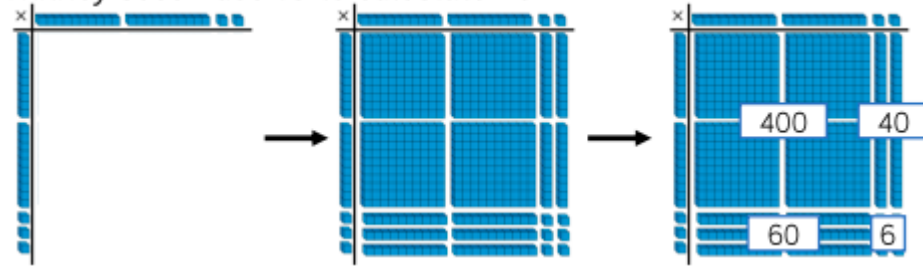
$9,363 \div 4$

Muffins are packed in trays of 6 in a factory.  
 In one day, the factory makes 5,623 muffins.  
 How many trays do they need?  
 How many trays will be full?  
 Why are your answers different?

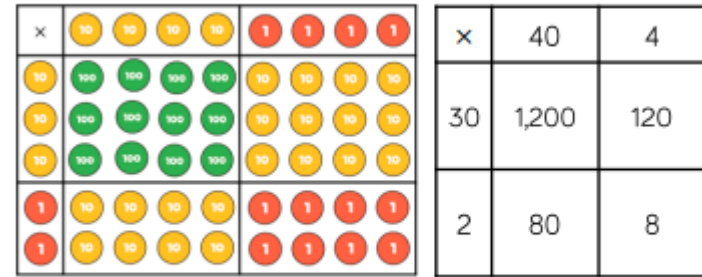
# Year 6

- ▶ Solve problems involving addition, subtraction, multiplication and division.

Whitney uses Base 10 to calculate  $23 \times 22$



Rosie adapts the Base 10 method to calculate  $44 \times 32$



Compare using place value counters and a grid to calculate:

$$45 \times 42$$

$$52 \times 24$$

$$34 \times 43$$

- ▶ Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

- ▶ Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

	4	2	6	7
×			3	4

- ▶ Divide numbers up to 4 digits by a two-digit number using the formal written method of **short division** and **long division**, interpreting remainders according to the context.

	0	3	6
12	4	<sup>4</sup> 3	<sup>7</sup> 2

- ▶ Use their knowledge of the order of the operations to carry out calculations involving the four operations.

2 3 4 5 7 8

Place the digits in the boxes to make the largest product.

×				

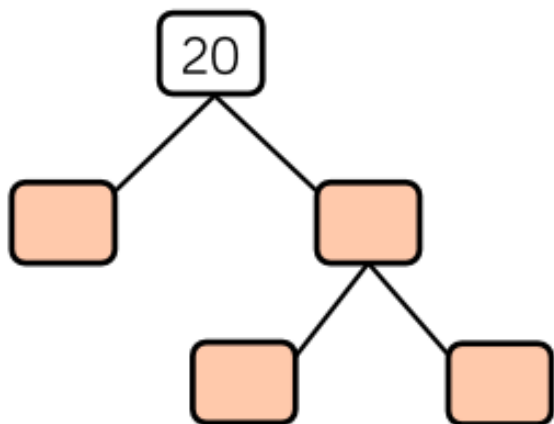
		0	3	6
1	2	4	3	2
	—	3	6	0
			7	2
	—		7	2
				0

$12 \times 1 = 12$   
 $12 \times 2 = 24$   
 $12 \times 3 = 36$   
 $12 \times 4 = 48$   
 $12 \times 5 = 60$   
 $12 \times 6 = 72$   
 $12 \times 7 = 84$   
 $12 \times 8 = 96$   
 $12 \times 7 = 108$   
 $12 \times 10 = 120$



- ▶ Children identify the common factors of two numbers, common multiples, prime, composite, square and cube numbers.

All numbers can be broken down into prime factors.  
A prime factor tree can help us find them.  
Complete the prime factor tree for 20



Use the clues to work out the number.

- It is greater than 10
- It is an odd number
- It is not a prime number
- It is less than 25
- It is a factor of 60

24 and 36

20 and 30

28 and 45



# Summary

Using concrete resources to  
support multiplication and  
division

# Numicon



$$5 \times 4 = 20$$

$$4 \times 5 = 20$$



$$5 \times 4 = 20$$

$$4 \times 5 = 20$$

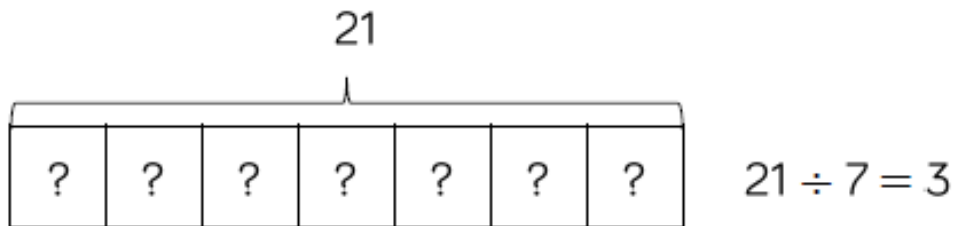
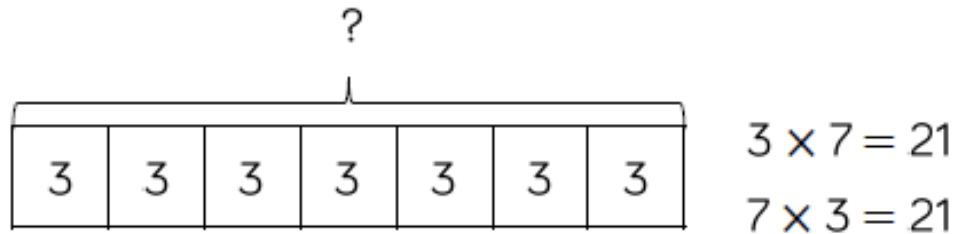
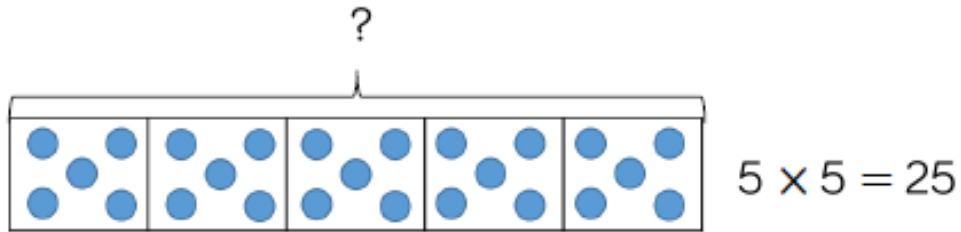


$$18 \div 3 = 6$$

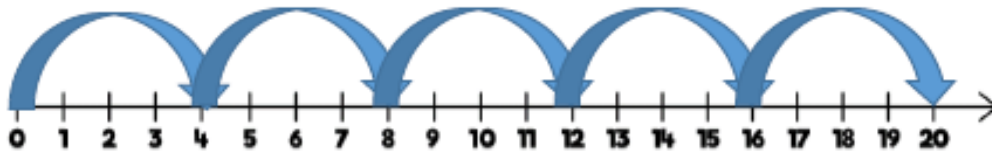


- ▶ Numicon supports children's understanding of multiplication as repeated addition.
- ▶ Children understand division as grouping. Children make the number they are dividing and then place the number shape they are dividing by over the top to find out how many groups of the number there are altogether. E.g, there are 6 groups of 3 in 18.

# Bar Modelling

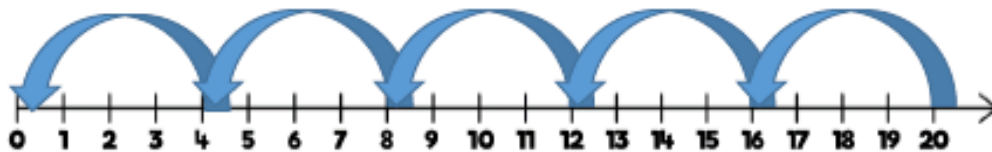


- ▶ Using a single bar model to represent repeated addition.
- ▶ Can use counters, dots or cubes within the bar before moving on to placing digits into the bar.
- ▶ Division can be presented by showing the total of the bar model and then dividing the bar model into equal groups.









$$4 \times 5 = 20$$


$$5 \times 4 = 20$$



$$20 \div 4 = 5$$

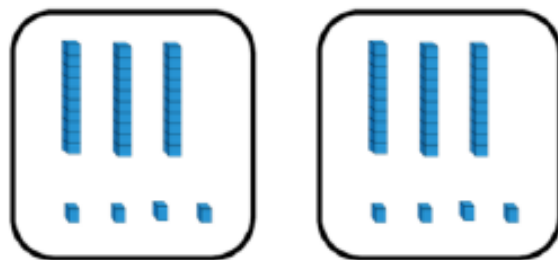
- ▶ Numbered lines support children to count in multiples, forwards and backwards as well as calculating single-digit multiplication.
- ▶ When multiplying children start at 0 and then count on to find the product of the numbers.
- ▶ When dividing, start at the number they are dividing by until they reach 0.
- ▶ Children record how many jumps they have made to find the answer to the division.

Hundreds	Tens	Ones
		
		
		

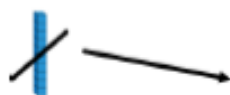


$$\begin{array}{r}
 24 \\
 \times 3 \\
 \hline
 72 \\
 \hline
 1
 \end{array}$$

- ▶ Supports column multiplication.
- ▶ It is important that children write out their calculation alongside equipment so they can see how the concrete and written representations match.
- ▶ Less efficient for larger numbers.

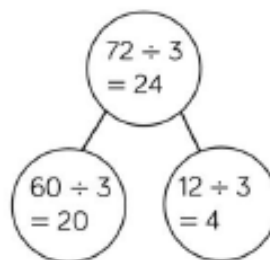


$$68 \div 2 = 34$$



Tens	Ones

$$72 \div 3 = 24$$



- ▶ Sharing Base 10/ Dienes between different groups e.g. by drawing circles or by rows on a place value grid.

Hundreds	Tens	Ones
	30 30 30	1 1 1 1
	30 30 30	1 1 1 1
	30 30 30	1 1 1 1
	30 30 30	1 1 1 1
	30 30 30	1 1 1 1
100	20 20	

$$\begin{array}{r}
 34 \\
 \times 5 \\
 \hline
 120 \\
 \hline
 12
 \end{array}$$

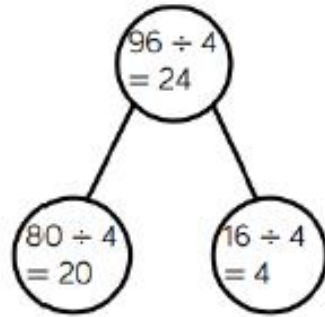
×	30 30 30 30	1 1 1 1
30	100 100 100 100	30 30 30 30
30	100 100 100 100	30 30 30 30
30	100 100 100 100	30 30 30 30
1	10 10 10 10	1 1 1 1
1	10 10 10 10	1 1 1 1

$$\begin{array}{r}
 44 \\
 \times 32 \\
 \hline
 8 \\
 80 \\
 120 \\
 + 1200 \\
 \hline
 1408 \\
 \hline
 1
 \end{array}$$

- ▶ It is important that children write out their calculation alongside the equipment so they can see how the concrete and written match.
- ▶ PVC should be used to support the understanding of the written methods rather than support the arithmetic.
- ▶ Children can see how to multiply 2-digit numbers by 2-digit numbers.



Tens	Ones
10 10	1 1 1 1
10 10	1 1 1 1
10 10	1 1 1 1
10 10	1 1 1 1



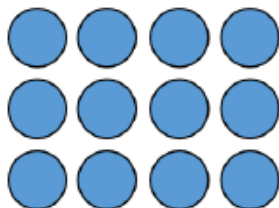
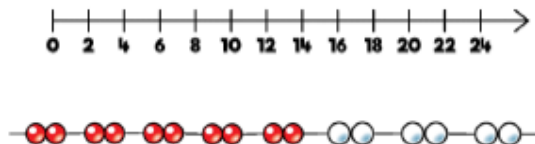
Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100	10 10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1 1

$$\begin{array}{r} 1223 \\ 4 \overline{) 4892} \end{array}$$

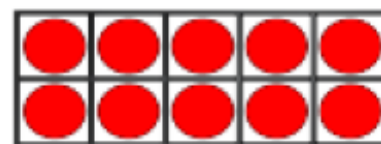
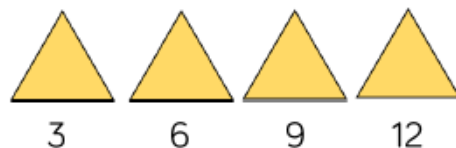
- ▶ When working with smaller numbers, children can use PVC to share between groups.
- ▶ They start by sharing the larger place value column and work from left to right. If there are any counters left over once they have been shared, they exchange the counter e.g. exchange one ten for ten ones. This method can be linked to the part-whole model to support children to show their thinking.
- ▶ Also support children's understanding of short division by grouping counters rather than sharing them.



# Times tables



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



9	18	27	36	45
54	63	72	81	90



4      8      12      16

4	8	12	16	20
24	28	32	36	40
44	48	52	56	60



# Multiplication

Skill	Year
Solve one-step problems with multiplication	1/2
Multiply 2-digit by 1-digit numbers	3/4
Multiply 3-digit by 1-digit numbers	4
Multiply 4-digit by 1-digit numbers	5

Skill	Year
Multiply 2-digit by 2-digit numbers	5
Multiply 2-digit by 3-digit numbers	5
Multiply 2-digit by 4-digit numbers	5/6

# Division

Skill	Year
Solve one-step problems with division (sharing)	1/2
Solve one-step problems with division (grouping)	1/2
Divide 2-digits by 1-digit (no exchange sharing)	3
Divide 2-digits by 1-digit (sharing with exchange)	3

Skill	Year
Divide 2-digits by 1-digit (sharing with remainders)	3/4
Divide 2-digits by 1-digit (grouping)	4/5
Divide 3-digits by 1-digit (sharing with exchange)	4
Divide 3-digits by 1-digit (grouping)	4/5

Skill	Year
Divide 4-digits by 1-digit (grouping)	5
Divide multi-digits by 2-digits (short division)	6
Divide multi-digits by 2-digits (long division)	6

# Supporting home learning

<https://whiterosemaths.com/for-parents/>

<https://whiterosemaths.com/parent-workbooks/>

<https://home.oxfordowl.co.uk/kids-activities/fun-maths-games-and-activities/>

[Mathsbot.com/manipulatives](https://mathsbot.com/manipulatives)

- ▶ [www.bbc.co.uk/bitesize](http://www.bbc.co.uk/bitesize)
- ▶ [www.purplemash.com](http://www.purplemash.com) -> Maths
- ▶ [nrich.maths.org](http://nrich.maths.org)
- ▶ [ICTgames.com](http://ictgames.com)
- ▶ [Topmarks.co.uk](http://topmarks.co.uk)
- ▶ [Mathsframe.co.uk](http://mathsframe.co.uk)
- ▶ [Primarygames.co.uk](http://primarygames.co.uk)
- ▶ [Mathszone.co.uk](http://mathszone.co.uk)
- ▶ [www.snappymaths.com/](http://www.snappymaths.com/)
- ▶ [Mathplayground.com](http://mathplayground.com)
- ▶ [Doorwayonline.org.uk/number](http://doorwayonline.org.uk/number)

Times tables:

- ▶ [www.learnyourtables.co.uk](http://www.learnyourtables.co.uk)
- ▶ [www.educationquizzes.com](http://www.educationquizzes.com)
- ▶ Hit the button
- ▶ [Timestables.co.uk](http://timestables.co.uk)



- Board games– Yahtzee, Rummikub, snakes and ladders, Monopoly, Bingo, Dominoes
- Dice games
- Card games: 10 pairs (addition/number bonds),
- Snap (cards add up to target number) etc
- Math Boggle (16 number cards– make a maths sentence)

# Questions

