

Maths at Martin Primary School
Parent Workshop
26.03.2026



Aims of the session

- Overview of our approach to maths at Martin Primary School
- CPA approach
- Bar model
- Progression of the four calculations from Year 1 to Year 6
- Misconceptions
- Modelling of methods in year groups

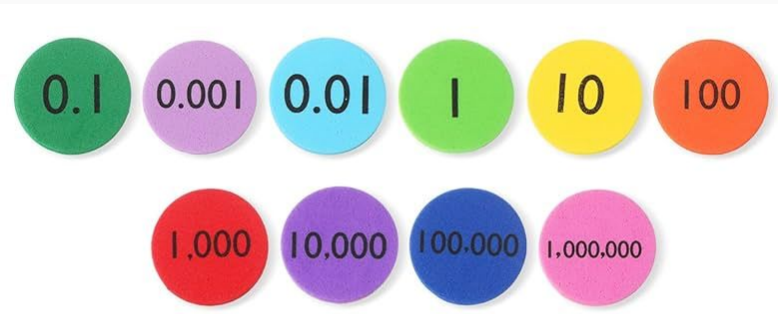
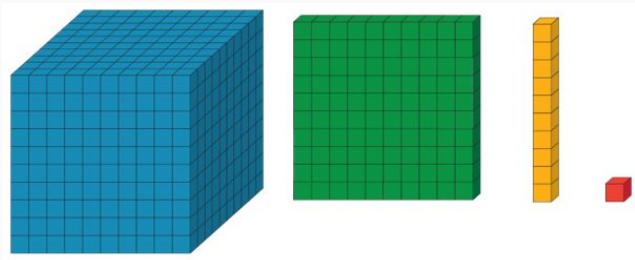
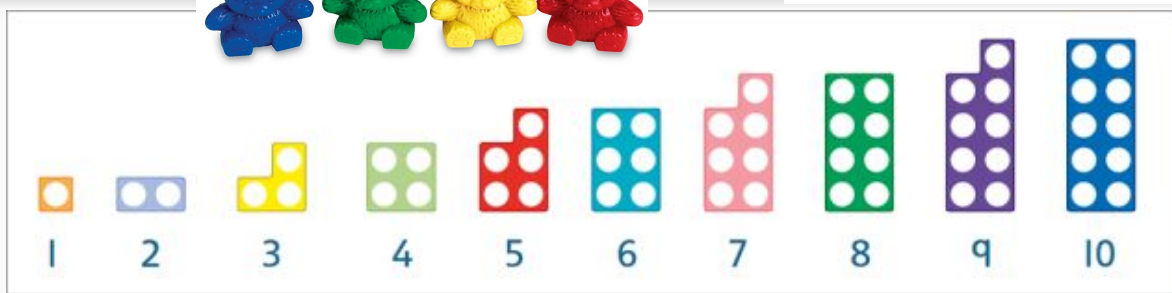
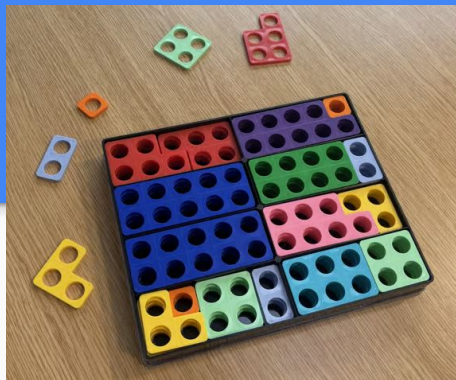
Maths at Martin Primary School

In our school we want children to enjoy maths and we aim to nurture their confidence in their maths abilities. Our learning is memorable, ambitious and relevant. We sequence learning that builds and is cumulative, enabling children to connect ideas.

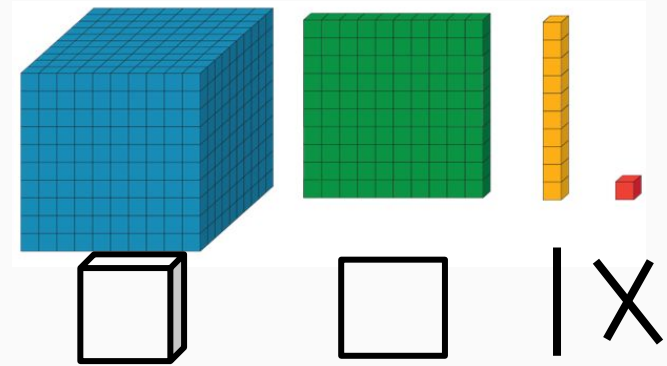
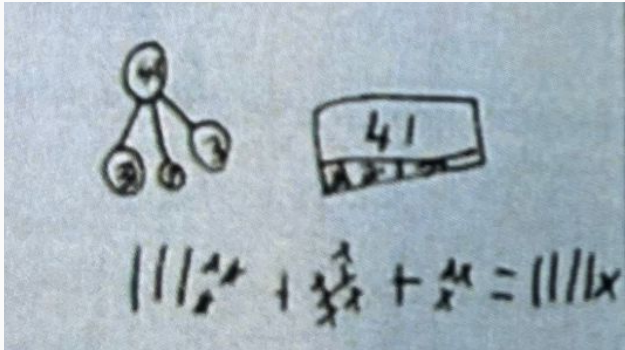
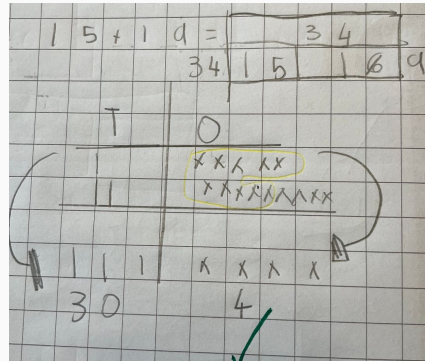
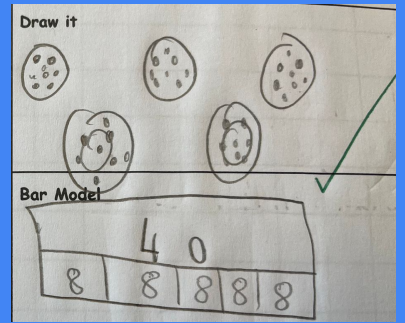
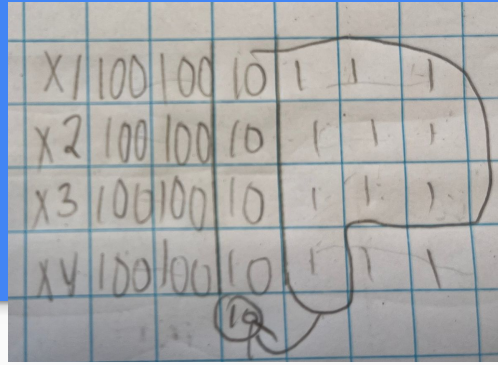
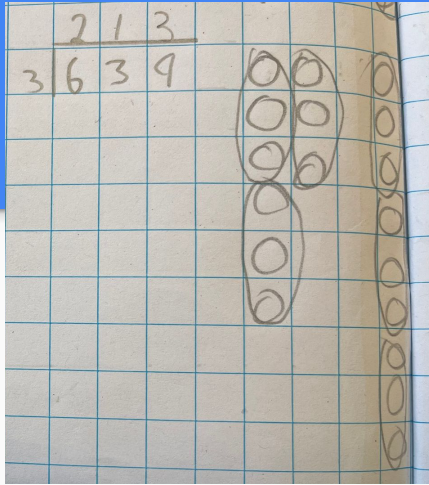
Children are encouraged to show their working in a variety of ways and to use a range of resources to solve challenging problems. We aim for children to master content within their year group so they are able to take on complex tasks. Where possible, teaching is linked to everyday life (for example- linking decimals to money), motivating children and helping them understand the importance of mathematics in the world.

Our maths curriculum is delivered through a CPA approach (concrete, pictorial, abstract) and further supported through the consistent use of bar modelling. Maths learning is hands on, rich in resources and rich in vocabulary. Children are scaffolded up in their learning and are taught in mixed ability groups, supporting all children to develop their mathematical understanding.

Concrete- equipment



Pictorial



Abstract

$$7. \quad 3199 \div 45 = 71 \text{ R } 4$$

0	2	1	3	9
15	3	1	9	9
0	↓			
3	1			
3	0	↓		
	9			
1	5	↓		
	4	9		
	4	5		
		4		

1	0	7	13	1
5	8	4	2	
3	4	7	6	
2	3	6	6	

H	T	O				
1	0	3				
		3				
		9	(3 × 3		
		0	0	(0 × 3	
		3	0	0	(100 × 3

$$12 + 12 = 24$$

CPA approach

Problem

John found 31 gold coins, 3 silver and 7 bronze coins. How many coins does he have altogether?

C

P

A

$31 + 7 + 03 = 41$

$7 + 3 + 31 = 41$

$41 = 31 + 7$

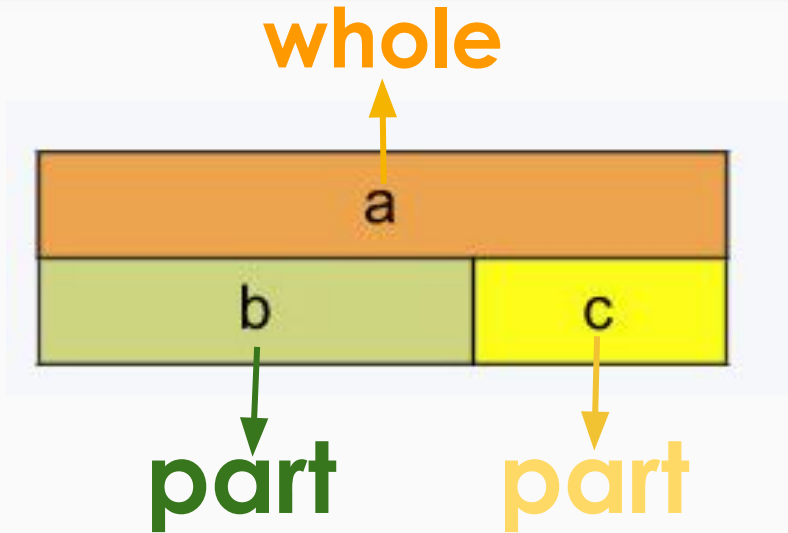
$41 = 7 + 31$

$41 = 3 + 31 + 7$

Names: _____

Bar model

Addition/ subtraction



$$b + c = a$$

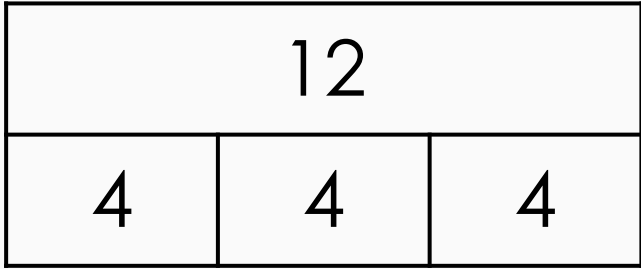
$$c + b = a$$

$$a - b = c$$

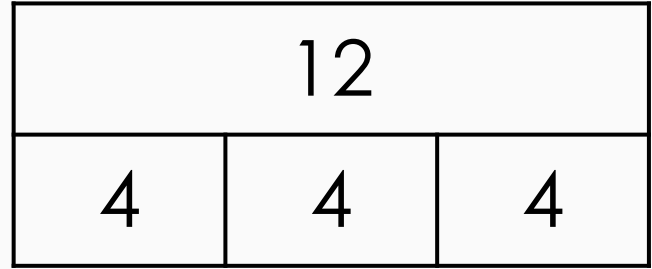
$$a - c = b$$

Bar model

Multiplication/ division



$$4 \times 3 = 12$$



$$12 \div 3 = 4$$

Addition/ subtraction

Year 1

4/12/25
LO: I can represent and use related number bonds and subtraction facts (fact families).

2	+	8	=	10
8	+	2	=	10
10	-	2	=	8
10	-	8	=	2

10	
2	8

There were
10 cupcaks
2 were gone
were 8 cupcaks
happo

9 = 1 + 6 + 2 ✓

9 = 4 + 1 + 4 ✓

25/11/25
LO: I can add together 3 single digit numbers and show this on part whole models and bar models.

Eleha

3/12/25 CP Activity
LO: I can explore number bonds within 10/20. I can work systematically to find all possible answers.

Eleha

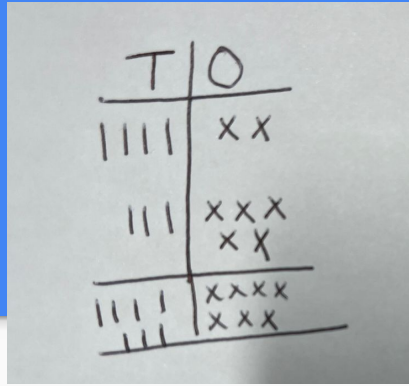
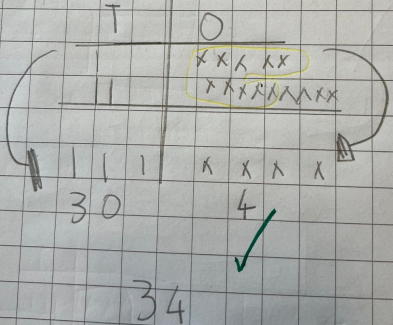
Addition/ subtraction

Year 2

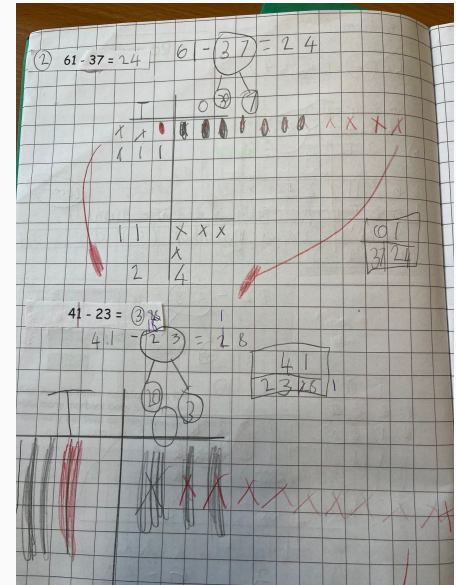
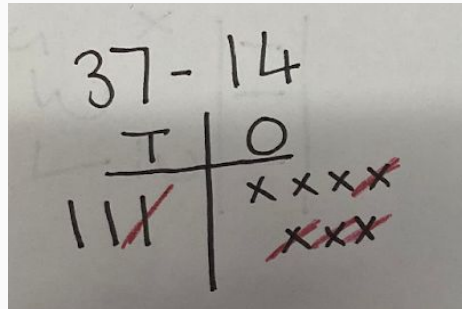
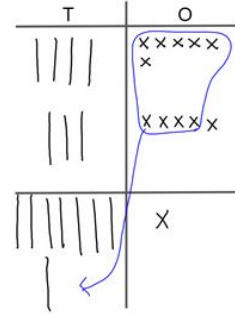
Ms Black plants 15 bulbs in the garden and Miss Freedman plants 19 bulbs. How many bulbs do they plant in total?



$$15 + 19 = 34$$



$$46 + 35 = 81$$



Addition/ subtraction

Year 3

$$24 + 23 = 47$$

	T	O
	11	xxxx
+	11	xxx
<hr/>		
	1111	xxxxx xxx

$$24 + 23 = 47$$

	T	O
	24	
+	23	
<hr/>		
	47	

$$37 - 14$$

	T	O
	11	xxxxx xxx

$$37 - 14$$

	T	O
	37	
-	14	
<hr/>		
	23	

	H	T	O
	3	7	0
+	1	2	9
<hr/>			
	4	9	9

Diagram: A tree diagram showing 499 at the top, branching down to 370 and 129.

	H	T	O
	2	4	8
+	3	9	0
<hr/>			
	6	3	8

Diagram: A tree diagram showing 638 at the top, branching down to 248 and 390. Includes a box with 1111 and a row of 10 crosses.

cross a 10.

	H	T	O
	6	2	8
	2	1	9
<hr/>			
	4	0	9

Diagram: A tree diagram showing 628 at the top, branching down to 219 and 409. Includes a box with 219 and a row of 10 crosses.

Ethan has £409 left. ✓

Addition/ subtraction

Year 6

Use <, > or = to compare the calculations.

$3.89 - 0.738$	$>$	$4.503 - 1.65$
$47.803 + 4.67$	$<$	$28.482 + 24.27$
$28.537 - 8.37$	$=$	$10.298 + 9.869$

$$\begin{array}{r} 47.803 \\ + 4.670 \\ \hline 52.473 \end{array}$$

$44\boxed{2}5$	$84\boxed{1}9$
$+ \boxed{2}6\boxed{5}$	$+ \boxed{4}0\boxed{3}$
<hr/>	<hr/>
4690	8822

$$\begin{array}{r} \boxed{9}1\overset{3}{4}\overset{1}{4}\boxed{0}\boxed{8} \\ - 1\boxed{2}0\boxed{6}6.0 \\ \hline 793748 \end{array}$$

Multiplication

Year 1

3/2/26 CT/TA/I
LO: I can add equal groups.

Look at the equal groups below.
Show them in assorted ways.

Which one is the odd one out?
Explain how you know.

4 groups of 5

2 groups of 10

5 groups of 4

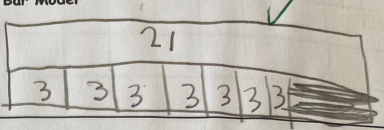
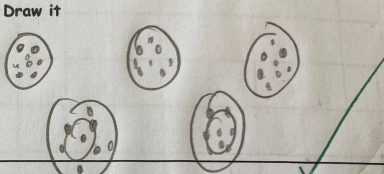
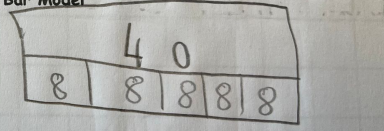
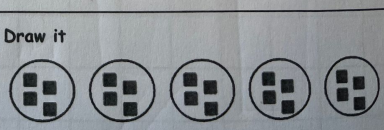
10 groups of 2

3 groups of 6

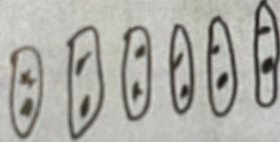
The student's work is on a grid background. At the top, there is a date '3/2/26' and initials 'CT/TA/I'. Below that is a Learning Objective (LO) 'I can add equal groups.' in a green box. The main task is to identify the odd one out among five multiplication descriptions: '4 groups of 5', '2 groups of 10', '5 groups of 4', '10 groups of 2', and '3 groups of 6'. The student has drawn several representations: a boat, a row of five smiley faces, a 2x5 grid of black squares, a 5x4 grid of black squares, a 10x2 grid of black squares, and a 3x6 grid of blue circular objects. There are also some handwritten calculations and diagrams, including a box with '4x5=20' and another with '5x4=20'. A green checkmark is visible at the bottom right of the work.

Multiplication

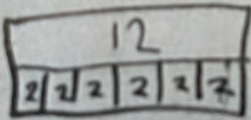
Year 2

Calculation - Add It $3+3+3+3+3+3+3=21$	Bar Model 
Say it 5 groups of 8 equals 40	Draw it 
Calculation - Add It $8+8+8+8+8=40$	Bar Model 
Say it 5 groups of 4	Draw it 

6 groups of 2



$2+2+2+2+2+2=12$
 $6 \times 2 = 12$
 $2 \times 6 = 12$



Multiplication

Year 3

4.

The diagram shows three groups of dots representing $7 \times 4 = 28$. Each group consists of two rows of four dots. Below these are two equations: $7 \times 4 = 28$ and $4 \times 7 = 28$. A fourth group of dots shows a single row of seven dots, representing $4 \times 7 = 28$.

3. H T O

7 2 (2 x 4)

4 x 4 (70 x 4)

8

+ 2 8 0

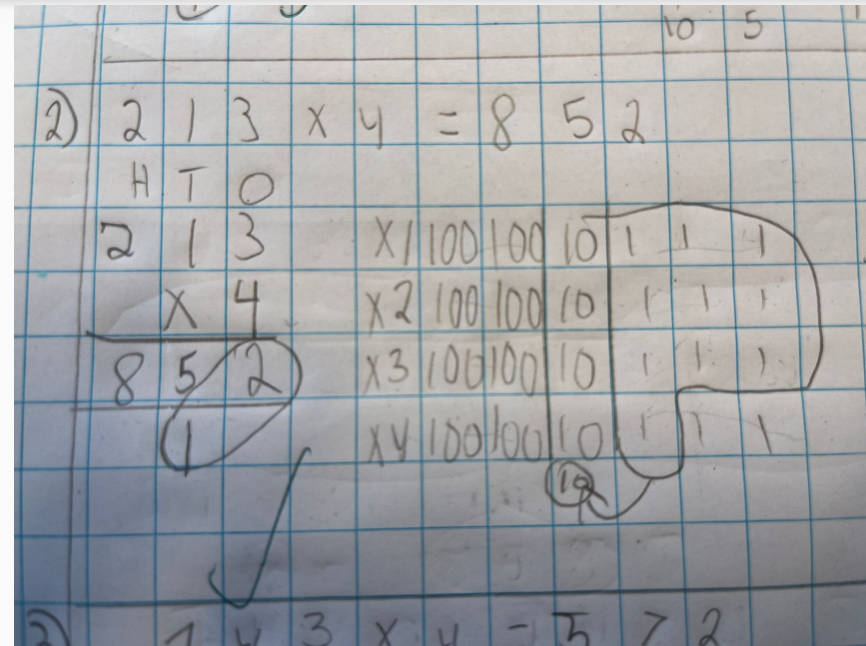
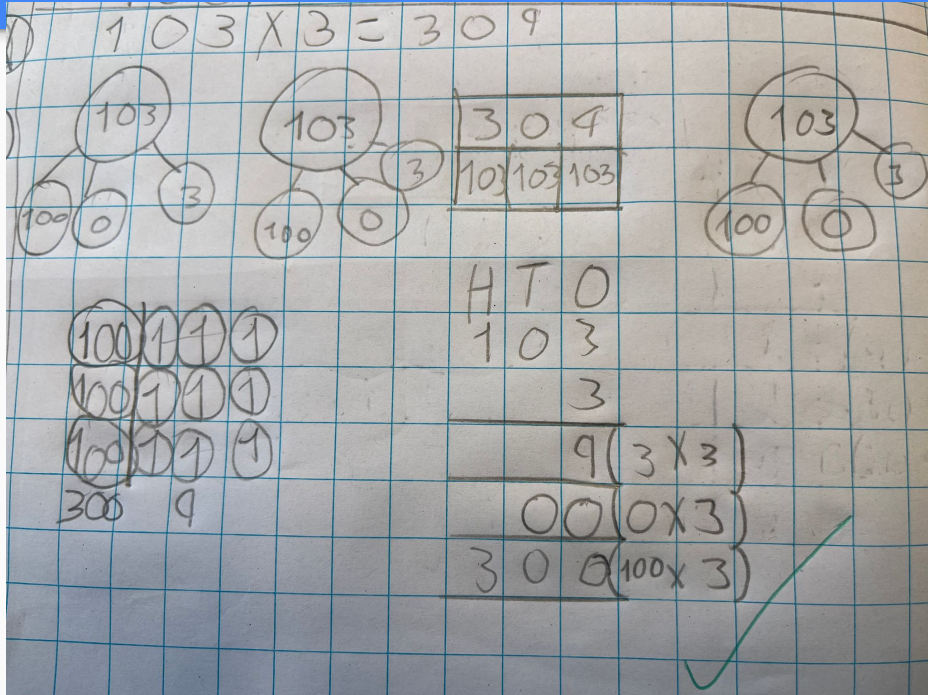
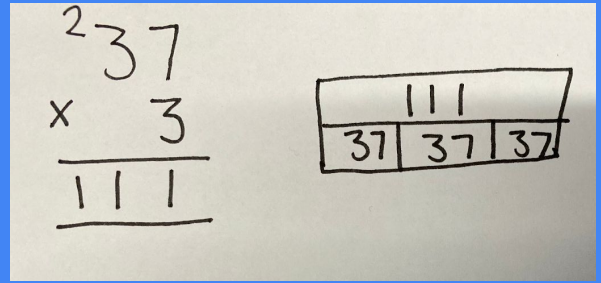
2 8 8

$72 \times 4 = 288$

$$23 \times 4 = 92$$
$$\begin{array}{r} 23 \\ \times 4 \\ \hline 12 \text{ (4 x 3)} \\ + 80 \text{ (4 x 20)} \\ \hline 92 \end{array}$$

Multiplication

Year 4



Multiplication

Year 5

$$\begin{array}{r} 8506 \\ \times 23 \\ \hline 25518 \\ 170120 \\ \hline 195638 \end{array}$$

5. A knitting pattern book contains 1689 different knitting patterns. If each pattern uses 36 rows of knitting, how many rows are in the entire book?

$$\begin{array}{r} 1689 \\ \times 36 \\ \hline 10134 \\ 50670 \\ \hline 60804 \end{array}$$

There are 60804 rows in the book.

Multiplication

Year 6

$$\begin{array}{r} 34.31 \times 7.4 = 253.894 \\ \times \overset{3}{3} \overset{2}{4} \overset{\textcircled{3}}{\textcircled{.}} \overset{\textcircled{1}}{\textcircled{3}} \overset{\textcircled{1}}{\textcircled{1}} \\ \times \quad \quad \quad \underline{7.4} \\ \hline \quad 13724 \\ + 240170 \\ \hline \underline{253.894} \end{array}$$

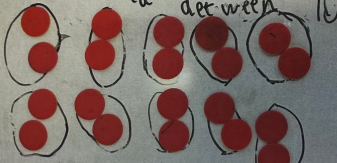
Division

Year 1

10/2/36
LO: I can explore sharing equally.


Question:	✓ yes	✗ no
Can you share 20 between 5 equally?	✓	✓
Can you share 13 between 5 equally?	✓	✓
Can you share 12 between 2 equally?	✓	✓
Can you share 20 between 10 equally?	✓	✗
Can you share 19 between 2 equally?	✓	✗
Can you share 24 between 10 equally?	✗	✓

20 shared between 10
Elena

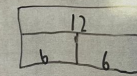


Each group has 2. ✓

12 shared between 2
Elena

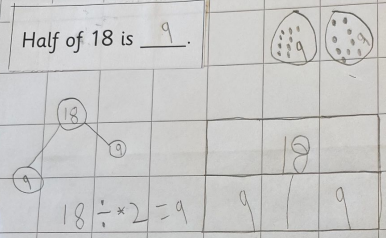


Each group has 6



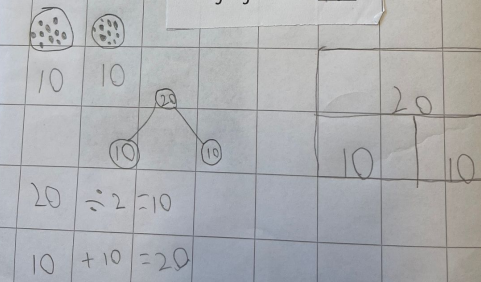
27/2/26 I/CT/TA
LO: I can recognise and find half of an amount to 20 and show this in different ways

Half of 18 is 9.



18 ÷ 2 = 9
9 + 9 = 18

Half of 20 is 10.

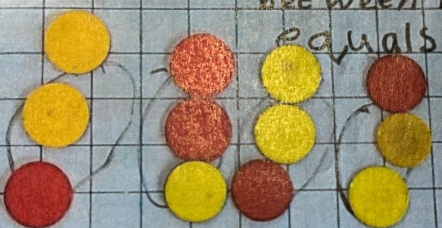


20 ÷ 2 = 10
10 + 10 = 20

Division

Year 2

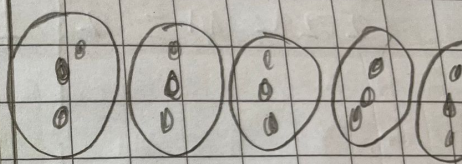

12 Shared between 4 equals 3



$3 \times 4 = 12$
 $4 \times 3 = 12$
 $12 \div 4 = 3$
 $12 \div 3 = 4$

1	2
3	3
3	3

I have 15 cupcakes and I share them out equally to 5 of my friends. How many will they each get? 3



$5 \times 3 = 15$
 $15 \div 3 = 5$
 $3 \times 5 = 15$
 $15 \div 5 = 3$

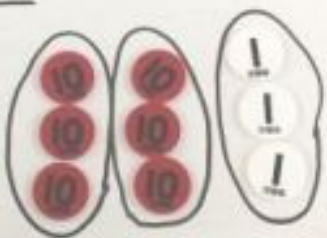
15				
3	3	3	3	3

Division

Year 3

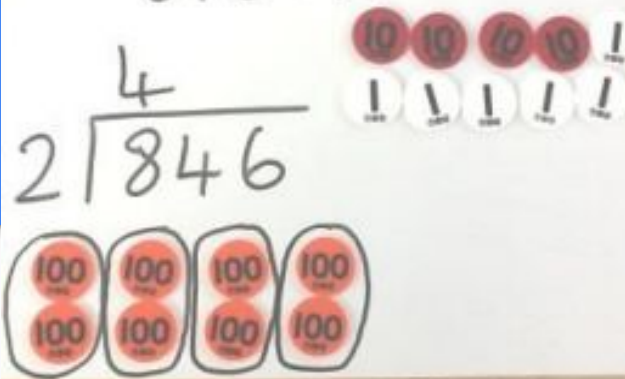
$63 \div 3 = 21$

$$\begin{array}{r} 21 \\ 3 \overline{)63} \end{array}$$



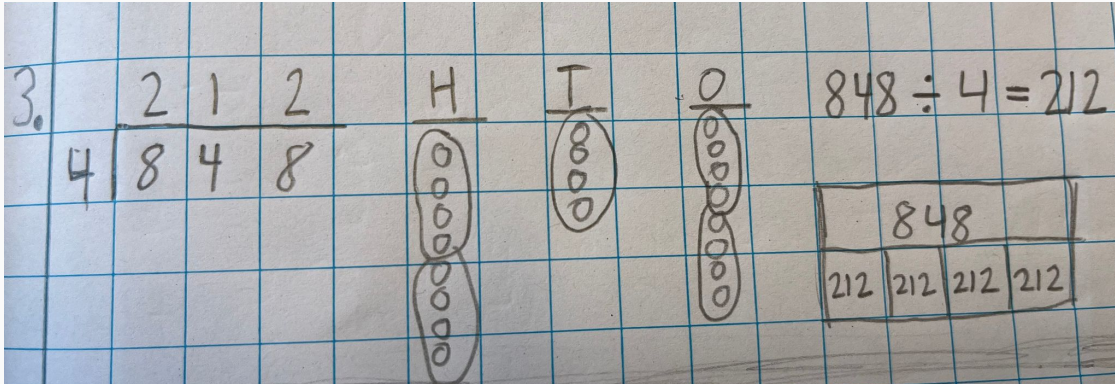
$846 \div 2 =$

$$\begin{array}{r} 4 \\ 2 \overline{)846} \end{array}$$



3.

	2	1	2	H	T	O			
4	8	4	8	000000	0000	00000000	$848 \div 4 = 212$		
							<table border="1"><tr><td>848</td></tr><tr><td>212 212 212 212</td></tr></table>	848	212 212 212 212
848									
212 212 212 212									



Division

Year 5

How many full rows of seats are needed altogether?

$$3276 \div 4 = 819$$

3276
819
3276
32
007
4
36
36
00

There are 819 full rows needed.

Workings

$$\begin{array}{r} 036 \\ 15 \overline{) 540} \\ \underline{0} \\ 54 \\ \underline{15} \\ 45 \\ \underline{45} \\ 090 \\ \underline{90} \\ 00 \end{array}$$

Workings

$$\begin{array}{r} 15 \\ \times 2 \\ \hline 30 \end{array}$$
$$\begin{array}{r} 15 \\ \times 3 \\ \hline 45 \end{array}$$
$$\begin{array}{r} 315 \\ \times 6 \\ \hline 90 \end{array}$$

Division

Year 6

7. $3199 \div 45 = 213 \frac{4}{5}$

$$\begin{array}{r} 0213^{\text{r}4} \\ 15 \overline{) 3199} \\ \underline{0} \downarrow \\ 31 \downarrow \\ \underline{30} \downarrow \\ 19 \downarrow \\ \underline{15} \downarrow \\ 49 \\ \underline{45} \\ 4 \end{array}$$

$$849 \div 4 = 212 \text{r}1 \text{ or } 212\frac{1}{4} \text{ or } 212.25$$

$$\begin{array}{r} 212 \text{r}1 \\ 4 \overline{) 849} \\ \underline{-8} \\ \text{r}1 \end{array}$$

$$\begin{array}{r} 212\frac{1}{4} \\ 4 \overline{) 849} \\ \underline{-8} \\ \text{r}1 \end{array}$$

$$\begin{array}{r} 212.25 \\ 4 \overline{) 849.00} \\ \underline{-8} \downarrow \\ 10 \downarrow \\ \underline{-8} \downarrow \\ 20 \end{array}$$

Some language misconceptions/ pointers ...

- Adding/ taking away a zero when multiplying/ dividing by 10, 100 etc
- Just move the decimal point...
- Calculation rather than sum
- Bus stop method
- 'Take 34 from 21' for $34 - 21$
- Difference means subtraction

Demonstrations in key stages