KS2 maths parent workshop

28.01.2025

Miss Earl
Mr Lockwood

Aims of the session

- To understand the concept of a mastery approach
- To explain concrete, pictorial and abstract approaches in maths
- To discuss how maths is taught today at Joseph Hood Primary School
- To show some of the methods that are taught
- Explore resources that you can use to support at home.

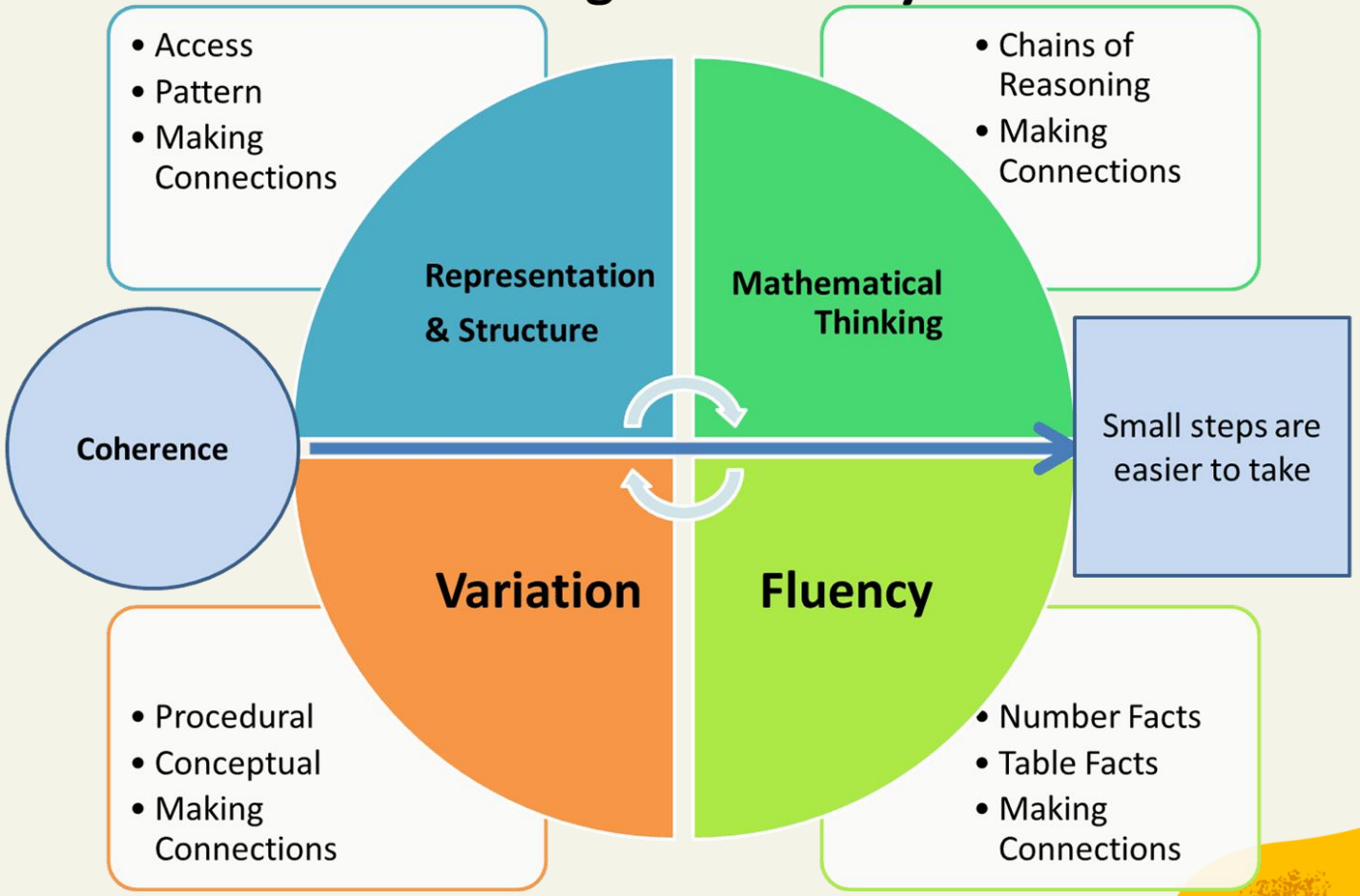
Our Vision

Our aim at Joseph Hood is for all children to enjoy mathematics and have a secure and deep understanding of fundamental mathematical concepts and procedures when they leave us to go to secondary school. We believe that mathematics is a tool for everyday life that is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore. As teachers, we have a crucial role in supporting children's early Mathematical development and preparing them to be effective mathematicians.

Aims and Objectives

- To develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.
- To develop an ability to solve problems, reason, communicate, think logically and to work systematically and accurately.
- To use mathematical language effectively and confidently.
- To apply their knowledge and fascination of mathematics to real life contexts.

Teaching for Mastery



Teaching for mastery principles

- It is achievable for all
- Deep and sustainable learning
- The ability to build on something that has already been sufficiently mastered
- The ability to reason about a concept and make connections
- Conceptual and procedural fluency
- Problem solving is central
- Challenge through greater depth
- Accurate and controlled differentiation and interventions must be used when necessary to ensure that learning barriers are overcome.

Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** FREE TRIAL VIEW			Number **Addition and subtraction** VIEW					Number **Multiplication and division A** VIEW			
Spring term	Number **Multiplication and division B** VIEW			Measurement **Length and perimeter** VIEW			Number **Fractions A** VIEW		Measurement **Mass and capacity** VIEW			
Summer term	Number **Fractions B** VIEW		Measurement **Money** VIEW	Measurement **Time** VIEW			Geometry **Shape** VIEW		**Statistics** VIEW		Consolidation	

Year 4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** FREE TRIAL VIEW				Number **Addition and subtraction** VIEW			Measurement **Area** VIEW	Number **Multiplication and division A** VIEW			Consolidation
Spring term	Number **Multiplication and division B** VIEW				Measurement **Length and perimeter** VIEW			Number **Fractions** VIEW			Number **Decimals A** VIEW	
Summer term	Number **Decimals B** VIEW		Measurement **Money** VIEW		Measurement **Time** VIEW		Consolidation	Geometry **Shape** VIEW		Statistics VIEW	Geometry **Position and direction** VIEW	

Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** FREE TRIAL VIEW			Number **Addition and subtraction** VIEW		Number **Multiplication and division A** VIEW			Number **Fractions A** VIEW			
Spring term	Number **Multiplication and division B** VIEW			Number **Fractions B** VIEW		Number **Decimals and percentages** VIEW			Measurement **Perimeter and area** VIEW		Statistics VIEW	
Summer term	Geometry **Shape** VIEW			Geometry **Position and direction** VIEW		Number **Decimals** VIEW			Number **Negative numbers** VIEW	Measurement **Converting units** VIEW		Measurement **Volume** VIEW

Year 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** FREE TRIAL VIEW		Number **Addition, subtraction, multiplication and division** VIEW					Number **Fractions A** VIEW		Number **Fractions B** VIEW		Measurement **Converting units** VIEW
Spring term	Number **Ratio** VIEW		Number **Algebra** VIEW		Number **Decimals** VIEW		Number **Fractions decimals and percentages** VIEW	Measurement **Area, perimeter and volume** VIEW		**Statistics** VIEW		
Summer term	Geometry **Shape** VIEW		Geometry **Position and direction** VIEW		**Themed projects, consolidation and problem solving** VIEW							

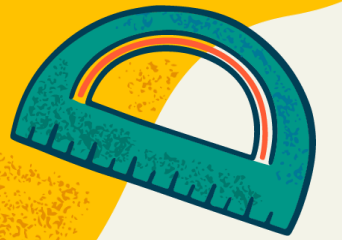
Number

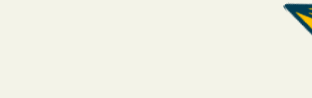
Decimals

VIEW

- **Step 1** Place value within 1
- **Step 2** Place value — integers and decimals
- **Step 3** Round decimals
- **Step 4** Add and subtract decimals
- **Step 5** Multiply by 10, 100 and 1,000
- **Step 6** Divide by 10, 100 and 1,000
- **Step 7** Multiply decimals by integers
- **Step 8** Divide decimals by integers
- **Step 9** Multiply and divide decimals in context

Concrete Pictorial Abstract





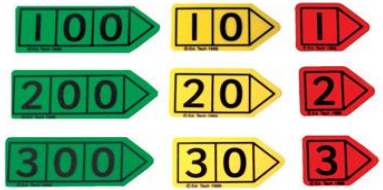
Concrete is the “doing” stage.

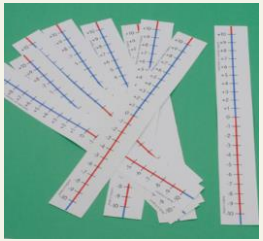
- During this stage, pupils use concrete objects to model problems. Unlike traditional maths teaching methods where teachers demonstrate how to solve a problem, the CPA approach brings concepts to life by allowing children to experience and handle physical (concrete) objects.

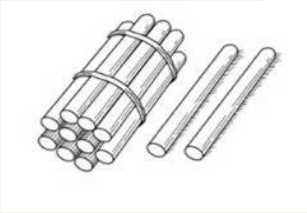
- For example, if a problem involves adding pieces of fruit, children can first handle actual fruit. From there, they can progress to handling abstract counters or cubes which represent the fruit.

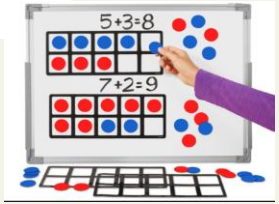
Concrete – a range of resources used in school.

		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









Can you think of any concrete resources you may already have at home to help your child with maths?

Weighing scales, rulers, pasta shapes, dried kidney beans, dice, dominoes, playing cards, cups, board games, draughts, toys, … the list seems endless.

Pictorial

- Pictorial is the “seeing” stage.

- Visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem.

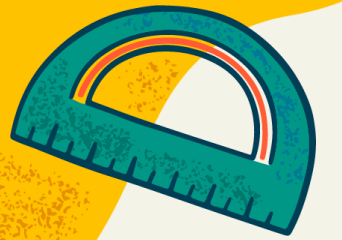
- Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions). Simply put, it helps students visualise abstract problems and make them more accessible.

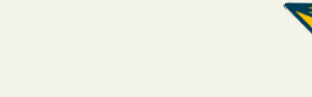
Abstract

- Abstract is the “symbolic” stage, where children use abstract symbols to model problems.

- Children will not progress to this stage until they have demonstrated that they have a solid understanding of the concrete and pictorial stages of the problem.

- The abstract stage involves the teacher introducing abstract concepts (for example, mathematical symbols). Children are introduced to the concept at a symbolic level, using only numbers, notation, and mathematical symbols (for example, +, –, x, /) to indicate addition, multiplication or division.



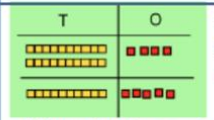
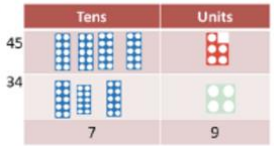
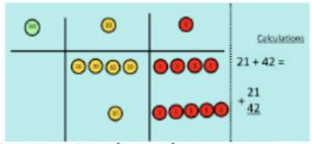
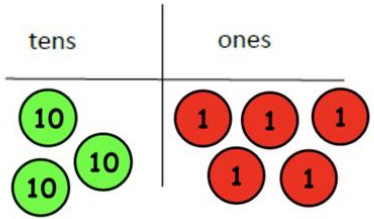
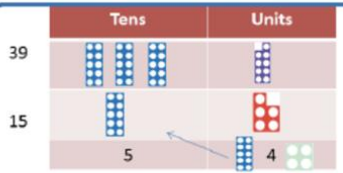
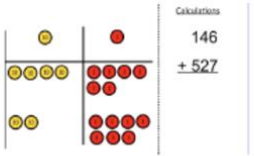
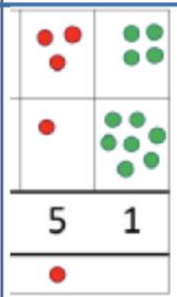
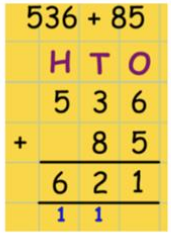


Arithmetic (calculation)

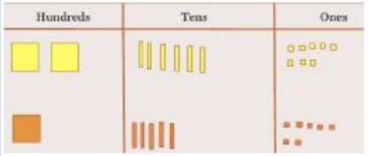
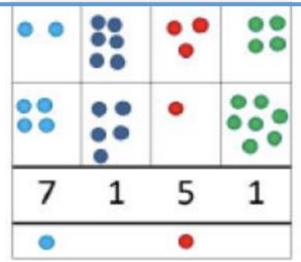
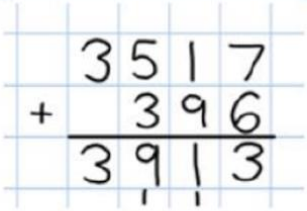
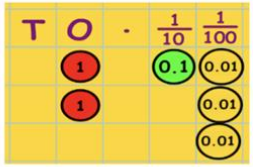
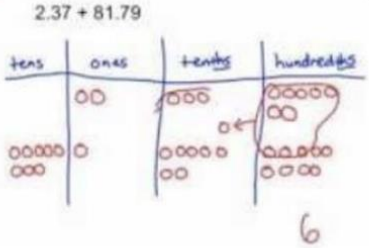
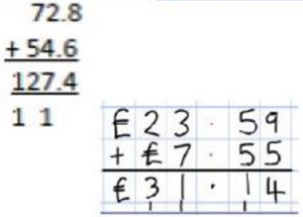
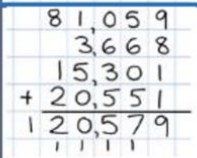
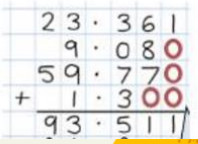
Addition

- add
- more
- plus
- make
- sum
- total
- altogether

Y3 ADDITION +

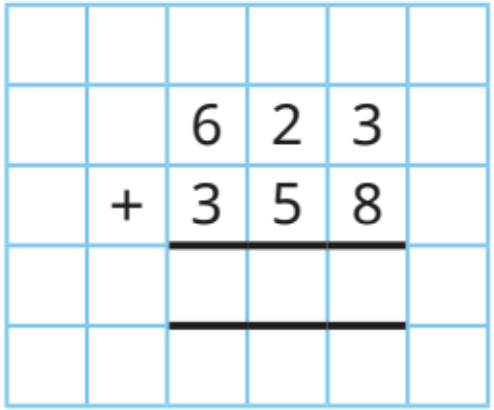
Objective & Strategy	Concrete	Pictorial	Abstract
Column Addition—no regrouping (friendly numbers) Add two or three 2 or 3-digit numbers.	 Model using Dienes or numicon Add together the ones first, then the tens.   Move to using place value counters	Children move to drawing the counters using a tens and one frame. 	H T O 2 2 3 + 1 1 4 3 3 7 Add the ones first, then the tens, then the hundreds.
Column Addition with regrouping.	 Exchange ten ones for a ten. Model using numicon and pv counters. 	 Children can draw a representation of the grid to further support their understanding, carrying the ten underneath the line	20 + 5 40 + 8 60 + 13 = 73 Start by partitioning the numbers before formal column to show the exchange. 

Y4-6 ADDITION

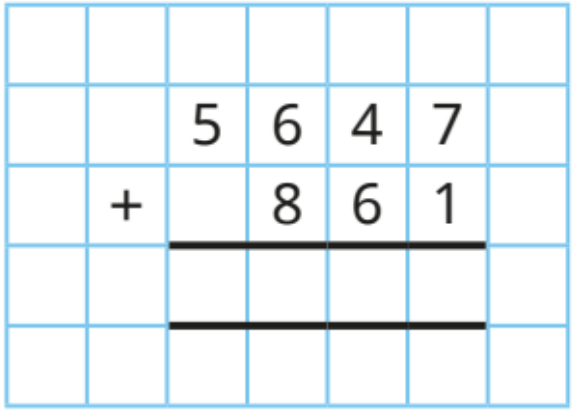
Objective & Strategy	Concrete	Pictorial	Abstract
Y4—add numbers with up to 4 digits	Children continue to use base 10 or PV counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand. 	 Draw representations using pv grid.	 Continue from previous work to carry hundreds as well as tens. Relate to money and measures.
Y5—add numbers with more than 4 digits. Add decimals with 2 decimal places, including money.	As year 4  Introduce decimal place value counters and model exchange for addition.		
Y6—add several numbers of increasing complexity Including adding money, measure and decimals with different numbers of decimal points.	As Y5	As Y5	 Insert zeros for place holders. 

Let's try!

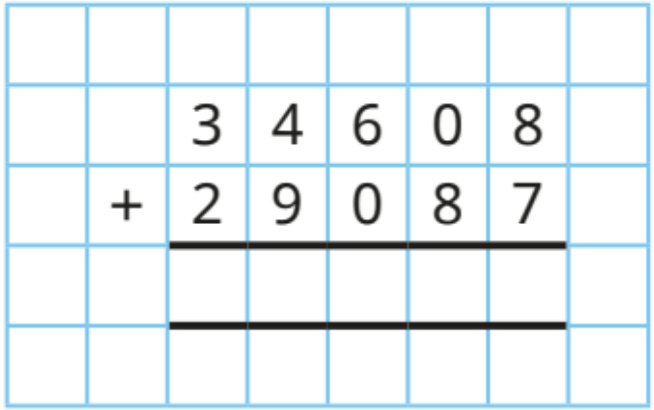
Work out the additions.



		6	2	3	
	+	3	5	8	



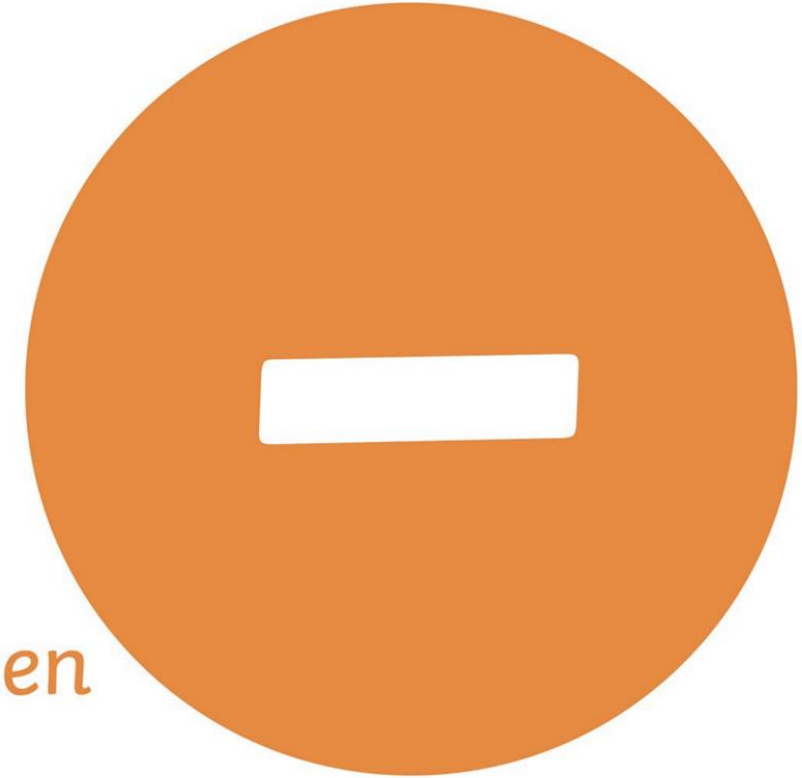
		5	6	4	7	
	+		8	6	1	



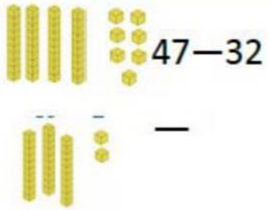
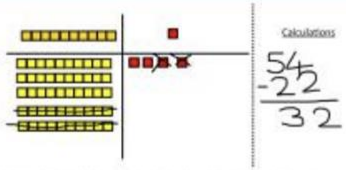
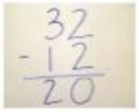
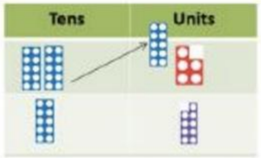
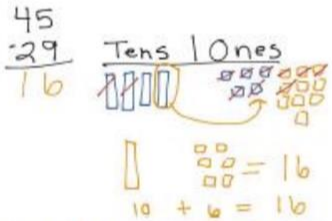
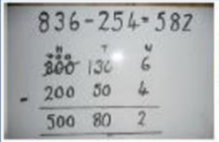
		3	4	6	0	8	
	+	2	9	0	8	7	

Subtraction

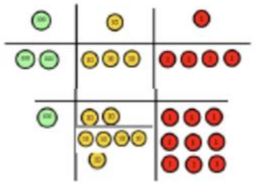
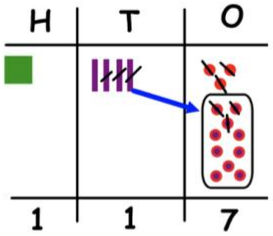
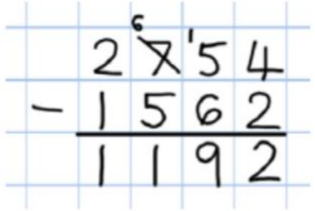
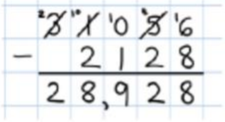
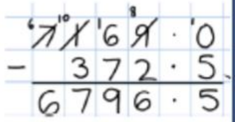
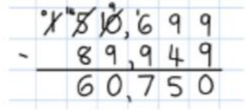
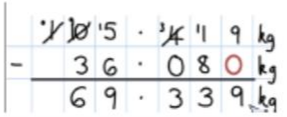
- subtract
- minus
- leave
- less
- take away
- difference between



Y3 SUBTRACTION - A3

Objective & Strategy	Concrete	Pictorial	Abstract
Column subtraction without regrouping (friendly numbers)	 Use base 10 or Numicon to model	 Darw representations to support understanding	47-24=23 40+7 -20+4 20+3 Intermediate step may be needed to lead to clear subtraction understanding. 
Column subtraction with regrouping	 Begin with base 10 or Numicon. Move to pv counters, modelling the exchange of a ten into tten ones. Use the phrase 'take and make' for exchange.	 Children may draw base ten or PV counters and cross off.	 Begin by partitioning into pv columns  Then move to formal method.

Y4-6 SUBTRACTION

Objective & Strategy	Concrete	Pictorial	Abstract
Subtracting tens and ones Year 4 subtract with up to 4 digits. *Introduce decimal subtraction through context of money*	234 - 179  Model process of exchange using Numicon, base ten and then move to PV counters.	Children to draw pv counters and show their exchange—see Y3 143-26 	 Use the phrase 'take and make' for exchange
Year 5- Subtract with at least 4 digits, including money and measures. *Subtract with decimal values, including mixtures of integers and decimals and aligning the decimal*	As Year 4	Children to draw pv counters and show their exchange—see Y3	 Use zeros for placeholders. 
Year 6—Subtract with increasingly large and more complex numbers and decimal values.			 

Let's try!

Work out the subtractions.

		7	5	2	
	–	3	1	5	

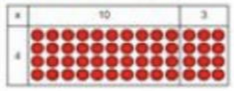
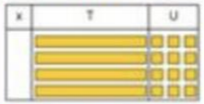
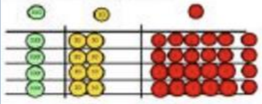
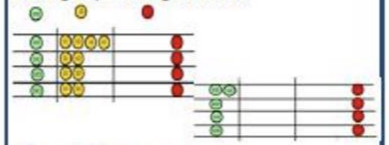
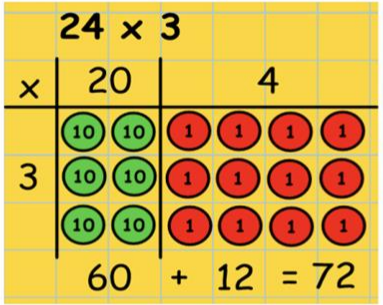
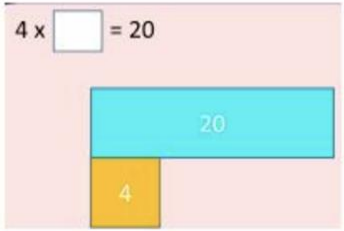
		8	1	6	
	–	5	3	9	

		3	4	6	0	8	
	–	1	2	7	2	7	

Multiplication

- lots of
- times
- multiply
- groups of
- product
- multiplied by
- multiple of
- repeated addition
- array

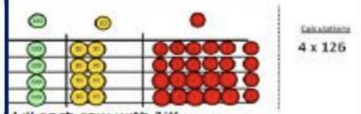
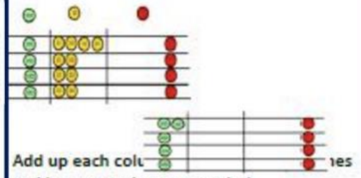
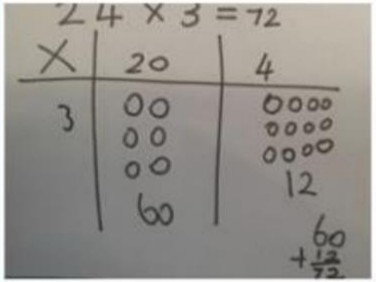
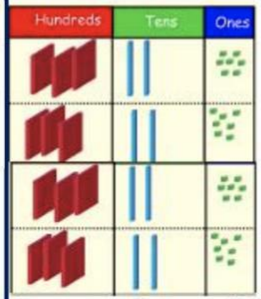
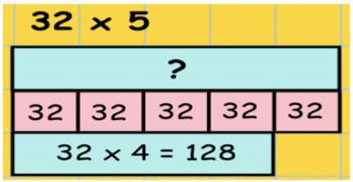
Y3 MULTIPLICATION X

Objective & Strategy	Concrete	Pictorial	Abstract
Grid method	Show the links with arrays to first introduce the grid method  4 rows of 10 4 rows of 3 Move onto base ten to move towards a more compact method.  4 rows of 13 Move on to place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows  Calculations 4 x 126 Fill each row with 126  Calculations 4 x 126 Add up each column, starting with the ones making any exchanges needed  Then you have your answer.	Children can represent their work with place value counters in a way that they understand. They can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking as shown below.  24 x 3 60 + 12 = 72 Bar model are used to explore missing numbers  4 x ☐ = 20 20 4	Start with multiplying by one digit numbers and showing the clear addition alongside the grid. 210 + 35 = 245 Moving forward, multiply by a 2 digit number showing the different rows within the grid method.

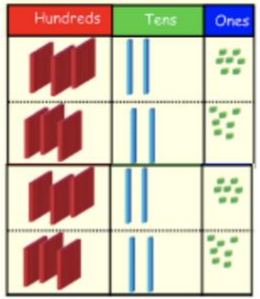
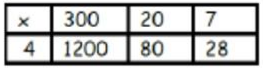
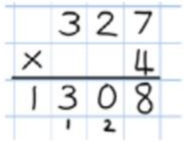
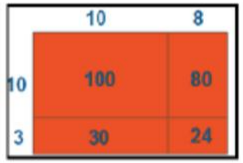
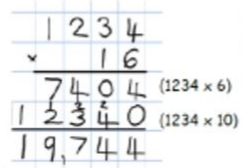
×	30	5
7	210	35

	10	8
10	100	80
3	30	24

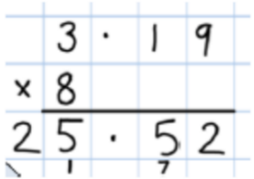
Y4 MULTIPLICATION X

Objective & Strategy	Concrete	Pictorial	Abstract
Grid method recap from year 3 for 2 digits x 1 digit Move to multiplying 3 digit numbers by 1 digit. (year 4 expectation)	Use place value counters to show how we are finding groups of a number. We are multiplying by 4 so we need 4 rows  Calculations 4 x 126 Fill each row with 126  Add up each col… …es making any exchanges needed	Children can represent their work with place value counters in a way that they understand. They can draw the counters using colours to show different amounts or just use the circles in the different columns to show their thinking as shown below.  	Start with multiplying by one digit numbers and showing the clear addition alongside the grid. | × | 30 | 5 | | 7 | 210 | 35 | 210 + 35 = 245
Column multiplication	Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. 321 x 2 = 642  It is important at this stage that they always multiply the ones first. The corresponding long multiplication is modelled alongside	| × | 300 | 20 | 7 | | 4 | 1200 | 80 | 28 | The grid method my be used to show how this relates to a formal written method.  Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.	327 x 4 28 80 1200 1308 This may lead to a compact method.

Y5-6 MULTIPLICATION

Objective & Strategy	Concrete	Pictorial	Abstract
Column Multiplication for 3 and 4 digits x 1 digit.	 It is important at this stage that they always multiply the ones first. Children can continue to be supported by place value counters at the stage of multiplication. This initially done where there is no regrouping. 321 x 2 = 642		327 x 4 = 28, 80, 1200 = 1308  This will lead to a compact method.
Column multiplication	Manipulatives may still be used with the corresponding long multiplication modelled alongside.	 Continue to use bar modelling to support problem solving	 18 x 3 on the first row (8 x 3 =24, carrying the 2 for 20, then 1 x 3) 18 x 10 on the 2nd row. Show multiplying by 10 by putting zero in units first  (1234 x 6) (1234 x 10)

Y6 MULTIPLICATION

Objective & Strategy	Concrete	Pictorial	Abstract
Multiplying decimals up to 2 decimal places by a single digit.			Remind children that the single digit belongs in the units column. Line up the decimal points in the question and the answer. 
Lattice method for multiplying multi-digit numbers and decimals.			Children must draw a diagonal line (top right to bottom left) in each box. The total is always split into tens and ones.  Once the grid is complete, diagonal columns are added in the same fashion as column addition, starting from the right Children may want to highlight or circle the diagonal columns when starting out. 

Let's try!

	H	T	O
	2	0	5
×			3

	H	T	O
	1	4	8
×			6

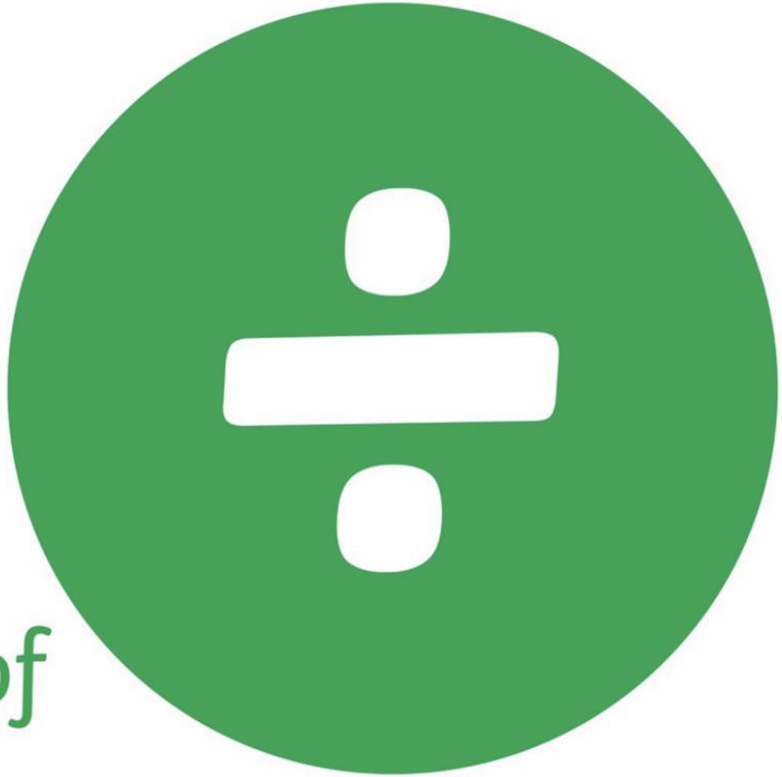
	H	T	O
	7	4	6
×			5

		4	2	6	7	
×				3	4	

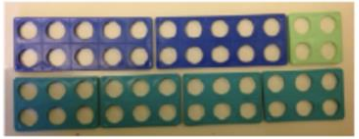
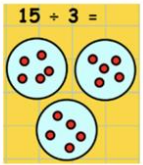
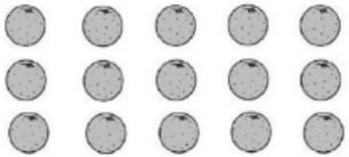
		3	0	4	6	
×				7	3	

Division

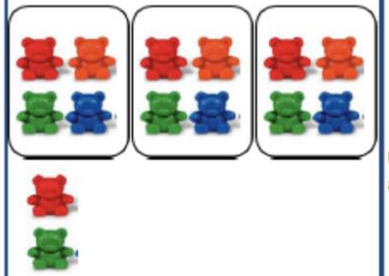
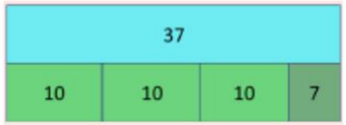
- divide
- divided by
- divided into
- share
- share equally
- equal groups of



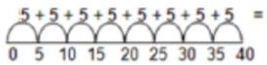
Y3 DIVISION ÷

Objective & Strategy	Concrete	Pictorial	Abstract
Division as grouping	Use cubes, counters, objects or place value counters to aid understanding.  24 divided into groups of 6 = 4 96 ÷ 3 = 32 	Continue to use bar modelling to aid solving division problems.  20 ÷ 5 = ? 5 x ? = 20  A total of 15 is shared equally between 3 groups.	How many groups of 6 in 24? 24 ÷ 6 = 4
Division with arrays	 Link division to multiplication by creating an array and thinking about the number sentences that can be created. Eg 15 ÷ 3 = 5 5 x 3 = 15 15 ÷ 5 = 3 3 x 5 = 15	Draw an array and use lines to split the array into groups to make multiplication and division sentences 	Find the inverse of multiplication and division sentences by creating eight linking number sentences. 7 x 4 = 28 4 x 7 = 28 28 ÷ 7 = 4 28 ÷ 4 = 7 28 = 7 x 4 28 = 4 x 7 4 = 28 ÷ 7 7 = 28 ÷ 4

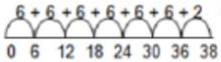
Y3 DIVISION ÷

Objective & Strategy	Concrete	Pictorial	Abstract
Division with remainders.	14 ÷ 3 = Divide objects between groups and see how much is left over 	Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.  Draw dots and group them to divide an amount and clearly show a remainder.  Use bar models to show division with remainders. 	Complete written divisions and show the remainder using r. 

Example without remainder:
40 ÷ 5
Ask "How many 5s in 40?"

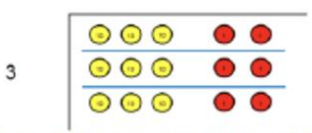
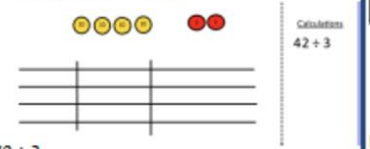
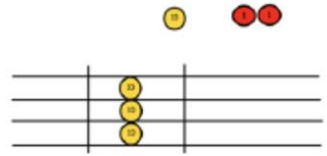
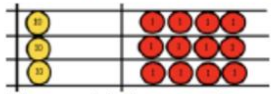
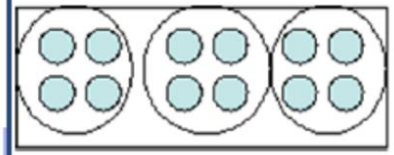
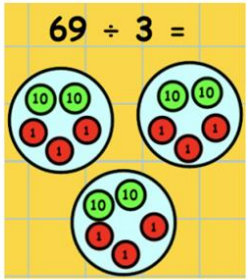
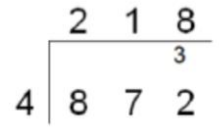
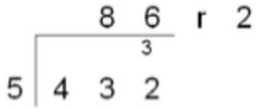
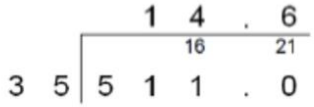
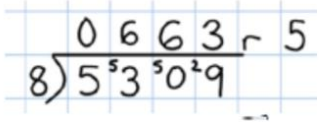


Example with remainder:
38 ÷ 6



For larger numbers, when it becomes inefficient to count in single multiples, bigger jumps can be recorded using known facts.

Y4-6 DIVISION

Objective & Strategy	Concrete	Pictorial	Abstract
Divide at least 3 digit numbers by 1 digit. Short Division	96 ÷ 3 Tens Units 3 2 3  Use place value counters to divide using the bus stop method alongside  42 ÷ 3= Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.  We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much in 1 group so the answer is 14.	Students can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.  Encourage them to move towards counting in multiples to divide more efficiently.  Children sharing out different PV counters to divide larger numbers.	Begin with divisions that divide equally with no remainder.  Move onto divisions with a remainder.  Finally move into decimal places to divide the total accurately.  

Long Division

Step 1—a remainder in the ones

```
   h t o
   0 4 1 R1
4 ) 1 6 5
```

4 does not go into 1 (hundred). So combine the 1 hundred with the 6 tens (160).

4 goes into 16 four times.

4 goes into 5 once, leaving a remainder of 1.

```
    th h t o
    0 4 0 0 R7
8 ) 3 2 0 7
```

8 does not go into 3 of the thousands. So combine the 3 thousands with the 2 hundreds (3,200).

8 goes into 32 four times (3,200 ÷ 8 = 400)
8 goes into 0 zero times (tens).
8 goes into 7 zero times, and leaves a remainder of 7.

```
   h t o
   0 6 1
4 ) 2 4 7
    - 4
      3
```

When dividing the ones, 4 goes into 7 one time. Multiply 1 × 4 = 4, write that four under the 7, and subract. This finds us the remainder of 3.

Check: 4 × 61 + 3 = 247

```
    th h t o
    0 4 0 2
4 ) 1 6 0 9
      - 8
        1
```

When dividing the ones, 4 goes into 9 two times. Multiply 2 × 4 = 8, write that eight under the 9, and subract. This finds us the remainder of 1.

Check: 4 × 402 + 1 = 1,609

Long Division

Step 2—a remainder in the tens

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
t o 2 2) 5 8	t o 2 2) 5 8 - 4 1	t o 2 9 2) 5 8 - 4 | 1 8
Two goes into 5 two times, or 5 tens ÷ 2 = 2 whole tens -- but there is a remainder!	To find it, multiply 2 × 2 = 4, write that 4 under the five, and subtract to find the remainder of 1 ten.	Next, drop down the 8 of the ones next to the leftover 1 ten. You combine the remainder ten with 8 ones, and get 18.

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
t o 2 9 2) 5 8 - 4 1 8	t o 2 9 2) 5 8 - 4 1 8 - 1 8 0	t o 2 9 2) 5 8 - 4 1 8 - 1 8 0
Divide 2 into 18. Place 9 into the quotient.	Multiply 9 × 2 = 18, write that 18 under the 18, and subtract.	The division is over since there are no more digits in the dividend. The quotient is 29.

Long Division

Step 2—a remainder in any of the place values

1. Divide.	2. Multiply & subtract.	3. Drop down the next digit.
h t o 1 2) 2 7 8	h t o 1 2) 2 7 8 - 2 0	h t o 1 8 2) 2 7 8 - 2 0 7
Two goes into 2 one time, or 2 hundreds ÷ 2 = 1 hundred.	Multiply 1 × 2 = 2, write that 2 under the two, and subtract to find the remainder of zero.	Next, drop down the 7 of the tens next to the zero.
Divide.	**Multiply & subtract.**	**Drop down the next digit.**
h t o 1 3 2) 2 7 8 - 2 0 7	h t o 1 3 2) 2 7 8 - 2 0 7 - 6 1	h t o 1 3 2) 2 7 8 - 2 0 7 - 6 1 8
Divide 2 into 7. Place 3 into the quotient.	Multiply 3 × 2 = 6, write that 6 under the 7, and subtract to find the remainder of 1 ten.	Next, drop down the 8 of the ones next to the 1 leftover ten.
1. Divide.	**2. Multiply & subtract.**	**3. Drop down the next digit.**
h t o 1 3 9 2) 2 7 8 - 2 0 7 - 6 1 8	h t o 1 3 9 2) 2 7 8 - 2 0 7 - 6 1 8 - 1 8 0	h t o 1 3 9 2) 2 7 8 - 2 0 7 - 6 1 8 - 1 8 0
Divide 2 into 18. Place 9 into the quotient.	Multiply 9 × 2 = 18, write that 18 under the 18, and subtract to find the remainder of zero.	There are no more digits to drop down. The quotient is 139.

Long Division

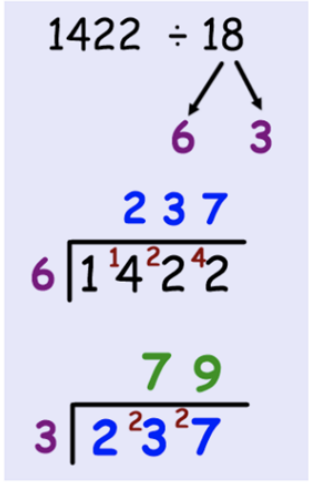
Y6 DIVISION

Factorisation

Used to divide when the divisor is a composite number.

1422 ÷ 18

Factors of 18 are 3 and 6. Divide by one of the factors first. Then, take the answer and divide by the other factor.



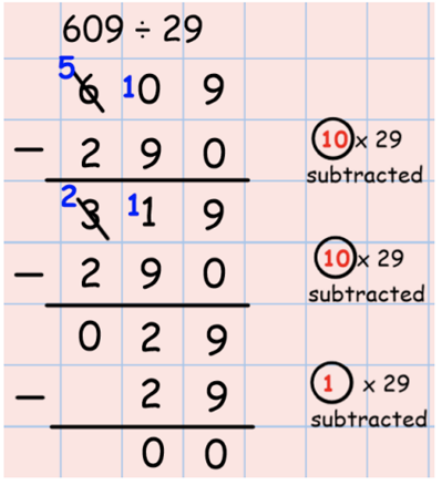
The answer is 79.

Chunking

Used to divide when the divisor is a prime number.

609 ÷ 29

Children use their knowledge of division being repeated subtraction. Initially, they subtract larger multiples of the divisor (x10 or x100).



Children record the total number of 29 they have subtracted.

In total 21 lots of 29 have been subtracted.

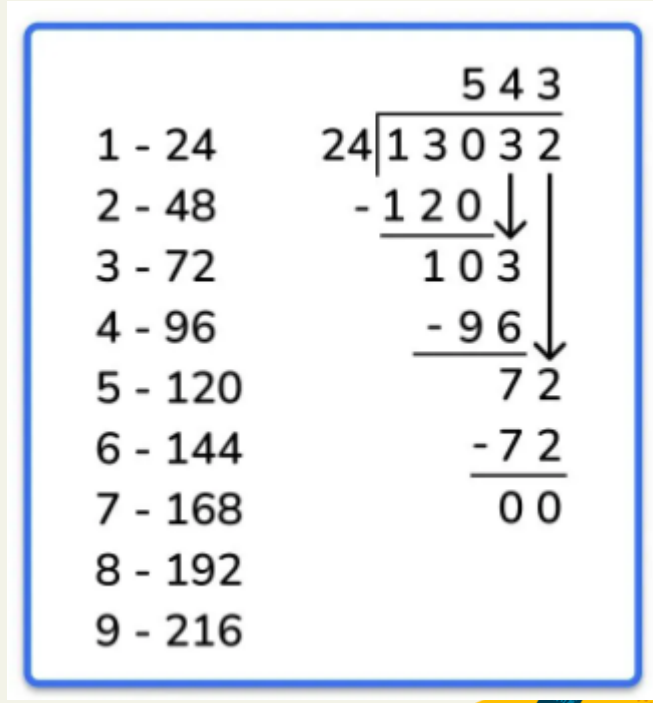
Long division (dividing by 2-digit numbers) Y6

- **Divide**: divide the dividend by the divisor – what is the answer without a remainder (use the list of multiples to help you).
- **Multiply**: multiply the answer to your previous division by the divisor to reach the multiple needed to calculate the remainder (use the list of multiples).
- **Subtract**: subtract the multiple from the original number to calculate the remainder.
- **Bring the next digit down**: this replaces the 'write the remainder just before the next number' step in short division.

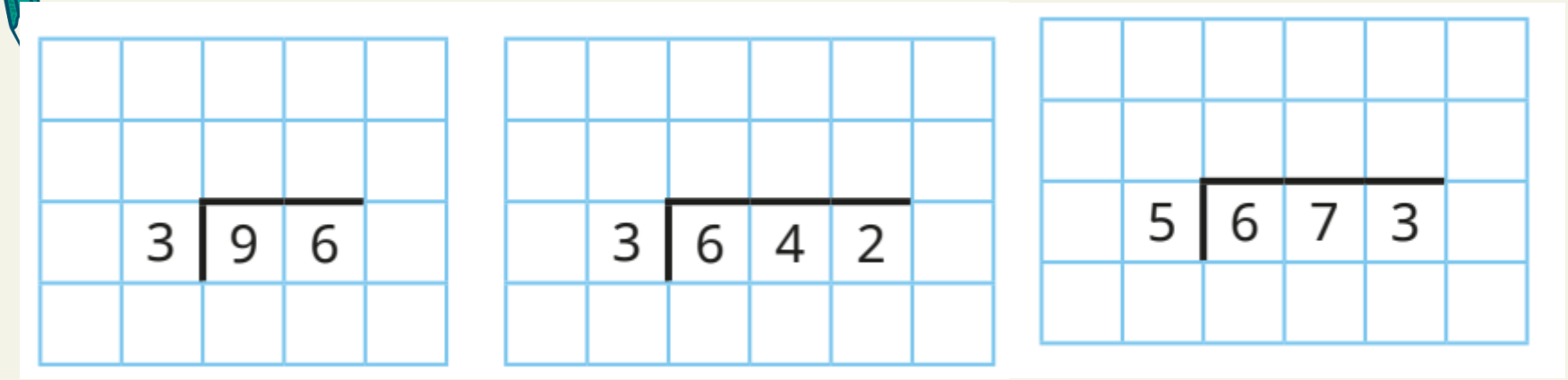
÷ × — ↓

Success criteria

1. List multiples of the divisor (are you going to do repeated addition or partition and add?)
2. Divide
3. Multiply
4. Subtract
5. Bring it down...
6. ... and bring it on back!



Let's try!



836 ÷ 11

798 ÷ 14

608 ÷ 19

Times Tables

Year 3

- Count in multiples of 2, 5 and 10.
- Recall and use doubles of all numbers to 10 and corresponding halves.
- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.
- Recall and use the multiplication and division facts for the 3, 4 and 8 multiplication tables.

Year 4

- Everything mentioned for year 3.
- Recall and use **multiplication** and **division** facts for multiplication tables up to 12 x 12.

The multiplication tables check (MTC) is statutory for all year 4 pupils. The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided. This will be completed across a two week period.
(2nd June - 13th June)

How many times tables do I need to learn?

1 times table
1 x 1 = 1
2 x 1 = 2
3 x 1 = 3
4 x 1 = 4
5 x 1 = 5
6 x 1 = 6
7 x 1 = 7
8 x 1 = 8
9 x 1 = 9
10 x 1 = 10
11 x 1 = 11
12 x 1 = 12
12 tables to learn

2 times table
2 x 2 = 4
3 x 2 = 6
4 x 2 = 8
5 x 2 = 10
6 x 2 = 12
7 x 2 = 14
8 x 2 = 16
9 x 2 = 18
10 x 2 = 20
11 x 2 = 22
12 x 2 = 24
11 tables to learn

5 times table
3 x 5 = 15
4 x 5 = 20
5 x 5 = 25
6 x 5 = 30
7 x 5 = 35
8 x 5 = 40
9 x 5 = 45
10 x 5 = 50
11 x 5 = 55
12 x 5 = 60
10 tables to learn

10 times table
3 x 10 = 30
4 x 10 = 40
6 x 10 = 60
7 x 10 = 70
8 x 10 = 80
9 x 10 = 90
10 x 10 = 100
11 x 10 = 110
12 x 10 = 120
9 tables to learn

3 times table
3 x 3 = 9
4 x 3 = 12
6 x 3 = 18
7 x 3 = 21
8 x 3 = 24
9 x 3 = 27
11 x 3 = 33
12 x 3 = 36
8 tables to learn

4 times table
4 x 4 = 16
6 x 4 = 24
7 x 4 = 28
8 x 4 = 32
9 x 4 = 36
11 x 4 = 44
12 x 4 = 48
7 tables to learn

If you already know that 8 x 4 = 32, you also know the answer to 4 x 8.

The 1 and 10 times tables (and many of the 11 times tables) are easy to work out, so that means there are even fewer to learn!

8 times table
6 x 8 = 48
7 x 8 = 56
8 x 8 = 64
9 x 8 = 72
11 x 8 = 88
12 x 8 = 96
6 tables to learn

6 times table
6 x 6 = 36
7 x 6 = 42
9 x 6 = 54
11 x 6 = 66
12 x 6 = 72
5 tables to learn

9 times table
7 x 9 = 63
9 x 9 = 81
11 x 9 = 99
12 x 9 = 108
4 tables to learn

7 times table
7 x 7 = 49
11 x 7 = 77
12 x 7 = 84
3 tables to learn

11 times table
11 x 11 = 121
12 x 11 = 132
2 tables to learn

12 times table
12 x 12 = 144
1 table to learn

TIMES TABLES ROCK STARS

SINGLE PLAYER

MULTIPLAYER

MATHS BANDS BATTLE

Ends in 3 days

Multiplication Check

In the Summer term of year 4, children complete a multiplication check.

This is where they are asked to demonstrate their times tables knowledge.

This is a government requirement and so it is important all children readily know their times tables by the end of year four.

We will be teaching the children their times tables and will be providing regular practise opportunities. However, we also recommend they spend some time at home practising, whether this is on times tables rockstars, singing along with a song or chanting it out loud.

Child 1	1	12	6
Child 2	25	25	16
Child 3	5	10	17
Child 21	18	21	59
Child 22	23	25	59
Child 23	25	25	60
Child 24	25	20	60
Child 25	22	22	62
Child 26	23	25	67
Child 27	23	24	71
Child 34	25	25	87
Child 35	25	25	93
Child 36	25	25	101
Child 37	25	25	104
Child 38	25	25	107
Child 39	25	24	118
Child 40	25	25	125

Number facts

What are number facts?
Number facts are simple calculations with two numbers. They could be addition, subtraction, multiplication or division. Sometimes these can be called fact families.

Number bonds (like 3 + 7 = 10, or 9 - 4 = 5) or facts learned from times tables (like 4 x 6 = 24 or 27 ÷ 3 = 9) are number facts.

How can number facts help you find new answers?
It is good to learn number facts so you can use them quickly. This can really help when you've got a more difficult problem.

Remembering your number facts will help you do these calculations quickly so there will be less chance of getting lost or mixed up.

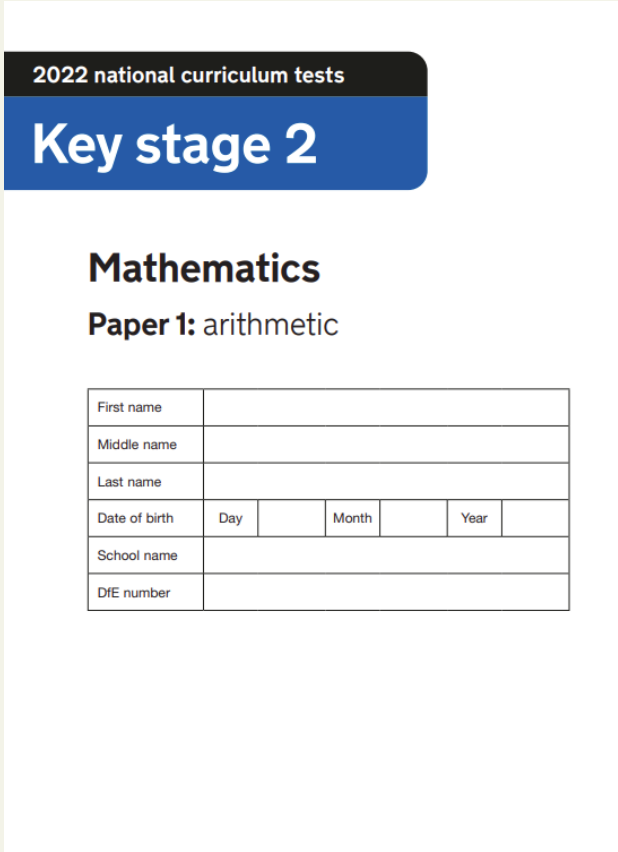
Year 6 SATS

What are SATS?

These are government based, national curriculum tests, which are held in the Summer term for children of Year 6. The data from the SATs will provide vital information to parents about their child's attainment, support the transition to secondary schools, and identify where additional support is best targeted to individuals.

Maths Paper 1 (Arithmetic)

- This is the first of three maths papers.
- The test is for 30 minutes.
- Most questions are worth 1 mark however there are a couple worth 2. These are the multiplying and dividing by 2-digit numbers questions.
- It is out of 40 marks.
- This score will be combined with the other two papers.



2022 national curriculum tests

Key stage 2

Mathematics

Paper 1: arithmetic

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

19 29.5 – 16.125 =

1 mark

20 508 × 74

Show your method

2 marks

21 $\frac{1}{8} \div 3 =$

1 mark

22 $1 + \frac{2}{7} + \frac{5}{7} =$

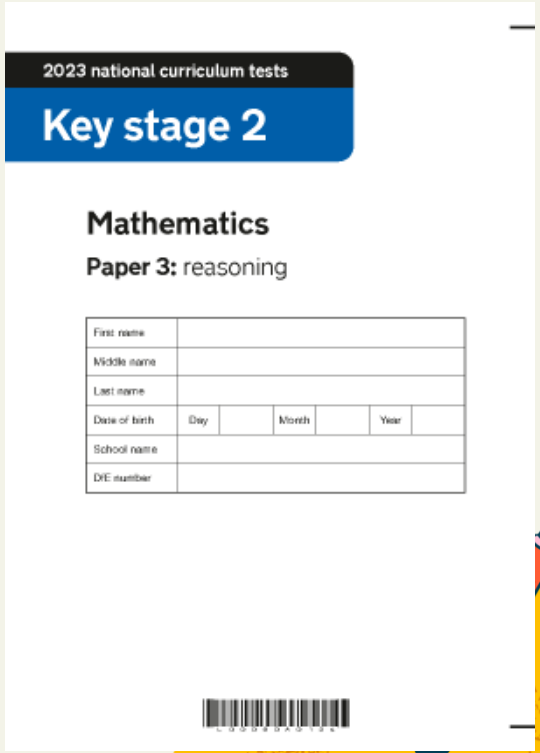
1 mark

23 70 + 48 ÷ 6 =

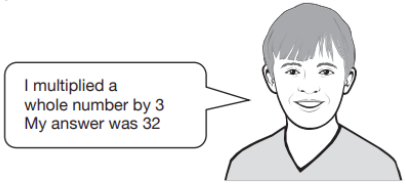
1 mark

Maths Paper 2 (Reasoning)
Maths Paper 3 (Reasoning)

- Papers 2 and 3 are reasoning papers which will last for 40 minutes each.
- Each paper is out of 35.
- The questions involve worded problems and a reasoning element.
- The score from these two papers will be combined with the arithmetic and the total is out of 110.



9 Jack says,



Explain why Jack is **not** correct.

1 mark

Use the table to calculate the **mean** hours of sunshine for Heathrow Airport from **2013** to **2015**.

Show your method

hours

2 marks

14 Here are five digit cards.

1	2	3	4	5

Use two cards to make a fraction **equivalent to 25%**

1 mark

Use two cards to make a fraction **equivalent to 0.4**

1 mark

How to help

1

Be positive about maths. Try not to say things like "I can't do maths" or "I hated maths at school" – your child may start to think like that themselves.

2

Point out the maths in everyday life. Include your child in activities involving numbers and measuring, such as shopping, cooking and travelling.

3

Praise your child for effort rather than for being "clever". This shows them that by working hard, they can always improve.

How to help

https://mathsathome.lgfl.org.uk/

Useful resources

- https://ttrockstars.com/
- https://www.busythings.co.uk/
- http://www.maths-games.org/times-tables-games.html
- http://www.topmarks.co.uk/maths-games/5-7-years/multiplicationand-division
- https://www.topmarks.co.uk/maths-games/7-11-years/times-tables
- http://www.teachingtables.co.uk/
- http://www.multiplication.com/games
- http://www.learnyourtables.co.uk/