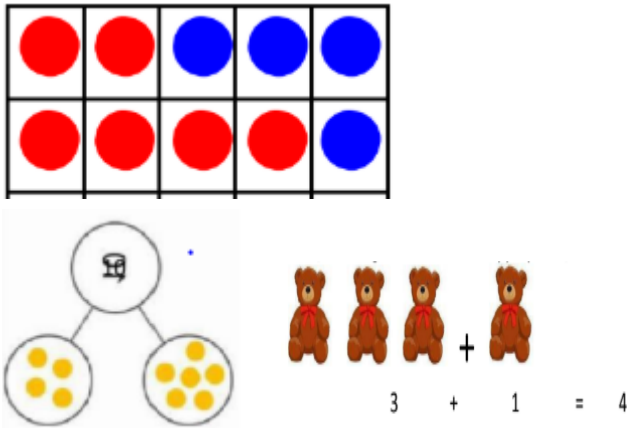
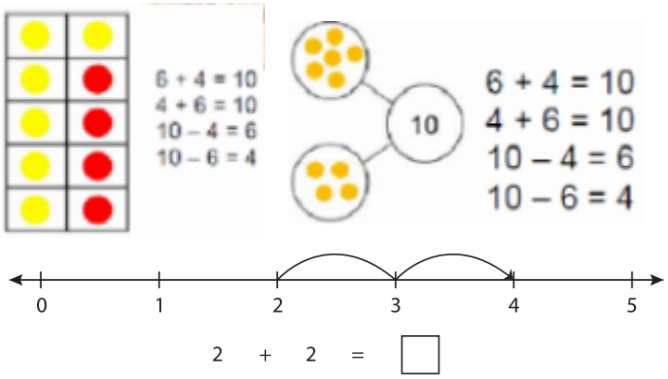
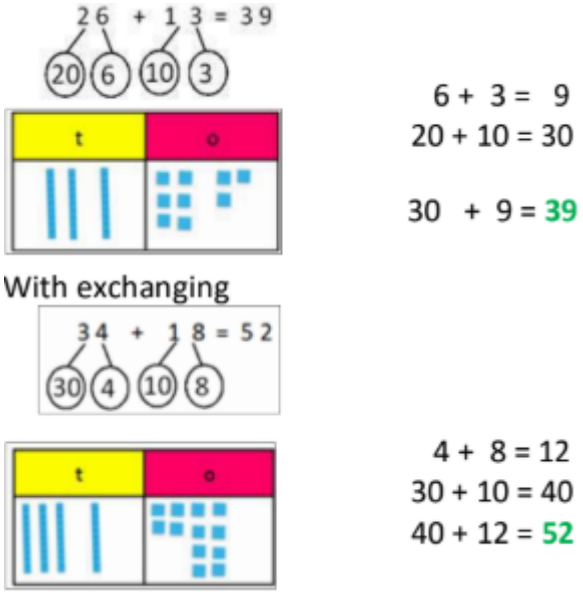
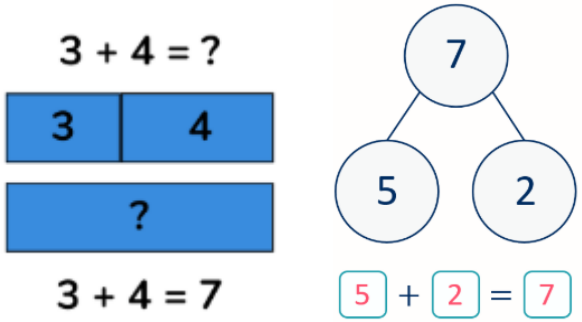
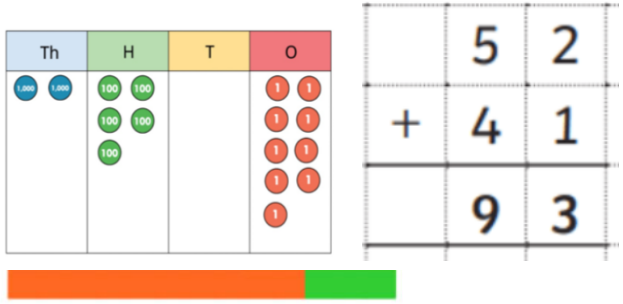
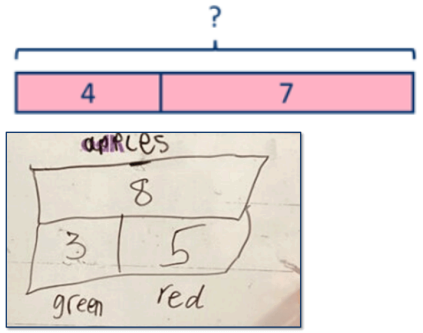
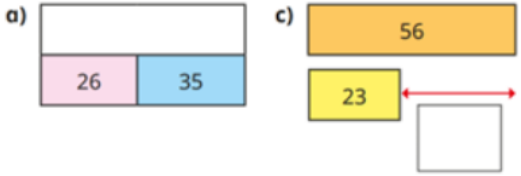
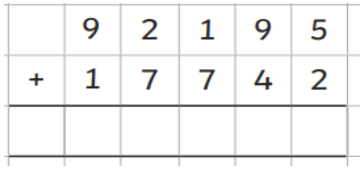
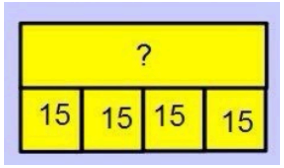
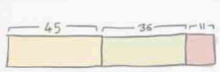
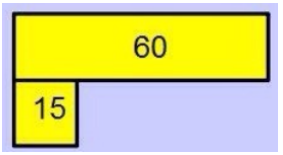
Addition R Y1 Y2 Y3 Y4 Y5 Y6	**Subtraction** R Y1 Y2 Y3 Y4 Y5 Y6
Multiplication R Y1 Y2 Y3 Y4 Y5 Y6	**Division** R Y1 Y2 Y3 Y4 Y5 Y6

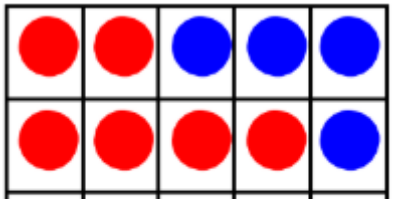
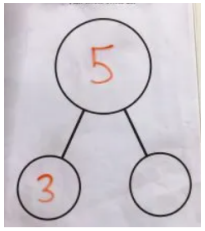
Addition	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Reception	Count 1:1 using objects within 10 Recognise numerals within 10 Cardinality of number Subitising to 5 Add 1 more	Count on and back from any given number within 10 Combine 2 groups (aggregation) Add more (augmentation)	Recording completed with visual representations Understanding of + and = symbols With objects: Tens frames Part part whole	

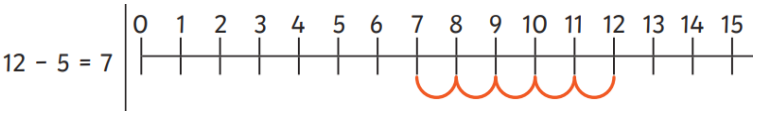
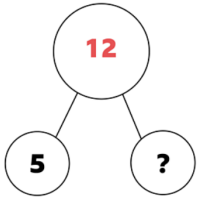
Addition	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 1 - C1 / C2	Count 1:1 using objects beyond 10 Recognise numerals beyond 10 Cardinality of number	Recognising and securing place value Count on and back from any given number within 100 Recall and use of number bonds to 10 and 20	Use of number lines to record 'jumping on' Recording simple number sentences pictorially and numerically within 100 Fact families within 20 With objects, numerals and recording: Part part whole Tens frames Number families e.g. 1+4=5 2+3=5 3+2=5	
Year 2	Secure place value with numbers to 100 and beyond Number bonds within 10 and related facts within 20	Using place value to combine two totals Counting on (in 1s, 2s, 10s) Bridging 10 Secure with the commutative fact of addition Using known number facts	Partitioning numbers with and without exchanging Missing number equations Combine two parts to make a whole Bar models used	

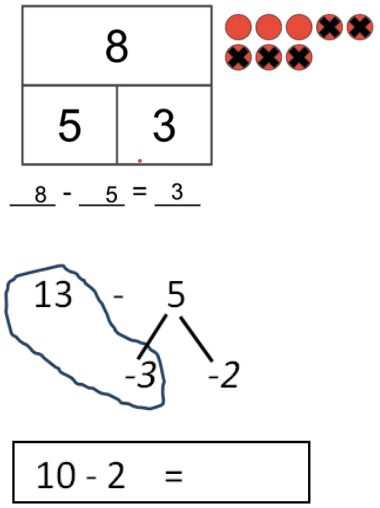
Addition	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
				
Year 3	Add 3 one digit numbers Add multiples of 10 Add across a 10 Missing number equations	Using place value to combine two totals Counting on (in 1s, 2s, 10s, 50s) Bridging 10/100	Bar model / cuisenaire rods used to show parts to make a whole: addend + addend = sum Pattern focus Column addition introduced Reinforce addition of 1s first	

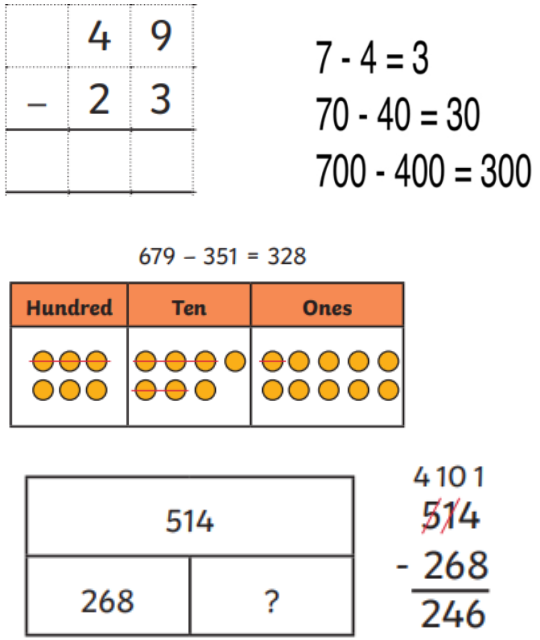
Addition	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 4 - C3 / C4	Add 1s, 10s, 100s to a 3 digit number Add two numbers with and without exchange Complements to 100	Notice patterns and use related facts 10 / 100 / 1,000	Drawing own bar models to support understanding of word problems Column addition, part part whole and number lines used when decimals are introduced and added.	
Year 5	Add 1s, 10s, 100s to a 4 digit number Add two 4 digit numbers	'To add 99, I can add 100 and take one away' Able to use number bonds and related facts	Use of bar models to represent addition Column addition to ensure place value is secure and when exchanging Refer back to part part whole method to represent	 

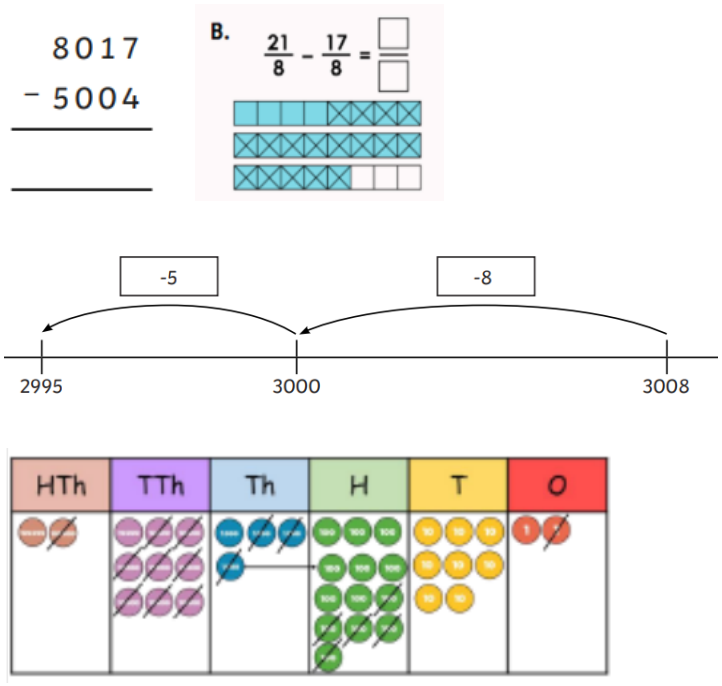
Addition	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 6	Be confident to use mental strategies to add Add whole numbers with 4 or more digits	Use of estimation before working out BODMAS Add and add to negative numbers Converting fractions before adding	BODMAS Use of number lines to check understanding Use of bar models to check inverse Convert fractions before adding- link to multiplication facts	 3 boys played a computer game. They scored 45 points, 36 points and 11 points. What was the total points they scored?   Filip and his family were on a day out. He gave his two children $\frac{3}{5}$ of his money. He gave his wife $\frac{1}{2}$ of the remaining money. He had £100 left, so how much did he have to begin with? 

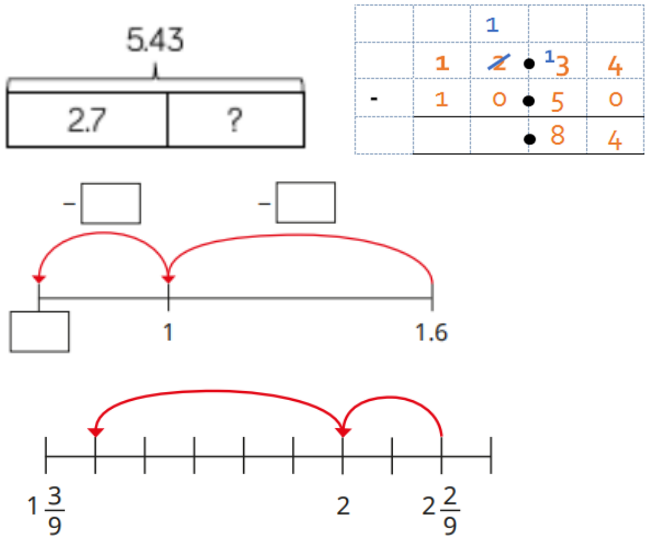
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Reception	Subitise to 3 Count how many Make numbers to 5 Take one away (through song and rhyme)	Count back from any given number within 10 Partition numbers to 5 methodically Introduction of First, Then, Now story language to support mathematical concept Use of numicon and other concrete equipment to represent number sentence of subtraction number story **Introduction to subtrahend, minuend and difference**	Recording completed with visual representations Understanding of - and = symbols With objects: Tens frames Part part whole	 If there are 10 sweets, 4 are blue, how many are red?  I have 5 sweets, I give Tom 3, how many do I have left?

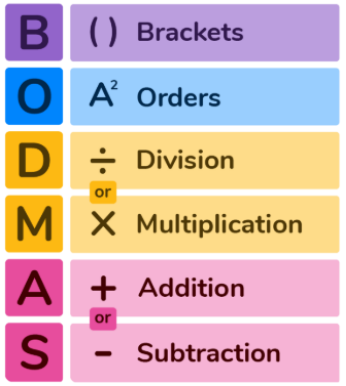
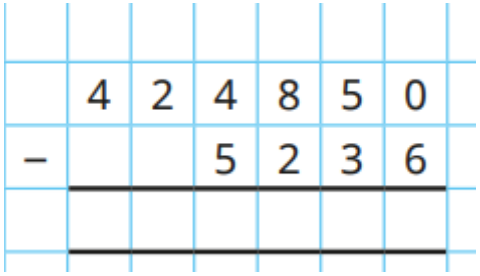
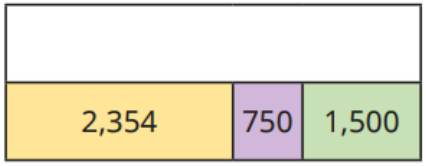
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 1 - C1 / C2	Conceptually subitise to 5 1 less Notice composition of numbers to 0 Partition Take away	Hold a number mentally Understand more/less Reinforce First, Then, Now story language Cardinality of number is secure to 20 **Focus on subtrahend, minuend and difference**	Elimination activities Use of number lines Part whole method	   There are 12 in total, 5 are black, how many are not black?

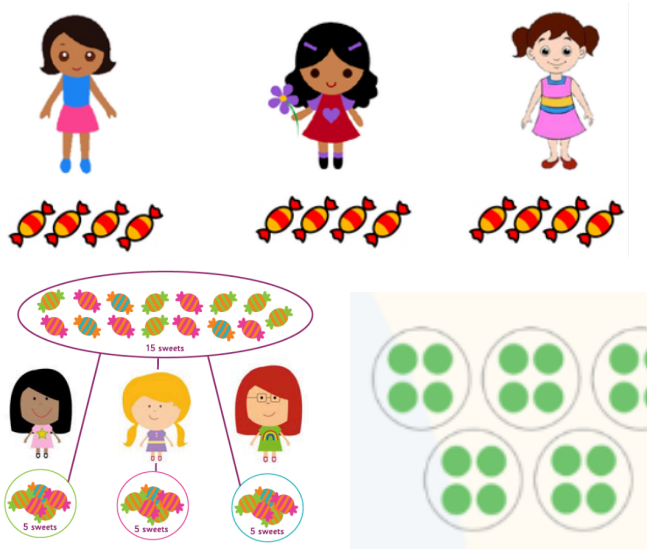
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 2	Find a part Take away Bonds within 10 Related facts within 20 Missing number problems	Secure number bonds to 10 in order to bridge through the 10. Partition to take away ones first then tens. Make known links to known facts. **Focus on subtrahend, minuend and difference**	Part part whole method. Bar models used to show whole and known/unknown parts. Number lines counting in 1s, 2s, 10s, 5s. Partitioning to bridge to the nearest 10.	

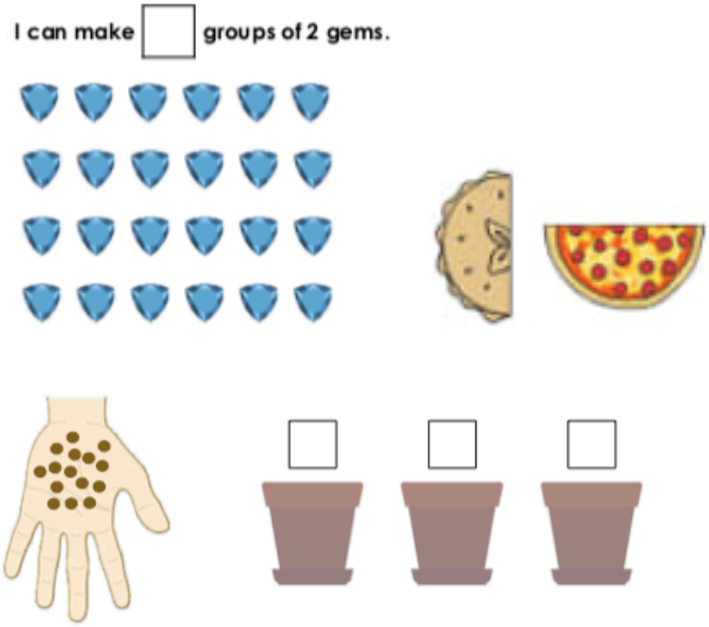
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 3	Subtract 1 from any number Subtract across 10 Subtract multiples of 10 Subtract 2 digit numbers across 10	Secure place value- 3 digit numbers Noticing patterns within calculations Use of inverse (addition) to check answers **Focus on subtrahend, minuend and difference**	Column subtraction without and with exchanges Elimination method Bar model	

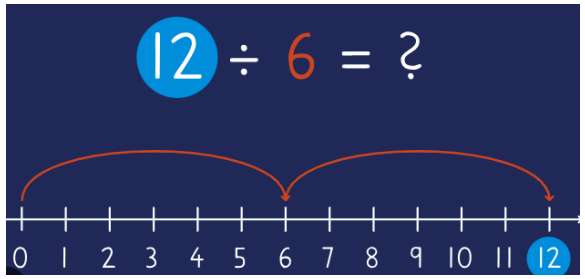
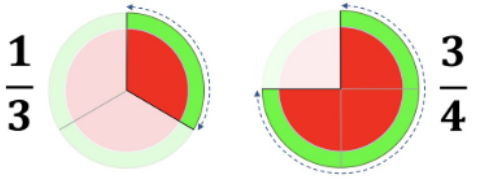
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 4 - C3 / C4	Subtract 1s, 10s and 100s from a 3 digit number Subtract two numbers with no exchange Subtract 2 numbers across a 10 or a 100 Complements to 100 Subtract fractions ith the same denominator within 1 whole	Number bonds and related facts. Pattern seeking. **Focus on subtrahend, minuend and difference**	Initial use of place value counters. Formal column method revisited. Number line used especially in the context of money. Return to elimination subtraction and bar model for fractions.	

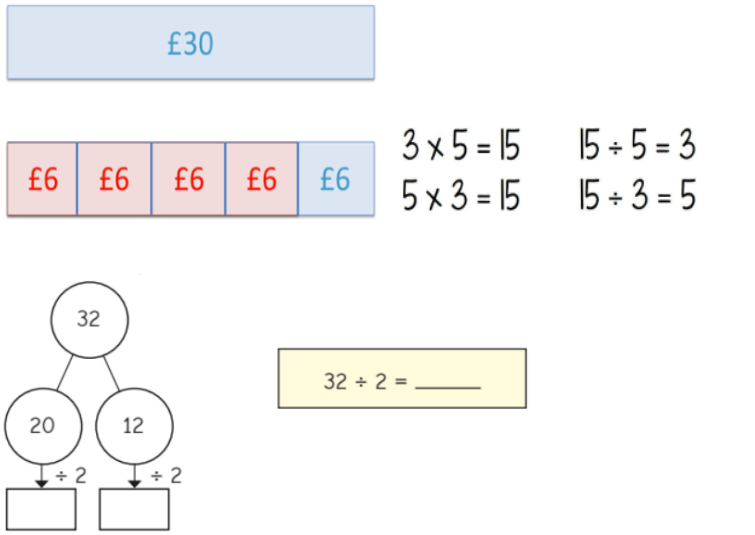
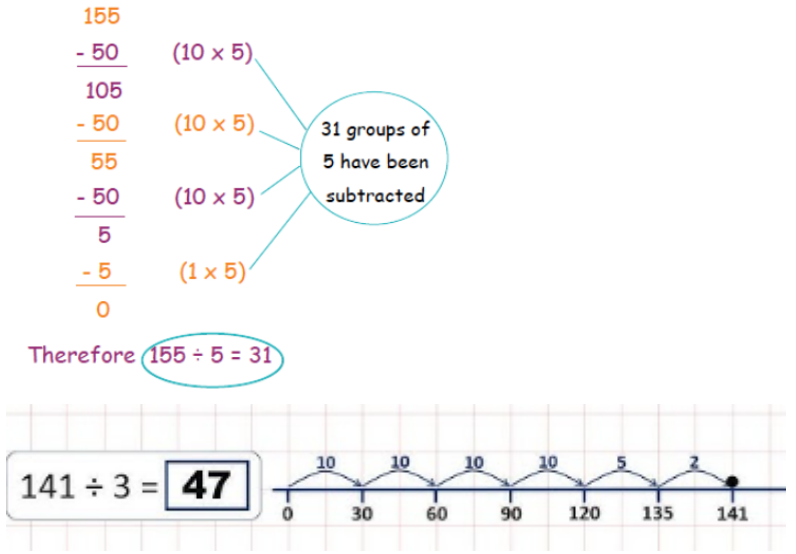
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 5	Subtract 1s, 10s, 100s, 1000s from a 4 digit number Subtract up to two 4 digit numbers Subtract decimals in the context of money Subtract fractions and mixed numbers with the same denominator	Focus on estimation and use of inverse. Use of number bonds and related facts. Links with bonds to 10 for decimals. **Focus on subtrahend, minuend and difference**	Column method used particularly in the context of decimals. Numberlines used to reinforce understanding when subtracting fractions within 1 whole or from a mixed number, and decimals.	

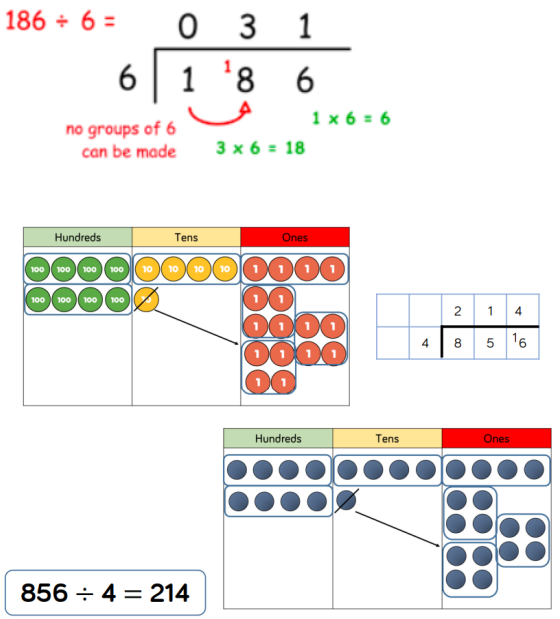
Subtraction	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 6	Subtract whole numbers with more than 4 digits Subtract using mental strategies Subtract decimals with up to 2 decimal places Complements to 1 Subtract fractions with denominators that are a multiple of one another	Use of inverse to check answers. Conversion into improper fractions to support subtraction. **Focus on subtrahend, minuend and difference**	Focus on column method. BODMAS introduced Numberlines support work with negative numbers	  

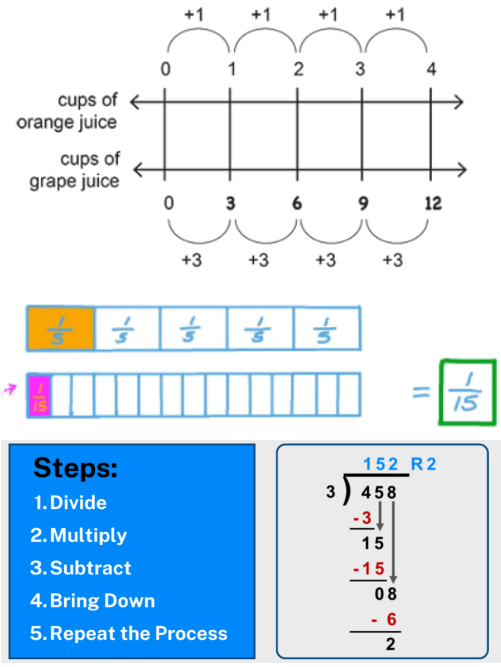
Division	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Reception	Ability to subitise and count with confidence to 10	A focus on identifying groups that are equal and unequal Automatic recall of number bonds to 5 and 10	Represent patterns with numbers up to 10 Distribute quantities equally	

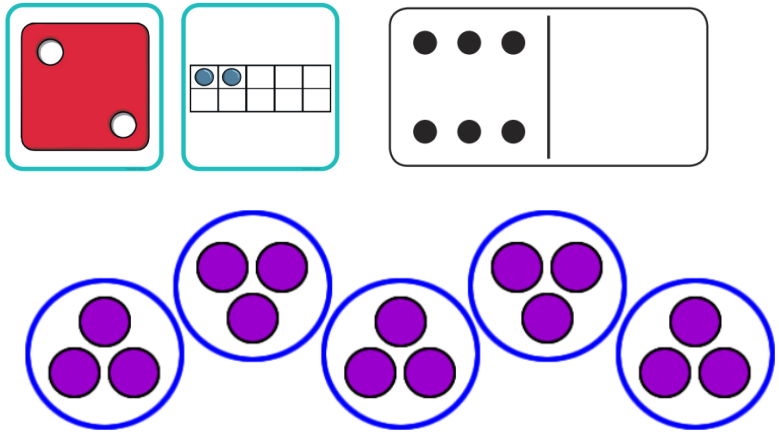
Division	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 1 - C1 / C2	Sharing into equal groups Grouping based on a range of variables	Recognise, find and name half and quarter of a quantity or shape Share equally and group	Arrays Division as repeated subtraction	

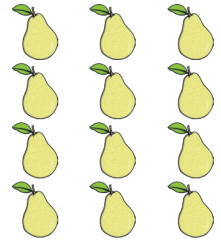
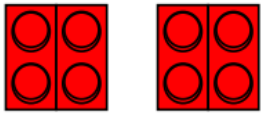
Division	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 2	Make equal groups by grouping and sharing Find a half and a quarter	Seeing equal groups Recall of division facts Related facts- linking division with multiplication	Bar models Grouping Numberlines Able to write unit and non unit fractions of a quantity	  

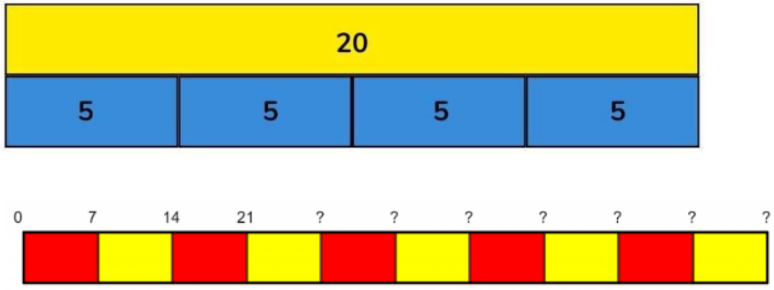
Division	Ready to access	Mental calculations	Written calculations	Visual representations
Year 3	Divide by 2, 10, 5 Missing number equations Unit fractions Non unit fractions	Recall of division facts for 3, 4 and 8 times tables Use of multiplication facts to work out 2 digit numbers divided by 1 digit numbers (fact families) Use of halving, then halving again for dividing by 4 (progress to by 8 by repeated halving) Recognising patterns	Bar models particularly to find fractions of quantities Grouping Numberlines- particularly when finding remainders Being able to identify a range of ways to group Flexible partitioning of larger numbers before dividing	
Year 4 - C3 / C4	Divide by 3, 4, 8 Related facts Divide a 2 digit number by a 1 digit number with and without exchange and with remainders Unit and non unit fractions of a set of objects	Use of division facts 12x12 Recognise when dividing by itself and 1 what happens Recognise and use related facts	Chunking (older children if secure) Short division introduction Place value charts for dividing by 10 and 100	

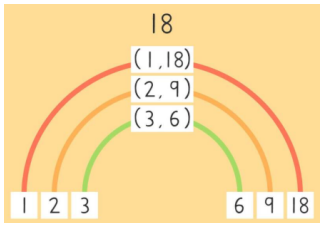
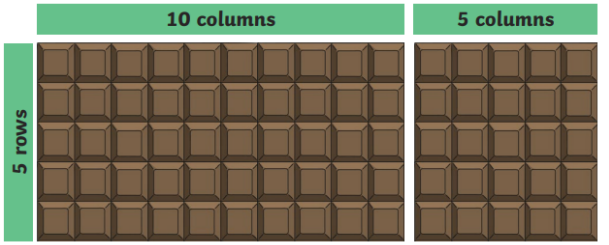
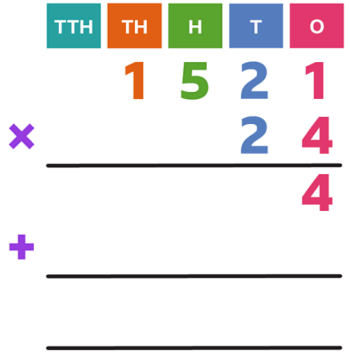
Division	Ready to access	Mental calculations	Written calculations	Visual representations
Year 5	Division facts up to 12x12 Divide by 1 and itself Related facts Divide a 2 or 3 digit number by a 1 digit number Divide by 10 and 100		Bus stop method introduced for short division	

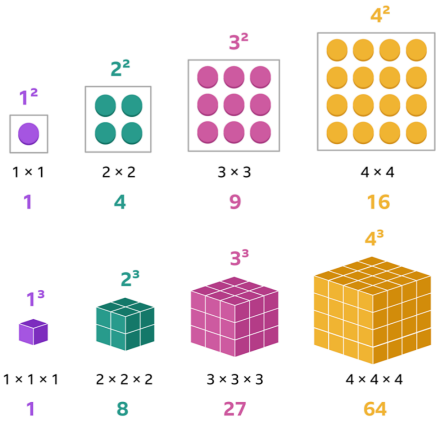
Division	Ready to access	Mental calculations	Written calculations	Visual representations
Year 6	Mental strategies for division Divide a 4 digit number by a 1 digit number Divide by 10, 100 and 1,000 Finding a fraction of an amount	Efficient use of mental calculations using known and related facts Dividing by 100 is the same as dividing by 10 twice, and dividing by 1,000 is the same as dividing by 10 three times Recognising patterns when dividing by integers Using multiples of 1%, 10%, 25%, 50% to find percentages Patterns and multiplicative relationship between ratios.	Formal methods as a focus- long division and short division Bar models when dividing a fraction by an integer and for percentages Use of double numberlines for ratios Ratio tables	

Multiplication	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Reception	Counting and subitise to 5/10.	Be able to compose all numbers to 10 Subitise to 5 Automatically recall number bonds to 5	Finding the same (double) Show equal groups	

Multiplication	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 1 - C1 / C2	Double to 10. Make equal groups.	Skip counting in 2s, 5s, 10s- identifying patterns in numbers.	Add equal groups - repeated addition Written number sentences with + symbol Create arrays Show doubles	   2 + 2 + 2 = ☐ 3 × 2 = ☐  4 + 4 = ☐ 2 × 4 = ☐

Multiplication	Ready to access	Mental calculations	Written calculations	Visual representations
Year 2	Count in 2s, 5s, 10s. Add equal groups. Make arrays Make doubles	Recall and use 2, 10 and 5 times tables by finding the pattern in a number sequence Understand the concept of doubling Begin to identify links between times tables	Use of numberlines and arrays to show tables Use of hundred squares to show patterns	
Year 3	Link repeated addition to multiplication Use arrays Double 2, 5 and 10x tables Missing numbers problems	Identifying links between times tables (2, 3, 4, 5, 8, 10) Finding patterns Use of inverse Ability to work systematically to work out correspondence problems	Use of bar models to show times tables and links Balanced equations Counting sticks to support link making and scaling	

Multiplication	Ready to access	Mental calculations	Written calculations	Visual representations
Year 4 - C3 / C4	3, 4, 8 times table and related facts. Multiply a 2 digit number by a 1 digit number with and without exchange Scaling Correspondence problems	Recognise and use factor pair and commutativity Use known facts to work out multiplication problems larger than 12x by partitioning	Find the patterns within equivalent calculations Using factor pairs Gattegno charts used to support understanding of multiplying by 10 and 100 Grid method initially introduced then progress to short multiplication method Bar models used to understand scaling Tables used to show all possibilities in correspondence problems	   e.g. 15 × 5 = (10 × 5) + (5 × 5) = 50 + 25 = 75 pieces. × | 40 (tens) | 6 (ones) | Total 30 (tens) | $30 \times 40 = 1,200$ | $30 \times 6 = 180$ | $1,200 + 180 = 1,380$ 5 (ones) | $5 \times 40 = 200$ | $5 \times 6 = 30$ | $200 + 30 = 230$ | | | $1,380 + 230 = 1,610$ 

Multiplication	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 5	All times tables facts (up to 12x12) Multiply by 1 and 0 Multiply 3 numbers Factor pairs Multiply by 10 and 100 Related facts Mental strategies Multiply a 2 or 3 digit number by a 1 digit number Scaling Correspondence problems	Multiply using mental strategies (partitioning and known facts) Recall of factors and multiples, and identify common facts of two numbers	Use of 3D models to support cube numbers Pattern identification on number squares Venn diagrams to sort factors Long multiplication method introduced Place value charts to show patterns of equations Bar models to support fraction work	

Multiplication	**Ready to access**	**Mental calculations**	**Written calculations**	**Visual representations**
Year 6	Multiples and factors Square and cube numbers Multiply 4 digit numbers by 1 and 2 digit numbers Multiply by 10, 100 and 1,000 Mental strategies Multiply fractions by a whole number Multiply mixed numbers by a whole number Find the whole	Identifying common factors and multiples Link with known facts when multiplying decimals by numbers other than 10, 100 and 1,000	Double number lines and tables to support ratio and identifying patterns. Bar models used to show the whole if we know a part.