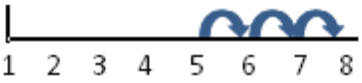
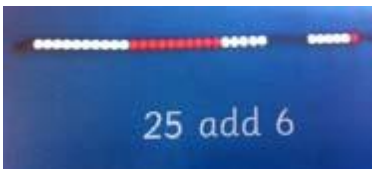
<table>
<tr><th colspan="2">Addition and subtraction Year 1</th></tr>
<tr><td>Mental Calculations</td><td rowspan="2">Read, write and interpret mathematical statements using +, – and =
Represent and use number bonds and related addition facts within 20
Add one digit and two digit numbers to 20 including zero
Solve one step problems using concrete objects and pictorial representations and missing number problems
Given a number, identify (and use the language) one more
Begin to compare commutative sums
Memorise and reason with number bonds to 10 and 20
Add using objects (Numicon, cubes, number liens and tracks
Pre calculation steps are understood</td></tr>
<tr><td>Written Calculations</td></tr>
<tr><td>Representations to support mental and written calculations</td><td>Use a range of concrete and pictorial representations
 
  </td></tr>
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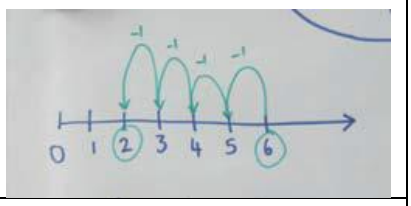
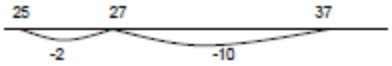
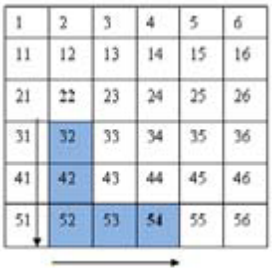
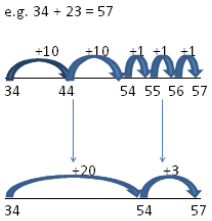
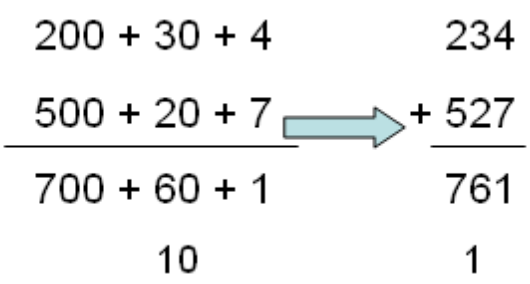
	  
Language/ Terminology	• Forwards, backwards, put together, add, altogether, total, take away, distance between, difference between, more than and less than

Addition and Subtraction Year 2	
Mental Calculations	**Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** • **A two digit number and ones** • **A two digit number and tens** • **Two two digit numbers** • **Adding three one digit numbers** **Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100** **Demonstrate the commutative law for addition** 30 + 4 20 + 5 50 + 9
Written Calculations	• Re partition numbers • Use a hundred square • Check calculations using inverse and by adding numbers in a different order 

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

	• Begin to record addition and subtraction in columns to support place value and prepare for formal written methods with larger numbers 
Representations to support mental and written calculations	Use a range of concrete and pictorial representations  
Links from other strands	• Counting in fractions up to 10, starting from any number and using the 1/2 and 1/4 equivalence on the number line • Solve problems

<table>
<tr><th colspan="2">Addition and Subtraction Year 3</th></tr>
<tr><td>Mental Calculations</td><td>Practise mental methods with increasingly large numbers
Consolidate partitioning and repartitioning
Use compensation for adding too much/ too little and read justing
Use straws, dienes, place value counters and empty number lines
Common strategies include: doubles/ near doubles, number pairs to 10 and 100, adding near multiples of ten and ad justing, known number facts, bridging through 10 and 100</td></tr>
<tr><td>Written Calculations</td><td>Add and subtract numbers with up to three digits using formal written (columnar) methods
Add and subtract two three digit number using physical and abstract representations (straws, dienes, place value counters and empty number lines)
<u>Extended method</u> 87 - 53 =
80 and 7
- 50 and 3
30 and 4 = 34
 
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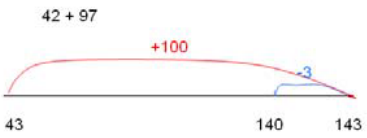
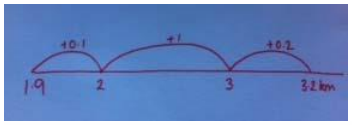
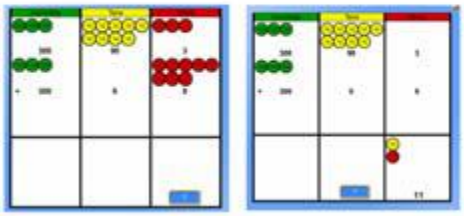
Representations to support mental and written calculations	Use a range of concrete and pictorial representations  
Links from other strands	• Addition of fractions with the same denominator within one whole $\frac{1}{2} + \frac{2}{4} = \frac{2}{4} + \frac{2}{4} = 1$ • Estimate answers and use inverse operations to check • Add amounts of money • Measure, compare and add lengths, mass and capacity
Addition Year 5	
Mental Calculations	**Add and subtract numbers mentally with increasingly large numbers** **Mentally add and subtract tenths and one digit numbers and tenths** **Add and subtract decimals, including a mix of whole numbers and decimals, decimals with different numbers of places and complements of 1**
Written Calculations	**Add numbers with up to 4 digits using the formal columnar method** £563.14 + £207.88 £771.02 1 1 1
Representations to support	

mental and written calculations	 12 462 + 2300 = 12 462 + 2000 + 300 = 14 462 + 300 = 14 762 Place Value counters to support column addition  393 + 308 1 1
Links from other strands	Add fractions with the same denominators and multiples of the same number $\frac{1}{2} + \frac{3}{4} = \frac{2}{4} + \frac{3}{4} = \frac{5}{4}$ Solve problems involving up to 3 decimal number

Addition and Subtraction Year 4	
Mental Calculations	**Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** • **A three digit number and ones** • **A three digit number and tens** • **A three digit number and hundreds** • **Adding three one digit numbers** Partition all numbers and recombine Use straws, dienes, place value counters, empty number lines Common strategies include: doubles/ near doubles, number pairs to 10 and 100, adding near multiples of ten and adjusting, known number facts, bridging through 10 and 100
Written Calculations	**Add and subtract numbers with up to four digits using formal written (columnar) methods**

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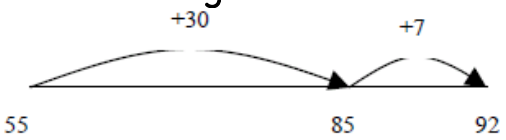
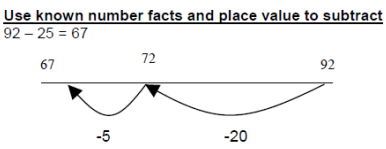
<td>
Add and subtract three digit numbers using columnar method and then move onto 4 digits, include decimal



addition for money

789 + 642 becomes

Answer: 1431



</td>
</tr>
<tr>
<td>Representations to support mental and written calculations</td>
<td>Use a range of concrete and pictorial representations</td>
</tr>
<tr>
<td>Links from other strands</td>
<td>

Addition of fractions with the same denominator to become fluent through a variety of increasingly complex problems beyond one whole
Counting using simple fractions and decimals, both forwards and backwards
Estimate answers and use inverse operations to check
Solve addition and subtraction two step problems in context, deciding which operations and methods to use and why

</td>
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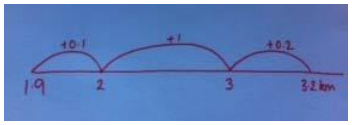
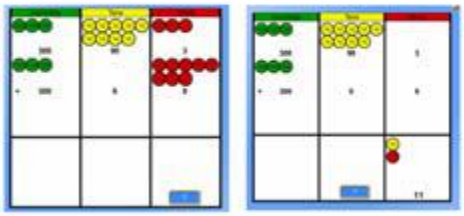
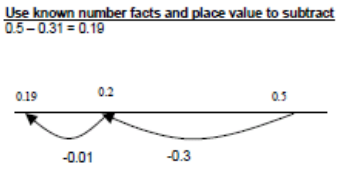
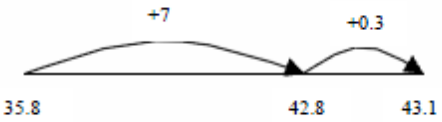
</table>

	• Identify, represent and estimate numbers using different representations • Recognise the place value of each digit in a 4 digit number • Estimate, compare and calculate different measures, including amounts in £ and p (including fractions and decimals)

Addition Year 5	
Mental Calculations	**Add and subtract numbers mentally with increasingly large numbers** **Mentally add and subtract tenths and one digit numbers and tenths** **Add and subtract decimals, including a mix of whole numbers and decimals, decimals with different numbers of places and complements of 1**
Written Calculations	**Add numbers with up to 4 digits using the formal columnar method** £563.14 + £207.88 £771.02 1 1 1
Representations to support mental and written calculations	

	 12 462 + 2300 = 12 462 + 2000 + 300 = 14 462 + 300 = 14 762 Place Value counters to support column addition  393 + 308 1 1
Links from other strands	Add fractions with the same denominators and multiples of the same number $\frac{1}{2} + \frac{3}{4} = \frac{2}{4} + \frac{3}{4} = \frac{5}{4}$ Solve problems involving up to 3 decimal number

Addition and subtraction Year 6	
Mental Calculations	Perform mental calculations including those with mixed operations 
Written Calculations	

	Add and subtract larger numbers using the formal £563.14 + £207.88 £771.02 1 1 1 columnar method $1\ {}^{7}\cancel{8}\ .\ {}^{9}\cancel{0}\ {}^{10}\cancel{1}\ 1$ $-\ \ 5\ .\ 4\ 5\ 6$ $1\ 2\ .\ 5\ 5\ 5$
Representations to support mental and written calculations	 234 kg + 49 kg = 273 kg 200 + 30 + 4 40 + 9 200 + 70 + 13
Links from other strands	Add fractions with different denominators and mixed numbers using the concept of equivalent fractions Use knowledge of the order of operations Use symbols and letters to represent variable and unknowns Calculate and interpret mean as the average

	Find missing angles and express geometry relationships algebraically