


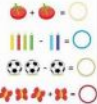









# Knightwood Primary School Calculation Policy

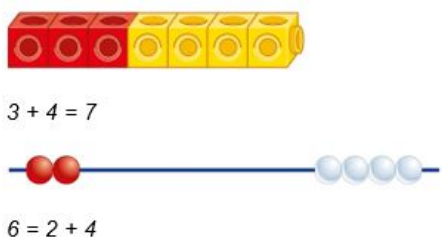
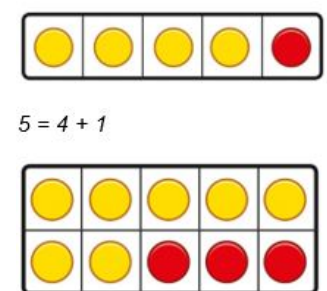
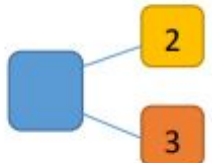
# EYFS

Addition	Subtraction	Multiplication	Division
<p>Children are encouraged to gain a sense of the number system through the use of counting concrete objects.</p>  <p>They combine objects in practical ways and count all.</p>  <p>They understand addition as counting on and will count on in ones and twos using object s, cubes, bead string and number line.</p>  <p>They use concrete and pictorial representation to record their calculations.</p> <p>They begin to use + and =</p> <p>They are encouraged to develop a mental picture of the number system in their heads to use for calculations.</p> <p>Higher attaining children may be able to represent their calculations using symbols and numbers within a written</p> 	<p>Children are encouraged to gain a sense of the number system through the use of counting concrete objects.</p>  <p>They understand subtraction as counting out.</p>  <p>They begin to count back in ones and twos using objects, cubes, bead string and number line.</p>  <p>They use concrete and pictorial representation to record their calculations.</p> <p>They begin to use - and =</p> <p>They are encouraged to develop a mental picture of the number system in their heads to use for calculations.</p> <p>Higher attaining children may be able to represent their calculations using symbols and numbers within a written calculation.</p>	<p>Children use concrete objects to make and count equal groups of objects.</p>  <p>They will count on in twos using a bead string and number line.</p> <p>They understand doubling as repeated addition.</p> $2 + 2 = 4$ <p>They use concrete and pictorial representation to record their calculations. Higher attaining children may be able to represent their calculations using symbols and numbers within a written calculation.</p> 	<p>Children use concrete objects to count and share equally into 2 groups.</p> <p>6 cakes shared between 2 people each person gets 3 cakes. <math>6 \div 2 = 3</math></p>  <p>They count a set of objects and halve them by making two equal groups.</p> <p>They understand sharing and halving as dividing by 2.</p> <p>They will begin to use objects to make groups of 2 from a given amount.</p> <p>They use concrete and pictorial representation to record their calculations.</p> <p>Higher attaining children may be able to represent their calculations using symbols and numbers within a written calculation.</p> 


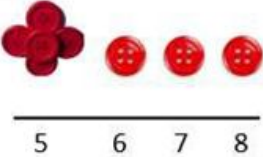
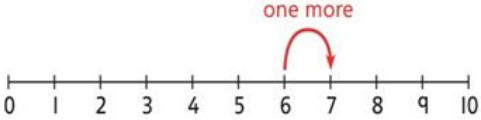
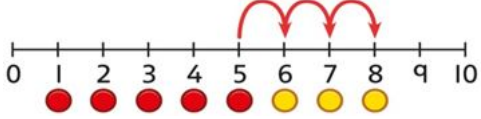
# Year 1 - Addition and subtraction

## National Curriculum statements:


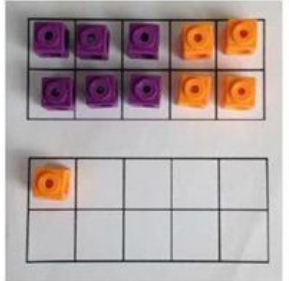
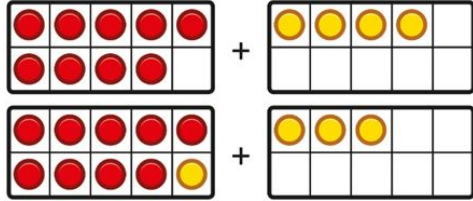
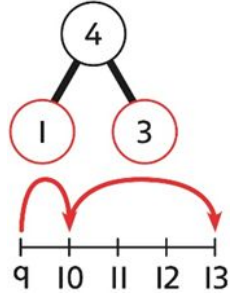
- read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as  $7 = \square - 9$ .

	Concrete	Pictorial	Abstract
Number bonds within and to 10	<p>Break apart a group and put back together to find and form number bonds.</p>  <p>3 + 4 = 7</p> <p>6 = 2 + 4</p>	<p>Use five and ten frames to represent key number bonds.</p>  <p>5 = 4 + 1</p> <p>10 = 7 + 3</p>	<p>Use the part whole model to move into the abstract. Make sure to include examples where one of the parts is zero</p> <p>•</p> <p>2 + 3 = 5 3 + 2 = 5 5 = 3 + 2 5 = 2 + 3</p> 


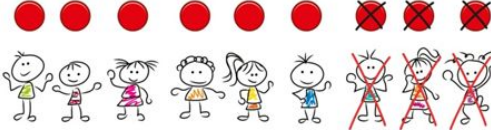

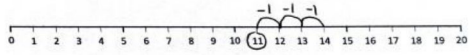
# Year 1 - Addition and subtraction

	Concrete	Pictorial	Abstract
Counting on	<p>Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.</p>  <p>Use counters etc to count on.</p> 	<p>Use a number line to understand how to link counting on with finding one more.</p>  <p><i>One more than 6 is 7. 7 is one more than 6.</i></p> <p>Learn to link counting on with adding more than one.</p>  <p><math>5 + 3 = 8</math></p>	<p><math>5 + 3 = 8</math></p> <p>Place the larger number in your head and count on the smaller number to find your answer.</p>


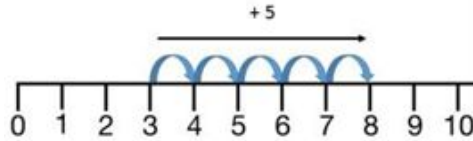
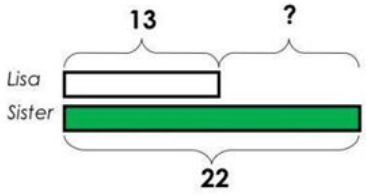
# Year 1 - Addition and subtraction

	Concrete	Pictorial	Abstract
Regrouping to cross 10	<p>Use a bead string to complete a 10 and understand how this relates to the addition.</p>  <p>Fill in a tens frame E.g. <math>6 + 4 = 10</math>. Add one more is 11 so <math>6 + 5 = 11</math></p> 	<p>Draw counters in a tens frame. Use knowledge of number bonds to 10.</p> 	<p>Use a part-whole model and a number line to support the calculation.</p> $9 + 4 = 13$ 

# Year 1 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtract 1s	<p>Arrange objects and remove to find out how many are left.</p> 	<p>Children draw objects and cross out to represent taking away.</p> 	$6 - 2 = 4$
Counting back	<p>Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones.</p>  <p><math>13 - 4 = 9</math></p>	<p>Count back on a number line or number track.</p> <p>Start with the minuend and count back the subtrahend, showing the jumps on the number line.</p>  <p><math>14 - 3 = 11</math></p>	<p>Put 13 in your head, count back 4.</p> <p>What number are you at?</p> <p>Use your fingers to help.</p>



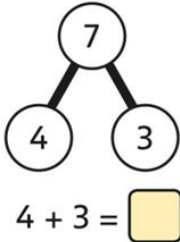
# Year 1 - Addition and subtraction

	Concrete	Pictorial	Abstract
Find the difference	<p>Compare amounts and objects to find the difference.</p> <p>Use cubes to build towers or make bars to find the difference. Use basic bar models with items to find the difference.</p>  <p>8 is 2 more than 6. 6 is 2 less than 8. The difference between 8 and 6 is 2.</p>	<p>Count on to find the difference, using a number line.</p>  <p>Draw bars to find the difference between 2 numbers.</p> 	<p>Children to understand 'find the difference' as subtraction.</p> <p>The difference between 10 and 6 is 4.</p> $10 - 4 = 6$ $10 - 6 = 4$

# Year 2 - Addition and subtraction

## National Curriculum statements:


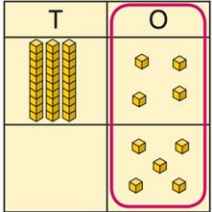
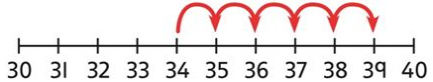
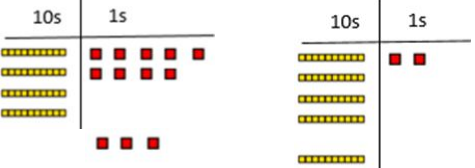
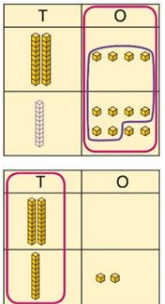
- solve problems with addition and subtraction:
  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
  - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- 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
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

	Concrete	Pictorial	Abstract
Adding 10s	<p>Use known bonds and unitising to add 10s.</p>  <p><i>I know that 4 + 3 = 7.</i> So, I know that 4 tens add 3 tens is 7 tens.</p>	<p>Use known bonds and unitising to add 10s.</p>  <p><i>I know that 4 + 3 = 7. So, I know that 4 tens add 3 tens is 7 tens.</i></p>	<p>Use known bonds and unitising to add 10s.</p> <p><math>4 + 3 = 7</math></p> <p><math>4 \text{ tens} + 3 \text{ tens} = 7 \text{ tens}</math></p> <p><math>40 + 30 = 70</math></p> 

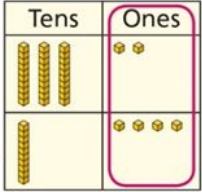
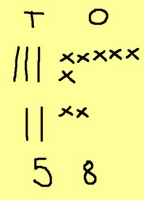
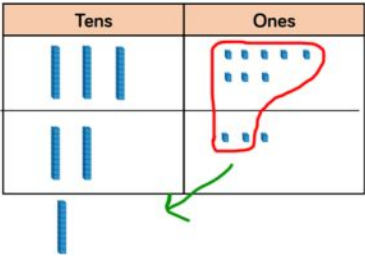
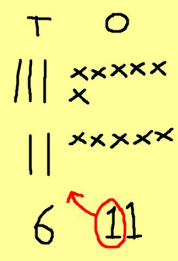
# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
Add tens to a 2-digit number	<p>Add the tens using dienes.</p> <p>35 is 3 tens and 5 ones. 20 is 2 tens. There are 5 tens and 5 ones in total</p>	<p>Add the tens and ones separately, drawing tens and ones to support.</p> <p>3 tens + 2 tens = 5 tens 5 tens + 5 ones = 55</p>	<p>Add the tens and ones separately. Use related facts.</p> $3 + 2 = 5$ <p>So <math>30 + 20 = 50</math> <math>50 + 5 = 55</math></p>
Add three 1-digit numbers	<p>Use number bond facts (if possible) e.g. <math>4 + 7 + 6</math> <math>4 + 6 = 10</math>. Add on <math>7 = 17</math></p> <p>Or start with the largest number.</p>	<p>Add together three groups of objects. Draw a picture to recombine the groups to make 10.</p>	$\begin{array}{r} \boxed{4} + \boxed{7} + \boxed{6} = \boxed{10} + \boxed{7} \\ \underbrace{\hspace{1.5cm}}_{10} \\ = \boxed{17} \end{array}$ <p>Combine the two numbers that make 10 and then add on the third number.</p>

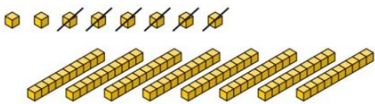
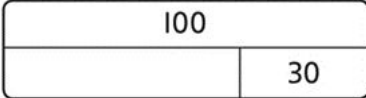

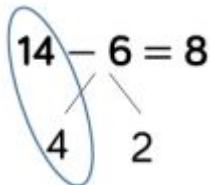
# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
<p>Add a 1-digit number to a 2-digit number, not crossing 10</p>	 <p>Add the 1s to find the total. Use known bonds within 10. E.g. <math>34 + 5 =</math> <math>34</math> is 3 tens and 4 ones. <math>4 + 5 = 9</math> So <math>34 + 5 = 39</math></p>	<p>A place value grid can be used.</p> 	<p>Understand the link between counting on and using known number facts. Encourage to use known number bonds to improve efficiency and accuracy.</p> 
<p>Add a 1-digit number to a 2-digit number, crossing 10</p>	<p>Make the numbers on a place value grid. Add up the ones and exchange 10 ones for 1 ten.</p> 	<p>Use a place value grid, drawing the counters /dienes.</p> 	<p><math>49 + 3 =</math> <math>40 = 4</math> tens and 9 ones <math>9</math> ones + <math>3</math> ones = <math>12</math> ones <math>40 + 12</math> ones = <math>52</math></p>

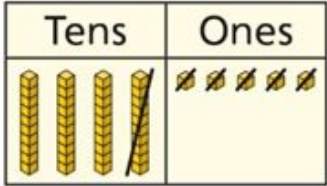
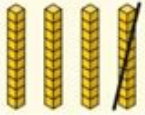

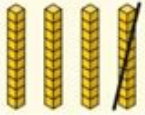

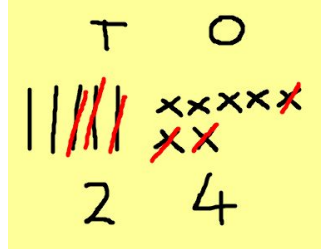


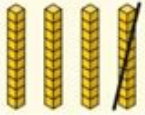

# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
Add two 2-digit numbers, not crossing 10	<p>Add the ones then add the tens using place value grid and dienes.</p> 	<p>Add the ones then add the tens drawing tens and ones.</p> 	$43 + 21 =$ $3 + 1 = 4$ $40 + 20 = 60$ $60 + 4 = 64$ So $43 + 21 = 64$
Add two 2-digit numbers, crossing 10	<p>Use dienes or place value counters Add the ones, exchange 10 ones for 1 ten. Add the tens.</p> 	<p>Draw the tens and ones. Add the ones, exchange 10 ones for 1 ten. Add the tens.</p> 	$57 + 24 =$ $7 + 4 = 11$ $50 + 20 = 70$ $70 + 11 = 81$

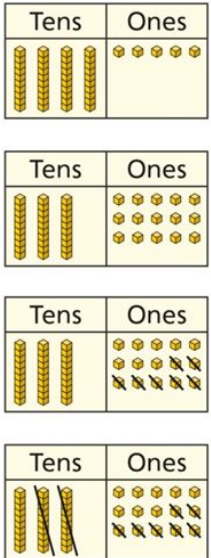
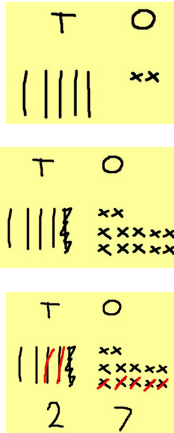
# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtract tens	<p>Use related facts and unitising, using dienes or place value counters</p>  <p>8 subtract 6 is 2. So, 8 tens subtract 6 tens is 2 tens.</p>	<p>Use known number bonds and unitising to subtract multiples of 10.</p>  <p><math>10 - 3 = 7</math> So, 10 tens subtract 3 tens is 7 tens.</p>	<p>Use known number bonds and unitising to subtract multiples of 10.</p> <p>7 tens subtract 5 tens is 2 tens. <math>70 - 50 = 20</math></p>
Subtract a 1-digit number, crossing 10	<p>Use dienes or place value counters, exchanging 1 ten for 10 ones.</p> <p>Count back using a number line.</p>	<p>Draw a number line or number track to count back. Use partitioning of the subtrahend to reach the next 10.</p> 	<p>Use partitioning of the subtrahend to reach the next 10.</p> 

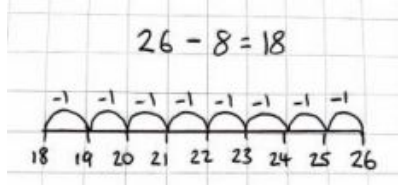
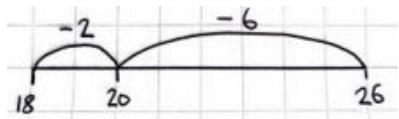
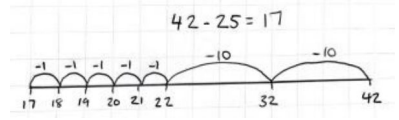
# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract				
Subtract a 2-digit number, not crossing 10	<p>Use dienes or place value counters. Subtract the ones then subtract the tens.</p>  <table border="1" data-bbox="305 440 633 627"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>  </td> <td>  </td> </tr> </tbody> </table>	Tens	Ones			<p>Draw tens and ones. Subtract the ones then subtract the tens. E.g. <math>57 - 33 =</math></p>  <p style="text-align: center;"> <span style="margin-right: 40px;">T</span> O     <span style="margin-right: 40px;">2</span> 4         </p>	$76 - 34 =$ $6 - 4 = 2$ $70 - 30 = 40$ $76 - 34 = 42$
Tens	Ones						
							

# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
<p>Subtract a 2-digit number, crossing 10</p>	<p>Use dienes or place value counters. Make the minuend using tens and ones. Exchange 1 ten for 10 ones. Subtract the ones then subtract the tens.</p> 	<p>Draw tens and ones for the minuend. Exchange 1 ten for 10 ones. Subtract the ones then subtract the tens.</p> 	<p>72 - 26 =  72 - 6 = 66  66 - 20 = 46  So 72 - 26 = 46</p>

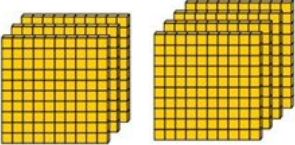
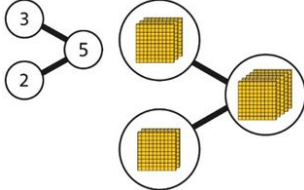
# Year 2 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtraction using a number line		<p>Subtract ones.</p>  <p>A number line from 18 to 26 with tick marks every 1 unit. Eight small arcs, each labeled '-1', are drawn above the line, starting from 26 and moving left to 18. The equation <math>26 - 8 = 18</math> is written above the line.</p> <p>Use knowledge of number bonds to subtract to the nearest ten.</p>  <p>A number line from 18 to 26 with tick marks every 2 units. A small arc labeled '-2' is drawn above the line from 26 to 20. A larger arc labeled '-6' is drawn above the line from 26 to 18. The numbers 18, 20, and 26 are marked on the line.</p> <p>Subtract 2-digit numbers. Subtract the tens and then the ones.</p>  <p>A number line from 17 to 42 with tick marks every 5 units. Five small arcs, each labeled '-1', are drawn above the line from 42 to 22. Two larger arcs, each labeled '-10', are drawn above the line from 42 to 32 and from 32 to 22. The numbers 17, 19, 21, 22, 32, and 42 are marked on the line. The equation <math>42 - 25 = 17</math> is written above the line.</p>	

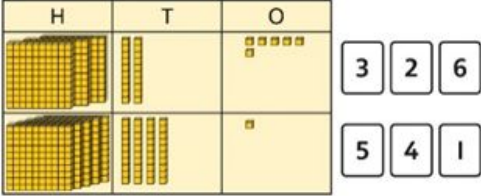
# Year 3 - Addition and subtraction

## National Curriculum objectives:

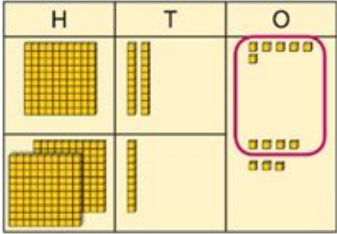
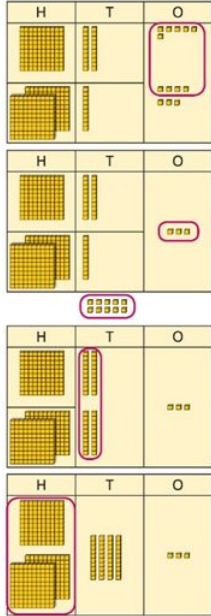
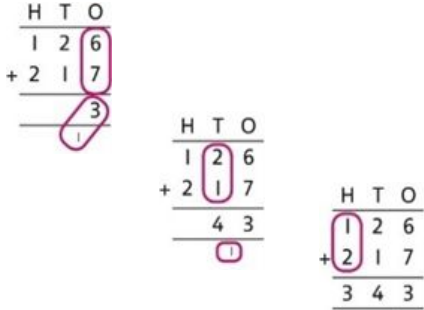
- add and subtract numbers mentally, including:
  - a three-digit number and ones
  - a three-digit number and tens
  - a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

	Concrete	Pictorial	Abstract
Adding 100s	<p>Use dienes or place value counters.</p> <p>3 hundreds + 4 hundreds = 7 hundreds.</p> <p><math>300 + 400 = 700</math></p> 	<p>Use known related facts to add multiples of 100. Represent with a part-whole model to support unitising.</p> 	<p>Use known related facts.</p> <p><math>3 + 4 = 7</math></p> <p><math>300 + 400 = 700</math></p>

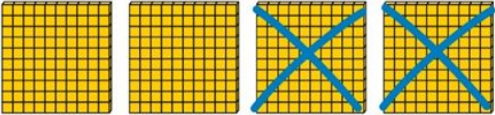
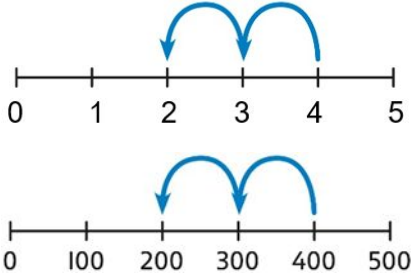
# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Column method addition without exchanging	<p>Make both numbers on a place value grid, using dienes or counters.</p> 	<p>Children to draw the dienes or counters in a place value grid.</p>	<p>Children to use expanded column method.</p> <p>E.g.</p> $143 + 256 =$ $100 + 40 + 3$ $\underline{200 + 50 + 6}$ $300 + 90 + 9 = 399$ <p>Then progress to compacted method.</p> $\begin{array}{r} 143 \\ + \underline{256} \\ \hline 399 \end{array}$

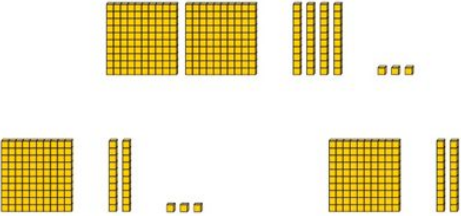
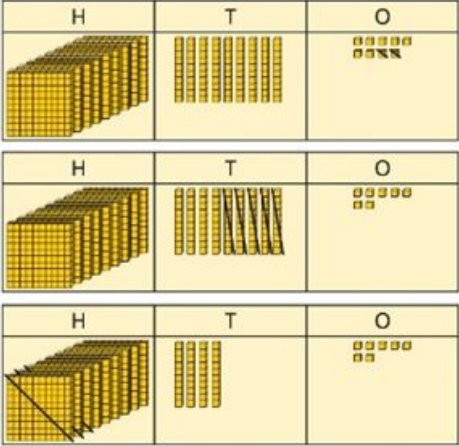
# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Column method addition with exchanging	<p>Make both numbers on a place value grid. Exchange the ones for 1 ten or tens for 1 hundred.</p>  <p>There are 13 ones. I will exchange 10 ones for 1 ten.</p>	<p>Draw a place value grid and dienes/counters.</p> 	<p>Use column addition, ensuring understanding of place value at every stage of the calculation.</p> $\begin{array}{r} \text{H T O} \\ 126 \\ + 217 \\ \hline \end{array}$  <p><math>126 + 217 = 343</math></p> <p>Note: Children should also study examples where exchange is required in more than one column, for example <math>185 + 318 = ?</math></p>

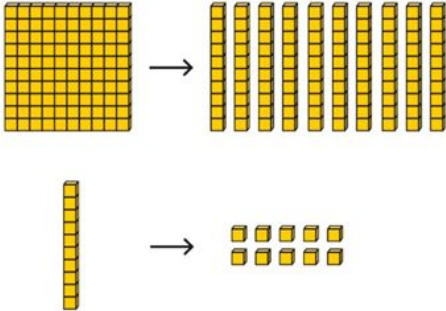
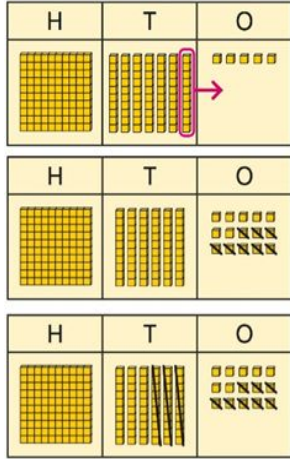
# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtracting 100s	<p>Use dienes or place value counters.</p>  <p><math>4 - 2 = 2</math> 4 hundreds - 2 hundreds = 2 hundreds.</p>	<p>Link counting back in 100s to counting back in 1s. Can use number lines to support.</p> 	<p>Use known related facts.</p> $7 - 3 = 4$ $700 - 300 = 400$

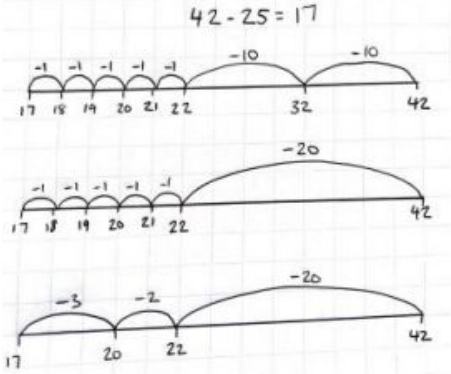
# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Column method subtraction without exchanging	<p>Use dienes or place value counters. Physically take away the ones, tens and hundreds.</p> 	<p>Use a place value grid and draw the dienes.</p> 	<p>Use column subtraction to calculate accurately and efficiently.</p> $  \begin{array}{r}  \text{H T O} \\  999 \\  - 352 \\  \hline  647  \end{array}  $

# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Column method subtraction with exchanging	<p>Use dienes or place value counters to enact the exchange of 1 hundred for 10 tens, and 1 ten for 10 ones.</p>  <p>The top diagram shows a 10x10 grid of yellow squares (representing 100) being exchanged for 10 vertical rods of 10 squares each (representing 10 tens). The bottom diagram shows a single vertical rod of 10 squares (representing 1 ten) being exchanged for 10 individual yellow squares (representing 10 ones).</p>	<p>Use a place value grid and draw dienes. Draw the exchange.</p> <p><math>175 - 38 = ?</math> I need to subtract 8 ones, so I will exchange a ten for 10 ones.</p>  <p>The pictorial shows three place value grids labeled H (Hundreds), T (Tens), and O (Ones).      - Top grid: H has 1 hundred, T has 7 tens, O has 5 ones. A pink box highlights one ten in the T column and eight ones in the O column. A pink arrow points from the ten to the ones column.      - Middle grid: H has 1 hundred, T has 6 tens, O has 15 ones (10 from the exchange plus 5 original).      - Bottom grid: H has 1 hundred, T has 6 tens, O has 7 ones (15 minus 8).</p>	<p>Use column subtraction to work accurately and efficiently.</p> $\begin{array}{r} \text{H T O} \\ 1 \overset{\circ}{7} 5 \\ - \quad 38 \\ \hline 137 \end{array}$ <p><math>175 - 38 = 137</math></p> <p>If the subtraction is a 3-digit number subtract a 2-digit number, children should understand how the recording relates to the place value, and so how to line up the digits correctly. Children should also understand how to exchange in calculations where there is a zero in the 10s column.</p>

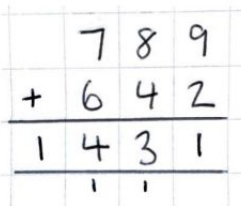
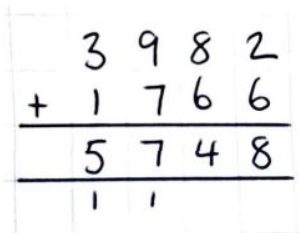
# Year 3 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtraction using a number line.		<p data-bbox="821 325 1290 354">Subtract the tens, then the ones.</p> <p data-bbox="821 401 1315 507">Children can also use knowledge of number bonds to subtract to the nearest ten.</p>  <p>The diagrams show three different ways to subtract 25 from 42 on a number line:</p> <ul style="list-style-type: none"><li>Method 1: Start at 42, subtract 5 ones (labeled -1) to reach 37, then subtract 10 tens (labeled -10) to reach 27, and finally subtract 10 more (labeled -10) to reach 17.</li><li>Method 2: Start at 42, subtract 5 ones (labeled -1) to reach 37, then subtract 20 tens (labeled -20) to reach 17.</li><li>Method 3: Start at 42, subtract 3 ones (labeled -3) to reach 39, subtract 2 tens (labeled -2) to reach 37, and finally subtract 20 tens (labeled -20) to reach 17.</li></ul>	

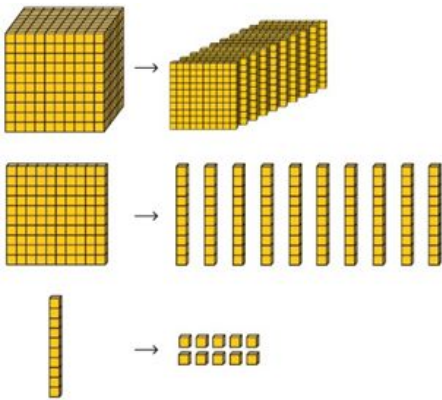
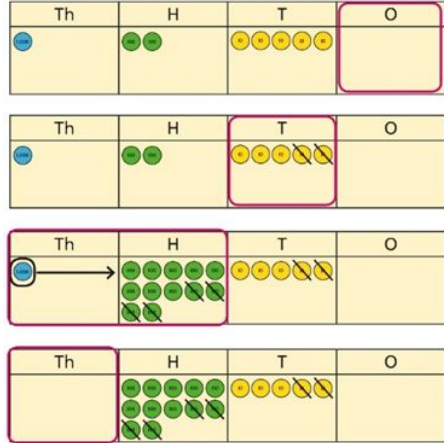
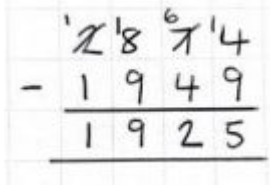
# Year 4 - Addition and subtraction

## National Curriculum objectives:

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

	Concrete	Pictorial	Abstract
Column method with exchanging, up to 4 digits	Consolidate understanding from methods used in Year 3.  		

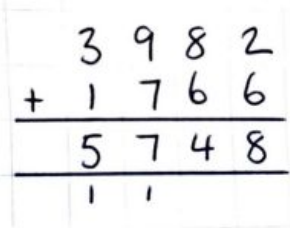
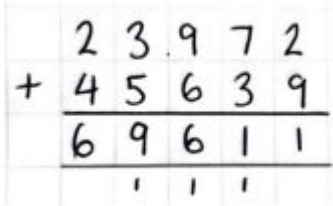
# Year 4 - Addition and subtraction

	Concrete	Pictorial	Abstract
<p>Column subtraction using to 4 digits, with exchanging</p>	<p>Use dienes to consolidate exchanging of a 1000 for 100s, a 100 for 10s, or a 10 for 1s.</p>  <p>The concrete stage shows three levels of exchanging: 1. A large cube of 1000 blocks is broken down into 10 smaller cubes of 100 blocks each. 2. A flat square of 100 blocks is broken down into 10 vertical rods of 10 blocks each. 3. A single vertical rod of 10 blocks is broken down into 10 individual blocks.</p>	<p>Draw place value counters or dienes on a place value grid to subtract, exchanging where necessary.</p>  <p>The pictorial stage uses four place value grids to show the subtraction of 1949 from 2874. The columns are labeled Th (Thousands), H (Hundreds), T (Tens), and O (Ones).      - Grid 1: Shows 2000 (2 blue circles in Th), 800 (8 green circles in H), 70 (7 yellow circles in T), and 4 (4 yellow circles in O).      - Grid 2: Shows the first exchange: one blue circle is moved from Th to H, and one yellow circle is crossed out in T. Now there are 9 green circles in H and 6 yellow circles in T.      - Grid 3: Shows the second exchange: one green circle is moved from H to T, and one yellow circle is crossed out in T. Now there are 8 green circles in H and 7 yellow circles in T.      - Grid 4: Shows the final state after subtraction: 1 blue circle in Th, 8 green circles in H, 2 yellow circles in T, and 5 yellow circles in O.</p>	<p>Column method, exchanging where required.</p>  <p>The abstract stage shows the column subtraction method. The numbers are written in columns with place value markers above them: 2 (Thousands), 8 (Hundreds), 7 (Tens), 4 (Ones) for the top number, and 1 (Thousands), 9 (Hundreds), 4 (Tens), 9 (Ones) for the bottom number. The result, 1925, is written below a horizontal line.</p>

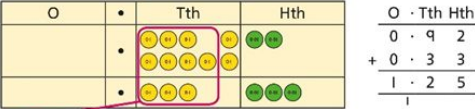
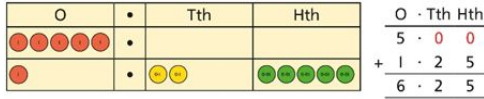
# Year 5 - Addition and subtraction

## National Curriculum objectives:

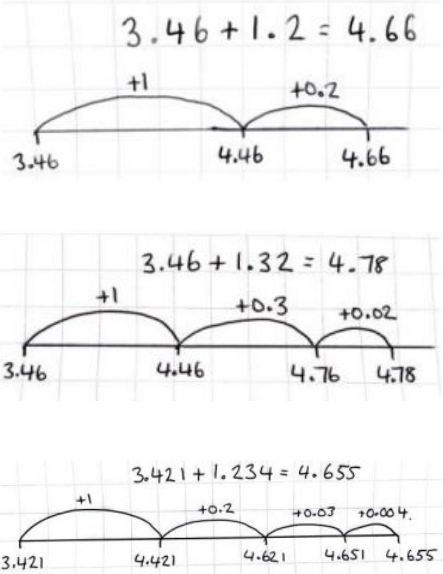
- add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers
- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Addition	Concrete	Pictorial	Abstract
Column method with regrouping, with more than 4 digits.	<p data-bbox="581 631 1557 661">Consolidate understanding from methods used in Year 3 and Year 4.</p> <div data-bbox="658 683 948 912"><math display="block">\begin{array}{r} 3982 \\ + 1766 \\ \hline 5748 \\ \hline \phantom{0}1 \phantom{0}1 \end{array}</math></div> <div data-bbox="1097 694 1431 901"><math display="block">\begin{array}{r} 23972 \\ + 45639 \\ \hline 69611 \\ \hline \phantom{0}1 \phantom{0}1 \phantom{0}1 \end{array}</math></div>		

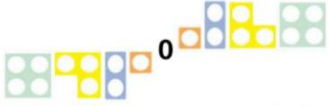
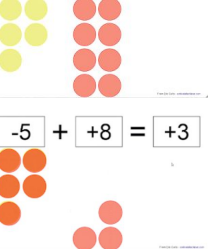
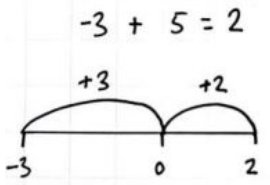
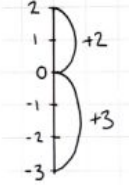
# Year 5 - Addition and subtraction

Addition	Concrete	Pictorial	Abstract
<p>Addition of decimals using column method</p>	<p>Use place value equipment e.g. place value counters to represent additions.</p> <p>Show <math>0.23 + 0.45</math> using place value counters.</p>	<p>Use place value equipment on a place value grid to represent additions.</p> <p>Represent exchange where necessary.</p>  <p>Include examples where the numbers of decimal places are different.</p> 	<p>Add using a column method, ensuring that children understand the link with place value.</p> $\begin{array}{r} 0.23 \\ + 0.45 \\ \hline 0.68 \end{array}$ <p>Include exchange where required, alongside an understanding of place value.</p> $\begin{array}{r} 0.92 \\ + 0.33 \\ \hline 1.25 \end{array}$ <p>Include additions where the numbers of decimal places are different.</p> <p><math>3.4 + 0.65 = ?</math></p>


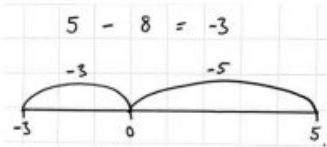
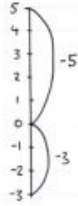
# Year 5 - Addition and subtraction

Addition	Concrete	Pictorial	Abstract
Addition of decimals using number lines		 <p>The pictorial column contains three examples of decimal addition on number lines, each with a grid background. Each example shows a starting point, a series of jumps, and the final sum.</p> <ul style="list-style-type: none"><li><b>Example 1:</b> <math>3.46 + 1.2 = 4.66</math>. The number line starts at 3.46. A jump of +1 leads to 4.46. A second jump of +0.2 leads to the final sum of 4.66.</li><li><b>Example 2:</b> <math>3.46 + 1.32 = 4.78</math>. The number line starts at 3.46. A jump of +1 leads to 4.46. A jump of +0.3 leads to 4.76. A final jump of +0.02 leads to the sum of 4.78.</li><li><b>Example 3:</b> <math>3.421 + 1.234 = 4.655</math>. The number line starts at 3.421. A jump of +1 leads to 4.421. A jump of +0.2 leads to 4.621. A jump of +0.03 leads to 4.651. A final jump of +0.004 leads to the sum of 4.655.</li></ul>	

# Year 5 - Addition and subtraction

Addition	Concrete	Pictorial	Abstract
<p>Adding with negative numbers (linking with temperature)</p>	 <p>Use of numicon to represent negative numbers.</p> $\boxed{-5} + \boxed{+8} = \boxed{\phantom{00}}$  <p>Use counters to represent negative numbers. Place the addend counters onto the negative number addend to represent the positive cancelling out the negative.</p>	<p>Represent on both horizontal and vertical number lines (to link to temperature).</p>  	

# Year 5 - Addition and subtraction

Subtraction	Concrete	Pictorial	Abstract
Column subtraction	<p>Consolidate understanding from Year 3 and Year 4.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <math display="block">\begin{array}{r} \overset{1}{2} \overset{8}{8} \overset{6}{7} \overset{1}{4} \\ - 1949 \\ \hline 1925 \end{array}</math> </div> <div style="text-align: center;"> <math display="block">\begin{array}{r} 748928 \\ - 33294 \\ \hline 41634 \end{array}</math> </div> </div>		
Subtraction with negative numbers (linking to temperature)	<p>Use of numicon to represent negative numbers.</p> 	<p>Represent on both vertical and horizontal number lines (linking to temperature).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <math display="block">5 - 8 = -3</math>  </div> <div style="text-align: center;">  </div> </div>	

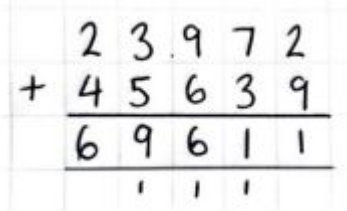
# Year 5 - Addition and subtraction

Subtraction	Concrete	Pictorial	Abstract																																
Subtracting decimals	<p>Use decimal place value counters to explore subtraction of decimals. Use a place value grid.</p> <table border="1" data-bbox="324 489 710 703"> <thead> <tr> <th>10's</th> <th>1's</th> <th>0.1's</th> <th>0.01's</th> </tr> </thead> <tbody> <tr> <td>10 10</td> <td>1 1</td> <td>0.1 0.1</td> <td>0.01 0.01</td> </tr> <tr> <td>10 10</td> <td>1 1</td> <td>0.1 0.1</td> <td>0.01 0.01</td> </tr> <tr> <td></td> <td>1 1</td> <td>0.1</td> <td></td> </tr> </tbody> </table>	10's	1's	0.1's	0.01's	10 10	1 1	0.1 0.1	0.01 0.01	10 10	1 1	0.1 0.1	0.01 0.01		1 1	0.1		<p>Draw counters on a place value grid, showing exchange where necessary.</p> <table border="1" data-bbox="823 484 1309 622"> <thead> <tr> <th>O</th> <th>.</th> <th>Tth</th> <th>Hth</th> </tr> </thead> <tbody> <tr> <td>● ● ● ●</td> <td></td> <td>● ● ● ●</td> <td>● ● ● ●</td> </tr> <tr> <td></td> <td></td> <td>● ●</td> <td>● ● ● ●</td> </tr> <tr> <td></td> <td></td> <td></td> <td>● ● ● ●</td> </tr> </tbody> </table>	O	.	Tth	Hth	● ● ● ●		● ● ● ●	● ● ● ●			● ●	● ● ● ●				● ● ● ●	<p>Use column subtraction, with an understanding of place value, including subtracting numbers with different numbers of decimal places.</p> <p><math>3.921 - 3.75 = ?</math></p> $  \begin{array}{r}  \text{O} \cdot \text{Tth} \quad \text{Hth} \quad \text{Thth} \\  \hline  3 \cdot 9 \quad 2 \quad 1 \\  - 3 \cdot 7 \quad 5 \quad 0 \\  \hline  \phantom{0} \cdot \\  \hline  \hline  \end{array}  $
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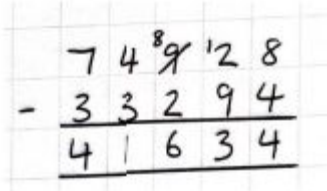
# Year 6 - Addition and subtraction

## National Curriculum objectives:

- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
- use negative numbers in context, and calculate intervals across zero

	Concrete	Pictorial	Abstract
Addition using column method	Consolidate understanding from methods used in Year 3, 4 and 5. 		





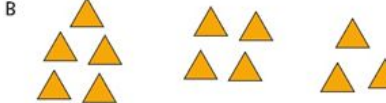
# Year 6 - Addition and subtraction

	Concrete	Pictorial	Abstract
Subtraction using column method	Consolidate understanding from methods used in Year 3, 4 and 5.		
	 <p>A handwritten subtraction problem on a grid background. The problem is <math>74928 - 33294 = 41634</math>. The numbers are written in a columnar format. The top row is 7 4 9 2 8. The second row is - 3 3 2 9 4. A horizontal line is drawn under the second row. The third row is 4 1 6 3 4. There are small superscripts above the 9 and 2 in the top row, and a small '8' above the 9 in the second row, possibly indicating place value or a specific method.</p>		

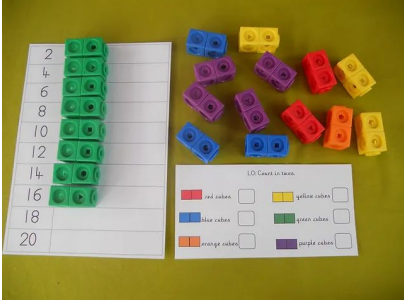
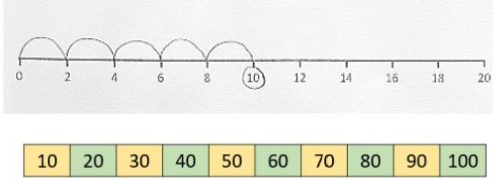
# Year 1 - Multiplication and division

## National Curriculum statements:

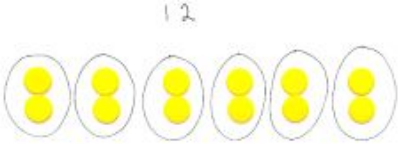
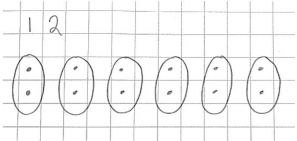
- solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
- Count in multiples of twos, fives and tens

	Concrete	Pictorial	Abstract
Recognise and make equal groups	<p>Arrange objects in equal groups. Provide opportunity for children to also create unequal groups to support understanding of the difference between equal and unequal groups.</p> <p>A  B  C </p>	<p>Children to draw equal or unequal groups.</p> <p>A  B </p>	<p>Use words to represent groups e.g. Three equal groups of 4. Four equal groups of 5.</p>

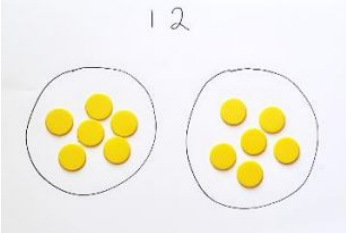
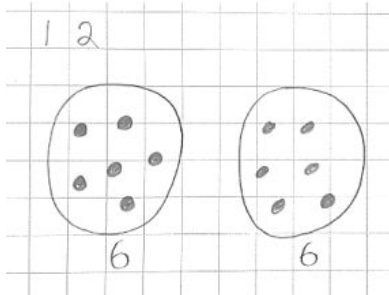
# Year 1 - Multiplication and division

	Concrete	Pictorial	Abstract
<p>Count in multiples of two, five and ten</p>	<p>Count objects in groups of two, five or ten.</p> 	<p>Structured number lines or number tracks.</p> 	<p>Count aloud in twos, fives and tens.</p>

# Year 1 - Multiplication and division

	Concrete	Pictorial	Abstract
Grouping	<p>Use objects to count and group.</p> <p>E.g. <i>I have 12 cookies to put in bags. If I put 2 in each bag, how many bags will I need?</i></p>  <p>A photograph of 12 cookies, each with two yellow dots, arranged in a single row. Above the cookies, the number '12' is written in a simple, handwritten font.</p>	<p>Draw groups of the amount.</p> <p>E.g. <i>I have 12 cookies to put in bags. If I put 2 in each bag, how many bags will I need?</i></p>  <p>A drawing on a grid background showing 12 cookies arranged in a single row. Each cookie is represented by an oval with two dots. Above the cookies, the number '12' is written in a simple, handwritten font.</p>	<p>Count in multiples of two, five or ten, as relevant.</p> <p>E.g. <i>I have 12 cookies to put in bags. If I put 2 in each bag, how many bags will I need?</i></p> <p>There are 12 altogether. There are 6 equal groups of 2.</p>

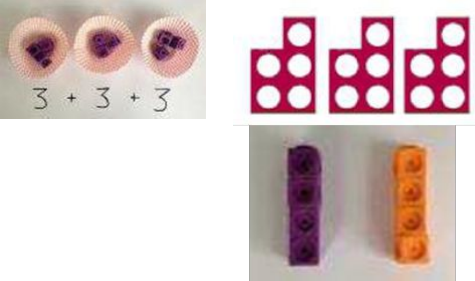

# Year 1 - Multiplication and division

	Concrete	Pictorial	Abstract
Sharing	<p>Use objects to count and share equally..</p> <p>E.g. <i>I have 12 sweets and share them between 2 people. How many will we each have?</i></p> 	<p>Draw the relevant groups then draw dots, sharing between the groups equally.</p> <p>E.g. <i>I have 12 sweets and share them between 2 people. How many will we each have?</i></p> 	<p>Count in multiples of two, five or ten, as relevant.</p> <p>E.g. <i>I have 12 cookies to put in bags. If I put 2 in each bag, how many bags will I need?</i></p> <p>If I share 12 equally between 2 groups, there will be 6 in each group.</p>




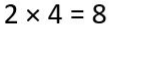



# Year 2 - Multiplication and division

## National Curriculum statements:







- recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs
- show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

	Concrete	Pictorial	Abstract
Repeated addition	<p>Use different objects to add equal groups.</p>  <p>The concrete representation shows three small round objects (possibly buttons or coins) in a row, with the equation <math>3 + 3 + 3</math> written below them. To the right, there are two vertical towers of blocks: one purple tower with three blocks and one orange tower with three blocks.</p>	<p>Draw objects to add equal groups.</p>  <p>The pictorial representation shows three groups of two yellow stars each, arranged in a horizontal line.</p>	<p>Write addition sentences to describe groups of objects or pictures.</p> $2 + 2 + 2 = 6$

# Year 2 - Multiplication and division

	Concrete	Pictorial	Abstract
Arrays showing commutativity	<p>Create arrays using counters/cubes to show multiplication sentences.</p>  	<p>Draw arrays in different rotations to find commutative multiplication sentences.</p>  $4 \times 2 = 8$  $2 \times 4 = 8$  $2 \times 4 = 8$  $4 \times 2 = 8$	<p>Use arrays to write repeated addition and multiplication sentences.</p>  $5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$

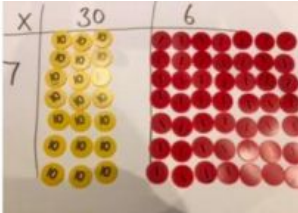
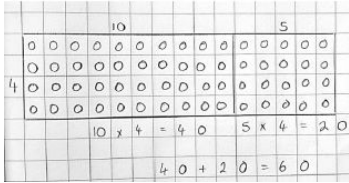
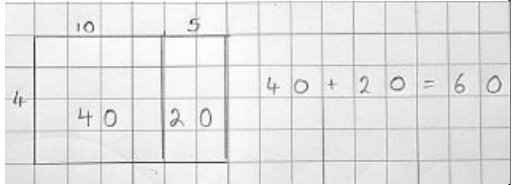
# Year 2 - Multiplication and division

	Concrete	Pictorial	Abstract
Sharing equally	<p>Start with a whole and share into equal parts, one at a time.</p> 	<p>Represent the objects shared into equal parts using a bar model.</p> <p><i>20 shared into 5 equal parts. There are 4 in each part.</i></p> 	$20 \div 5 = 4$
Grouping equally	<p>Understand how to make equal groups from a whole.</p>  <p>8 divided into 4 equal groups. There are 2 in each group.</p>	<p>Understand the relationship between grouping and the division number sentence.</p> <p><math>12 \div 3 = 4</math></p>  <p><math>12 \div 4 = 3</math></p>  <p><math>12 \div 6 = 2</math></p> 	<p>12 divided into groups of 3. <math>12 \div 3 = 4</math></p> <p>There are 4 groups.</p>

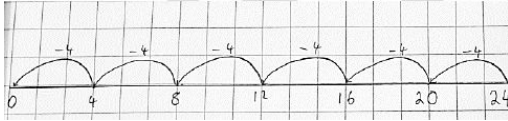
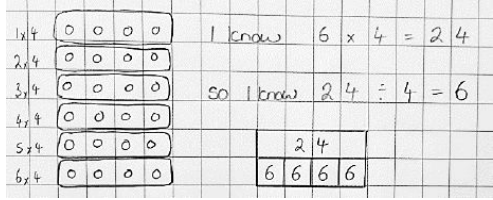
# Year 3 - Multiplication and division

## National Curriculum statements:

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
- solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which  $n$  objects are connected to  $m$  objects.

	Concrete	Pictorial	Abstract				
Two-digit number times one-digit number	<p>Use of partitioning and arrays using place value counters or dienes.</p> 	<p>Use of partitioning and arrays.</p>  <p><math>3 \times 24 =</math></p> <table border="1" data-bbox="813 942 1112 1089"> <thead> <tr> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	T	O			<p>Partition, multiply and add to find the answer.</p> 
T	O						

# Year 3 - Multiplication and division

	Concrete	Pictorial	Abstract										
Division facts for the 3, 4 and 8 times table	<p><math>48 \div 4</math> create using place value counters or dienes. Share the tens then share the ones. Any ones left over are the remainders.</p> <p><math>48 \div 4 =</math></p> <table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>1 1</td> </tr> <tr> <td>10</td> <td>1 1</td> </tr> <tr> <td>10</td> <td>1 1</td> </tr> <tr> <td>10</td> <td>1 1</td> </tr> </tbody> </table>	Tens	Ones	10	1 1	10	1 1	10	1 1	10	1 1	<p>Counting back using number lines.</p>  <p>Use of arrays and bar models.</p> 	<p>Use of known facts:            I know <math>30 \div 3 = 10</math> and  <math>9 \div 3 = 3</math>  <math>10 + 3 = 13</math></p>
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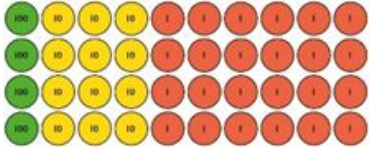


# Year 4 - Multiplication and division

## National Curriculum statements:

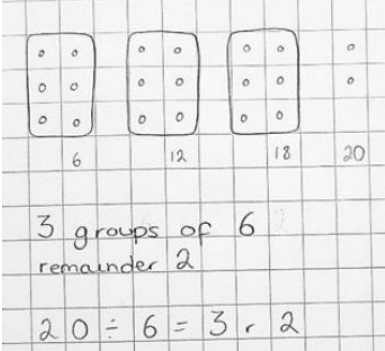
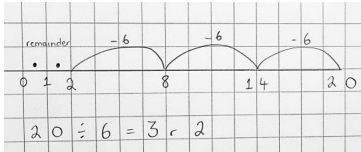
- recall multiplication and division facts for multiplication tables up to  $12 \times 12$
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- recognise and use factor pairs and commutativity in mental calculations
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

	Concrete	Pictorial	Abstract
Multiplying by multiples of 10 and 100	<p>Use unitising and place value equipment to understand how to multiply by multiples of 1, 10 and 100.</p> <p>3 groups of 4 ones is 12 ones. 3 groups of 4 tens is 12 tens. 3 groups of 4 hundreds is 12 hundreds.</p>	<p>Draw ones, tens and hundreds to show unitising and place value.</p>	<p>Use known facts and understanding of place value and commutativity to multiply mentally.</p> $4 \times 7 = 28$ $4 \times 70 = 280$ $40 \times 7 = 280$ $4 \times 700 = 2,800$ $400 \times 7 = 2,800$

# Year 4 - Multiplication and division

	Concrete	Pictorial	Abstract
Multiply 2 digit by 1 digit numbers	Place value counters or dienes should be used to support the understanding of the method. E.g. $136 \times 4$	Use place value equipment alongside a column method for multiplication of up to 3-digit numbers by a single digit.	Short multiplication method.
Multiply 3 digit by 1 digit numbers		 $\begin{array}{r} 312 \\ \times \quad 3 \\ \hline 936 \end{array}$	

# Year 4 - Multiplication and division

	Concrete	Pictorial	Abstract																				
<p>Division with remainders</p>	<p>Use place value counters to share. E.g. <math>844 \div 4 =</math></p> <table border="1" data-bbox="311 467 660 743"> <thead> <tr> <th colspan="2">H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>100</td> <td>10</td> <td>1</td> </tr> <tr> <td>100</td> <td>100</td> <td>10</td> <td>1</td> </tr> <tr> <td>100</td> <td>100</td> <td>10</td> <td>1</td> </tr> <tr> <td>100</td> <td>100</td> <td>10</td> <td>1</td> </tr> </tbody> </table>	H		T	O	100	100	10	1	100	100	10	1	100	100	10	1	100	100	10	1	<p>Arrays</p>  <p>3 groups of 6 remainder 2</p> $20 \div 6 = 3 \text{ r } 2$ <p>Number lines:</p>  $20 \div 6 = 3 \text{ r } 2$	<p>Begin with divisions that divide equally with no remainder.</p>
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100	100	10	1																				
100	100	10	1																				
100	100	10	1																				
100	100	10	1																				


# Year 5 - Multiplication and division

## National Curriculum statements:

- identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
- know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19
- multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- multiply and divide numbers mentally drawing upon known facts
- divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

	Concrete	Pictorial	Abstract												
Multiplying up to 4 digits by 2 digits		<p>Use an area model and add the parts. E.g. <math>234 \times 32 =</math></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><math>\times</math></td> <td>200</td> <td>30</td> <td>4</td> </tr> <tr> <td>30</td> <td>6,000</td> <td>900</td> <td>120</td> </tr> <tr> <td>2</td> <td>400</td> <td>60</td> <td>8</td> </tr> </table>	$\times$	200	30	4	30	6,000	900	120	2	400	60	8	<p>Use column multiplication, ensuring understanding of place value at each stage.</p> $  \begin{array}{r}  143 \\  \times \quad 32 \\  \hline  286 \\  1430 \\  \hline  1716  \end{array}  $
$\times$	200	30	4												
30	6,000	900	120												
2	400	60	8												

# Year 5 - Multiplication and division

	Concrete	Pictorial	Abstract
Division using bus stop method	<p>Children are formally introduced to bus stop method of short division.</p>  <p>The first diagram shows a bus stop for 4266 divided by 2. The divisor 2 is in the first column of the second row. The dividend 4266 is in the top row. The quotient digits 2, 1, 3, and 2 are in the second, third, fourth, and fifth columns of the second row. A vertical line is drawn to the left of the 8 in the second row. A horizontal line is drawn below the 4266 in the top row.</p> <p>The second diagram shows a bus stop for 214 divided by 4. The divisor 4 is in the second column of the second row. The dividend 214 is in the top row. The quotient digits 5 and 6 are in the third and fourth columns of the second row. A vertical line is drawn to the left of the 8 in the second row. A horizontal line is drawn below the 214 in the top row.</p>		

# Year 6 - Multiplication and division

## National Curriculum statements:

- multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- perform mental calculations, including with mixed operations and large numbers
- identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve problems involving addition, subtraction, multiplication and division
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

	Concrete	Pictorial	Abstract																																								
Multiply 4 digit numbers by 2 digit numbers.	When multiplying 4- digits by 2-digits, children should be confident in using the formal written method. If they are still struggling with times tables, provide multiplication grids to support when they are focusing on the use of the method. Consider where exchanged digits are placed and make sure this is consistent.		<table border="1"> <thead> <tr> <th>TTh</th> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> </thead> <tbody> <tr> <td></td> <td>2</td> <td>7</td> <td>3</td> <td>9</td> </tr> <tr> <td>×</td> <td></td> <td></td> <td>2</td> <td>8</td> </tr> <tr> <td>2</td> <td>1</td> <td>9</td> <td>1</td> <td>2</td> </tr> <tr> <td><small>2</small></td> <td><small>5</small></td> <td><small>3</small></td> <td><small>7</small></td> <td></td> </tr> <tr> <td>5</td> <td>4</td> <td>7</td> <td>8</td> <td>0</td> </tr> <tr> <td><small>1</small></td> <td></td> <td><small>1</small></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>6</td> <td>6</td> <td>9</td> <td>2</td> </tr> </tbody> </table>	TTh	Th	H	T	O		2	7	3	9	×			2	8	2	1	9	1	2	<small>2</small>	<small>5</small>	<small>3</small>	<small>7</small>		5	4	7	8	0	<small>1</small>		<small>1</small>			7	6	6	9	2
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# Year 6 - Multiplication and division

	Concrete	Pictorial	Abstract																				
Short division	<p>When children begin to divide up to 4- digits by 2-digits, written methods become the most accurate as concrete and pictorial representations become less effective. Children can write out multiples to support their calculations with larger remainders.</p> <div style="display: flex; flex-direction: column; align-items: center; margin-top: 20px;"> <table border="1" style="border-collapse: collapse; text-align: center; margin-bottom: 20px;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">3</td><td style="width: 20px; height: 20px;">6</td></tr> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;">12</td><td style="width: 20px; height: 20px;">4</td><td style="width: 20px; height: 20px;">4<sub>3</sub></td><td style="width: 20px; height: 20px;">7<sub>2</sub></td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">4</td><td style="width: 20px; height: 20px;">8</td><td style="width: 20px; height: 20px;">9</td></tr> <tr><td style="width: 20px; height: 20px;">15</td><td style="width: 20px; height: 20px;">7</td><td style="width: 20px; height: 20px;">7<sub>3</sub></td><td style="width: 20px; height: 20px;">13<sub>3</sub></td><td style="width: 20px; height: 20px;">13<sub>5</sub></td></tr> </table> </div>					0	3	6		12	4	4 <sub>3</sub>	7 <sub>2</sub>		0	4	8	9	15	7	7 <sub>3</sub>	13 <sub>3</sub>	13 <sub>5</sub>
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# Year 6 - Multiplication and division

	Concrete	Pictorial	Abstract																																																																																																						
Long division	<p>Children can also divide by 2-digit numbers using long division. Children can write out multiples to support their calculations with larger remainders. When a remainder is left at the end of a calculation, children can either leave it as a remainder, convert it to a fraction or a decimal. This will depend on the context of the question.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse; margin-bottom: 10px;"> <tr><td></td><td></td><td>2</td><td>4</td><td>r</td><td>1</td><td>2</td></tr> <tr><td>1</td><td>5</td><td>3</td><td>7</td><td>2</td><td></td><td></td></tr> <tr><td></td><td>-</td><td>3</td><td>0</td><td>0</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>7</td><td>2</td><td></td><td></td></tr> <tr><td></td><td>-</td><td></td><td>6</td><td>0</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>1</td><td>2</td><td></td><td></td></tr> </table> <p> <math>1 \times 15 = 15</math>  <math>2 \times 15 = 30</math>  <math>3 \times 15 = 45</math>  <math>4 \times 15 = 60</math>  <math>5 \times 15 = 75</math>  <math>10 \times 15 = 150</math> </p> </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse; margin-bottom: 10px;"> <tr><td></td><td></td><td>2</td><td>4</td><td><math>\frac{4}{5}</math></td></tr> <tr><td>1</td><td>5</td><td>3</td><td>7</td><td>2</td></tr> <tr><td></td><td>-</td><td>3</td><td>0</td><td>0</td></tr> <tr><td></td><td></td><td></td><td>7</td><td>2</td></tr> <tr><td></td><td>-</td><td></td><td>6</td><td>0</td></tr> <tr><td></td><td></td><td></td><td>1</td><td>2</td></tr> </table> </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse; margin-bottom: 10px;"> <tr><td></td><td></td><td>0</td><td>3</td><td>6</td></tr> <tr><td>1</td><td>2</td><td>4</td><td>3</td><td>2</td></tr> <tr><td></td><td>-</td><td>3</td><td>6</td><td>0</td></tr> <tr><td></td><td></td><td></td><td>7</td><td>2</td></tr> <tr><td></td><td>-</td><td></td><td>7</td><td>2</td></tr> <tr><td></td><td></td><td></td><td></td><td>0</td></tr> </table> <p> <math>12 \times 1 = 12</math>  <math>12 \times 2 = 24</math>  <math>12 \times 3 = 36</math>  <math>12 \times 4 = 48</math>  <math>12 \times 5 = 60</math>  <math>12 \times 6 = 72</math>  <math>12 \times 7 = 84</math>  <math>12 \times 8 = 96</math>  <math>12 \times 7 = 108</math>  <math>12 \times 10 = 120</math> </p> </div> </div>					2	4	r	1	2	1	5	3	7	2				-	3	0	0						7	2				-		6	0						1	2					2	4	$\frac{4}{5}$	1	5	3	7	2		-	3	0	0				7	2		-		6	0				1	2			0	3	6	1	2	4	3	2		-	3	6	0				7	2		-		7	2					0
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