
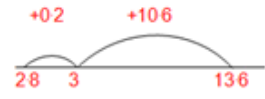
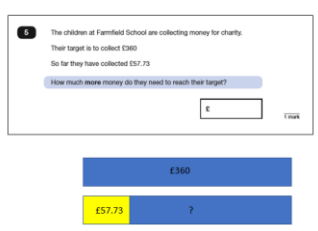
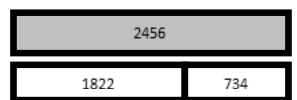


Subtraction KS2

<p>KS1</p>	<p>Pupils should practise subtraction to 20 and within to become increasingly fluent. They should use the facts they know to derive others, e.g using $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $100 - 70 = 30$ and $70 = 100 - 30$. Know the effect of zero.</p> <p>As well as number lines, 100 squares could be used to model calculations such as $74 - 11$, $77 - 9$ or $36 - 14$, where partitioning or adjusting are used. Pupils should learn to check their calculations, including by adding to check. They should continue to see subtraction as both take away and finding the difference and should find a small difference by counting up. They should use Dienes to model partitioning into tens and ones* and learn to partition numbers in different ways e.g. $23 = 20 + 3 = 10 + 13$.</p>																								
<p>Year</p>	<p>3</p>		<p>4</p>																						
<p>Developing Conceptual/ Procedural Understanding</p>	<p>Subtract mentally pairs of multiples of 100 using known facts $600 - 200 = 400$ because $6 - 2 = 4$</p> <p>Remodelling strategy (keeping the difference the same) $502 - 198$ $504 - 200 = 304$</p> <p>Re-arranging Use of apparatus to understand rearrangements, e.g. 55 as 40 and 15(not as part of calculations).</p> <p>Place value materials to represent numbers in calculations</p> 	<p>Start with least significant digit - decomposition</p> $\begin{array}{r} 81 = 80 \quad 1 \\ - 57 \quad 50 \quad 7 \\ \hline \end{array}$ $\begin{array}{r} 81 = 70 \quad 11 \\ - 57 \quad 50 \quad 7 \\ \hline 24 \quad 20 \quad 4 \end{array}$ <p>“1 subtract 7 is tricky so I will rearrange 81 into 70 and 11. 11 subtract 7 equals 4 and 70 subtract 50 equals 20. 20 and 4 make 24.”</p> $247 - 138 =$ <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>H</td> <td>30</td> <td>T</td> <td>U</td> </tr> <tr> <td>200</td> <td>40</td> <td>17</td> <td>7</td> </tr> <tr> <td>100</td> <td>30</td> <td>8</td> <td>-</td> </tr> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>100</td> <td>0</td> <td>9</td> </tr> </table>	H	30	T	U	200	40	17	7	100	30	8	-	100	0	9	<p>Columnar subtraction</p> $\begin{array}{r} 6 \quad 14 \quad 1 \\ 784 \\ - 286 \\ \hline 468 \end{array}$ <p>Emphasis on language of place value, i.e. 14 units subtract 6 units, 14 tens subtract 8 tens, and 6 hundreds subtract 2 hundreds.</p> <p>Representing problems There are 386 pupils at Oak Primary. If 79 pupils have sandwiches, how many have dinners?</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>386</td> <td></td> </tr> <tr> <td>?</td> <td>79</td> </tr> </table>	386		?	79	<p>Subtract mentally pairs of multiples of 1000 using known facts $6000 - 2000 = 4000$ because $6 - 2 = 4$</p> <p>Remodelling strategy (keeping the difference the same) $3548 - 1998$ $3550 - 2000 = 1550$</p> <p>Find the difference strategy $13 - 6 - 2 = 8 =$</p>  <p>$28 \quad 3 \quad 136$</p> <p>$13 - 6 - 2 = 10 - 8$</p> <p>Place value materials to represent calculations Appendix 1.</p>	<p>Columnar subtraction $2344 - 187$</p> $\begin{array}{r} 2 \quad 1 \quad 3 \quad 1 \\ 2344 \\ - 187 \\ \hline 2157 \end{array}$ <p>$6467 - 2684$</p> $\begin{array}{r} 5 \quad 13 \quad 1 \\ 6467 \\ - 2684 \\ \hline 3783 \end{array}$ <p>Columnar subtraction (decimals) in contexts such as money and measurement</p> $\begin{array}{r} 32.34 \\ - 14.18 \\ \hline 18.16 \end{array}$	<p>Representing problems Check the answer to the following calculations using the inverse. Show all your working.</p>  <p>$2456 - 734 = 1822$</p> 
H	30	T	U																						
200	40	17	7																						
100	30	8	-																						
100	0	9																							
386																									
?	79																								
<p>Known facts</p>	<p>Derive and use addition and subtraction facts to 100, e.g. $33 + 67 = 100$.</p>		<p>Derive and use addition and subtraction facts (for multiples of 10) to 1000, e.g. $330 + 670 = 1000$.</p>																						
<p>Essential knowledge</p>	<p>Subtract single digit bridging through boundaries</p>	<p>Subtract multiples of 10, 100</p>	<p>Fluency of 2 digit - 2 digit</p>	<p>Subtract multiples of 10, 100 and 1000</p>																					
	<p>Partition second number to subtract</p>	<p>Pairs of 100 (complements of 100)</p>	<p>Partition second number to subtract</p>	<p>Decimal subtraction from 10 or 1</p>																					
	<p>Difference between</p>	<p>Subtract near multiples of 10 and 100 by rounding and adjusting</p>	<p>Difference between</p>	<p>Subtract near multiples by rounding and adjusting</p>																					
	<p>Partition and recombine</p>																								

Subtraction KS2

Year	5		6									
Developing Conceptual/ Procedural Understanding	<p>Columnar subtraction</p> $\begin{array}{r} 1 \\ 2\ 3\ 1 \\ 52344 \\ - 1187 \\ \hline 51157 \end{array}$ <p>Include calculations with 'empty columns'. $324.9 - 7.25$</p> $\begin{array}{r} 1181 \\ 324.90 \\ - 7.25 \\ \hline 317.65 \end{array}$	<p>Representing problems</p> <p>Kangchenjunga is the third highest mountain in the world at 28,169 feet above sea level. Lhotse is the fourth highest at 27,960 feet above sea level. Find the difference in heights mentally.</p> <p>Keeping the difference, the same to make the numbers easier to calculate with.</p> <p>$122,456 - 11,999$</p> <p>$122,457 - 12,000$</p>	<p>Columnar subtraction</p> <p>Include calculations with up to 3 'empty columns'. $128.7 - 3.014$</p> $\begin{array}{r} 6\ 9\ 1 \\ 128.700 \\ - 3.014 \\ \hline 125.686 \end{array}$	<p>Representing problems</p> <p>Katie was given the calculation below $47326 - 1900 =$ She said "I will just take off 2000 then subtract another 100 so my answer is 45126." Is she correct? Would you use her method? Explain your answer</p> <div data-bbox="1549 391 1873 691"> <p>13</p> <p>There are 2,400 leaflets in a box. William and Ally take 450 leaflets each. Adam and Chen share the rest of the leaflets equally. How many leaflets does Adam get?</p> <p>Show your method</p> <p>750</p> </div> <div data-bbox="1549 740 1860 854"> <table border="1"> <tr> <td colspan="4">2,400</td> </tr> <tr> <td>450</td> <td>450</td> <td>?</td> <td></td> </tr> </table> </div>	2,400				450	450	?	
	2,400											
450	450	?										
Known facts	Derive and use addition and subtraction facts to 10 and 1, e.g. $3.3 + 6.7 = 10$ leads to $10 - 3.3 = 6.7$ and $0.33 + 0.67 = 1$ so $1 - 0.67 = 0.33$		All the KS2 required facts									
Essential knowledge	Fluency of 2 digit - 2 digit including with decimals	Subtract multiples of 10, 100, 1000 and tenths	Fluency of 2 digit - 2 digit including with decimals	Subtract multiples of 10, 100, 1000, tenths and hundredths								
	Partition second number to subtract	Use number facts, bridging and place value	Partition second number to subtract	Use number facts, bridging and place value								
	Adjust numbers to subtract	Difference between	Adjust numbers to subtract	Difference between								