
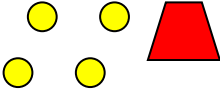

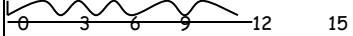



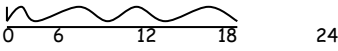


Four rules progression for all year groups

	Addition	Subtraction	Multiplication	Division																																														
Reception	 <p>Making 5 in different ways Know pairs with total of 10 Doubles to 5 All addition facts for numbers to 10 Use number tracks and empty number lines</p>	 <div style="border: 1px solid black; padding: 2px; display: inline-block;">How man</div> <p>How many are left when 3 bricks are taken away? Find the difference between... Use number tracks</p>	<p>Make a bead necklace 2red, 2blue, 2 red, 2 blue ... Pair socks, gloves, ... How many wheels on 3 bikes? Use the bricks to make a tower 3 times higher than this one... Count in 2s, 10s, x2, x10</p>	<p>Share the fruit for snack Give out one cup to each person I have 8 wheels, how many bikes can I make? Give everyone 2 sweets Make groups of 3 for PE</p>																																														
Year 1	<p>Know pairs with total of 20 Doubles to 20 All addition facts for numbers to 20 Use number tracks</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>T</td><td>U</td></tr> <tr><td></td><td>6</td><td>4</td></tr> <tr><td>+</td><td>4</td><td>8</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td>1</td><td>1</td><td>2</td></tr> <tr><td></td><td>1</td><td></td></tr> </table>		T	U		6	4	+	4	8	<hr/>			1	1	2		1		<p>State linked addition and subtraction facts to 20.</p> <p><b>Oral Method</b> There are 34 children in the class, 27 go to the Hall. How many are left?</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">            </div> <div style="border: 1px solid black; width: 100px; height: 15px; margin-top: 5px;"></div> <p>Use number tracks and empty number lines</p>	<p>Count in steps of 3, 4 and 5 to at least 30 and back Doubling Make arrays</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td>○</td><td>○</td><td>○</td><td></td></tr> <tr><td>○</td><td>○</td><td>○</td><td>3x2</td></tr> </table> <p>Use x and = x2, x5, x10 Number track, number line, 100 square as visual support</p>	○	○	○		○	○	○	3x2	<p><b>Grouping equally</b> <math>15 \div 3 \rightarrow</math></p> <table style="margin-left: auto; margin-right: auto;"> <tr><td>***</td></tr> <tr><td>***</td></tr> <tr><td>***</td></tr> <tr><td>***</td></tr> <tr><td>***</td></tr> </table>  <p><b>Sharing equally</b></p> 	***	***	***	***	***															
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Year 2	<p><b>Oral Method</b> <math>\rightarrow 41+19 \rightarrow 41+10+9</math></p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">            </div> <div style="border: 1px solid black; width: 100px; height: 15px; margin-top: 5px;"></div> <p><b>Formal Written Method</b></p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>H</td><td>T</td><td>U</td></tr> <tr><td></td><td>2</td><td>6</td><td>4</td></tr> <tr><td>+</td><td>1</td><td>4</td><td>8</td></tr> <tr><td colspan="4"><hr/></td></tr> <tr><td></td><td>4</td><td>1</td><td>2</td></tr> <tr><td></td><td>1</td><td></td><td></td></tr> </table> <p>Number tracks and empty number lines</p>		H	T	U		2	6	4	+	1	4	8	<hr/>					4	1	2		1			<p>State linked addition and subtraction facts: <math>41+19=60</math>     <math>60-41=19</math> <math>19+41=60</math>     <math>60-19=41</math></p> <p><b>Oral Method</b> Informal Counting back: <math>67 - 25</math></p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">           -10      </div> <p>Expanded : <math>67 - 25</math> <math>67 - 20 = 47</math> <math>47 - 5 = 42</math></p> <p><b>Formal Written Method</b> Introduce compact decomposition:</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>T</td><td>U</td></tr> <tr><td></td><td>5</td><td>13</td></tr> <tr><td></td><td><del>6</del></td><td>3</td></tr> <tr><td>-</td><td>2</td><td>7</td></tr> <tr><td colspan="3"><hr/></td></tr> <tr><td></td><td>3</td><td>6</td></tr> </table> <p>Number tracks and empty number lines</p>		T	U		5	13		<del>6</del>	3	-	2	7	<hr/>				3	6	<p>Introduce x3, x4, x9, x11 Single digit x1, x10, x100 Related facts <math>7 \times 5 \rightarrow 5 \times 7</math> Hops on a number line</p>	<p>Hops on a number line : <math>24 \div 6 =</math></p>  <p>Introduce remainders Divide by 10, divide by 100 Halving Arrays: ○ ○ ○ ○ <math>8 \div 4 =</math></p> <table style="margin-left: auto; margin-right: auto;"> <tr><td>○</td><td>○</td><td>○</td><td>○</td></tr> </table> <p>Move away from sharing <math>\rightarrow</math> grouping</p>	○	○	○	○
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<b>Year 3</b>	<p><b>Oral Method</b> 45+17</p> <p>Expanded : 40 + 10 = 50 5 + 7 = 12 → 62</p> <p><b>Formal Written Method</b> Extend written methods to column addition of two integers &lt;10,000 Use with decimals, money, length and weight Continue mental and informal strategies with appropriate numbers (number lines work well with time, money, weight...)</p>	<p><b>Oral Method</b> Continue to use mental strategies where appropriate.</p> <p><b>Formal Written Method</b> Reinforce compact decomposition:</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>H</td><td>T</td><td>U</td></tr> <tr><td></td><td></td><td>5</td><td>13</td></tr> <tr><td>-</td><td>1</td><td><del>6</del></td><td>3</td></tr> <tr><td></td><td></td><td>2</td><td>7</td></tr> <tr><td></td><td></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td></td><td>3</td><td>6</td></tr> </table>		H	T	U			5	13	-	1	<del>6</del>	3			2	7			<hr/>	<hr/>			3	6	<p>Introduce x6, x7, x8</p> <p><b>Formal Written Method</b> Develop compact multiplication 25 x 6</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>T</td><td>U</td></tr> <tr><td></td><td>2</td><td>5</td></tr> <tr><td>x</td><td></td><td>6</td></tr> <tr><td></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>1</td><td>5</td></tr> <tr><td></td><td></td><td>0</td></tr> <tr><td></td><td></td><td><hr/></td></tr> <tr><td></td><td></td><td>3</td></tr> </table>		T	U		2	5	x		6		<hr/>	<hr/>		1	5			0			<hr/>			3	<p><b>Formal Written Method</b> Repeated subtraction TU ÷ U (including remainders where appropriate) 34 ÷ 6 =</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>T</td><td>U</td><td></td></tr> <tr><td></td><td>3</td><td>4</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td>(2)</td></tr> <tr><td></td><td>2</td><td>2</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td>(2)</td></tr> <tr><td></td><td>1</td><td>0</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td>(1)</td></tr> <tr><td></td><td></td><td>6</td><td></td></tr> <tr><td></td><td></td><td><hr/></td><td></td></tr> <tr><td></td><td></td><td>4</td><td></td></tr> <tr><td></td><td></td><td><hr/></td><td></td></tr> <tr><td></td><td></td><td></td><td>5 r 4</td></tr> </table>		T	U			3	4		-	<hr/>	<hr/>	(2)		2	2		-	<hr/>	<hr/>	(2)		1	0		-	<hr/>	<hr/>	(1)			6				<hr/>				4				<hr/>					5 r 4																																																							
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<b>Year 4</b>	<p>Extend written methods to column addition of two or more integers or decimals in different contexts.</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>£</td><td></td><td></td><td>p</td></tr> <tr><td></td><td>1</td><td>5</td><td>.</td><td>6</td><td>7</td></tr> <tr><td>+</td><td>3</td><td>9</td><td>.</td><td>4</td><td>8</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>5</td><td>5</td><td>.</td><td>1</td><td>5</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>1</td><td>1</td><td></td><td>1</td><td></td></tr> </table>		£			p		1	5	.	6	7	+	3	9	.	4	8		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>		5	5	.	1	5		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>		1	1		1		<p><b>Formal Written Method</b> Reinforce compact decomposition:</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>H</td><td>T</td><td>U</td></tr> <tr><td></td><td></td><td>5</td><td>13</td></tr> <tr><td>-</td><td>3</td><td><del>6</del></td><td>3</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>1</td><td>2</td><td>7</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>2</td><td>3</td><td>6</td></tr> </table> <p>Extend to larger numbers and decimal money. Continue to use mental strategies and counting on when appropriate.</p>		H	T	U			5	13	-	3	<del>6</del>	3		<hr/>	<hr/>	<hr/>		1	2	7		<hr/>	<hr/>	<hr/>		2	3	6	<p>Introduce x12 Recognise squares and roots up to 12x12 <b>Oral Method</b> Informal expanded 32 x 3 → 30 x 3 = 90 2 x 3 = 6 → 96</p> <p>215 x 6 → 200 x 6 = 1200 10 x 6 = 60 5 x 6 = 30 → 1290</p> <p><b>Formal Written Method</b> Reinforce compact multiplication 625 x 6</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>H</td><td>T</td><td>U</td></tr> <tr><td></td><td>6</td><td>2</td><td>5</td></tr> <tr><td>x</td><td></td><td></td><td>6</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>3</td><td>7</td><td>5</td></tr> <tr><td></td><td></td><td></td><td>0</td></tr> <tr><td></td><td></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td></td><td>1</td><td>3</td></tr> </table>		H	T	U		6	2	5	x			6		<hr/>	<hr/>	<hr/>		3	7	5				0			<hr/>	<hr/>			1	3	<p><b>Formal Written Method</b> Reinforce subtraction HTU ÷ U (including remainders where appropriate) 134 ÷ 6 =</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>H</td><td>T</td><td>U</td><td></td></tr> <tr><td></td><td>1</td><td>3</td><td>4</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td><hr/></td><td>(10)</td></tr> <tr><td></td><td></td><td>6</td><td>0</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td><hr/></td><td>(10)</td></tr> <tr><td></td><td></td><td>1</td><td>4</td><td></td></tr> <tr><td>-</td><td><hr/></td><td><hr/></td><td><hr/></td><td>(2)</td></tr> <tr><td></td><td></td><td></td><td>2</td><td></td></tr> <tr><td></td><td></td><td></td><td><hr/></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>22 r 2</td></tr> </table>		H	T	U			1	3	4		-	<hr/>	<hr/>	<hr/>	(10)			6	0		-	<hr/>	<hr/>	<hr/>	(10)			1	4		-	<hr/>	<hr/>	<hr/>	(2)				2					<hr/>						22 r 2
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<b>Year 5</b>	Select suitable strategy (mental, informal, compact, calculator) when solving problems.	Extend written methods for subtraction with decimal numbers with 2 decimal places in different contexts.	Extend written methods to compact multiplication of decimals in different contexts when solving problems	<b>Formal Written Method</b> Reinforce subtraction HTU ÷ TU (including remainders where appropriate)																																																																																																																																																							
<b>Year 6</b>			Most children to continue formal methods																																																																																																																																																								
<b>Able Year 6</b>		<p>Extend written methods for subtraction with decimal numbers with 2 decimal places in different contexts.</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>£</td><td></td><td></td><td>p</td></tr> <tr><td></td><td>4</td><td>15</td><td>.</td><td>5</td><td>17</td></tr> <tr><td>-</td><td><del>5</del></td><td>5</td><td>.</td><td><del>6</del></td><td>7</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>3</td><td>9</td><td>.</td><td>4</td><td>8</td></tr> <tr><td></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td></td><td>1</td><td>6</td><td>.</td><td>1</td><td>9</td></tr> </table> <p>Select suitable strategy (mental, informal, compact, calculator) when solving problems</p>		£			p		4	15	.	5	17	-	<del>5</del>	5	.	<del>6</del>	7		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>		3	9	.	4	8		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>		1	6	.	1	9	<p>More able to explore other methods e.g. grid method Grid method TU x U: 37 x 4</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td>x</td><td>30</td><td>7</td></tr> <tr><td><hr/></td><td><hr/></td><td><hr/></td></tr> <tr><td>4</td><td>120</td><td>28</td></tr> </table> <p>120 + 28 = 148 Extend to HTU x U, HTU x TU etc.</p>	x	30	7	<hr/>	<hr/>	<hr/>	4	120	28	<p>Traditional short division for more able Repeated subtraction HTU ÷ U : 196 ÷ 6 Approx = close to 30</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td></td><td>32</td><td>r. 4</td></tr> <tr><td>6</td><td>) 196</td><td></td></tr> </table>		32	r. 4	6	) 196																																																																																																
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