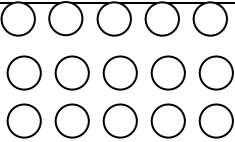
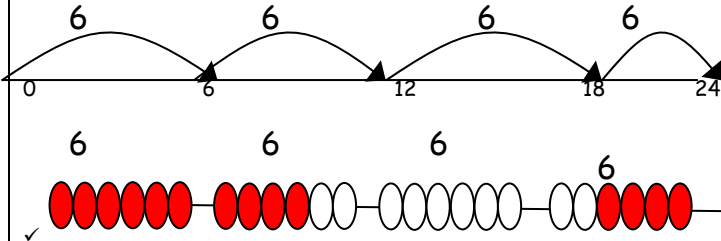
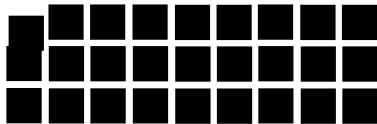



	<p>Arrays</p> <p>Inverse</p>	 <p>$5 \times 3 = 15$</p> <p>$3 \times 5 = 15$</p> <p>Using symbols to stand for unknown numbers to complete equations using inverse operations</p> <p>$\square \times 5 = 20$ $3 \times \triangle = 15$ $\square \times \circ = 20$</p>	
3	<p>Repeated addition</p> <p>Arrays</p> <p>Scaling</p> <p>Inverse</p> <p>Partitioning</p>	<p>Children will continue to use:</p> <p>✓ Repeated addition 4 times 6 is $6 + 6 + 6 + 6 = 24$ or 4 lots of 6 or 6×4 Children should use number lines or bead bars to support their understanding.</p>  <p>✓ Arrays Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method.</p>  <p>$9 \times 4 = 36$</p> <p>Children will also develop an understanding of</p> <p>✓ Scaling e.g. Find a ribbon that is 4 times as long as the blue ribbon</p>  <p>✓ Using symbols to stand for unknown numbers to complete equations using inverse operations</p> <p>$\square \times 5 = 20$ $3 \times \triangle = 18$ $\square \times \circ = 32$</p> <p>✓ Partitioning</p> <p>$38 \times 5 = (30 \times 5) + (8 \times 5)$ $= 150 + 40$ $= 190$</p>	<p>Empty number line</p> <p>Beads</p>

4	Arrays	<p>Children will continue to use arrays where appropriate leading into the grid method of multiplication.</p> <p>X 10 4 6X14 = (6X10) + (6x4) ***** ***** ***** ***** *****</p> <p>6 ***** ***** ***** ***** *****</p> <p>Grid method</p> <p>TU × U (Short multiplication - multiplication by a single digit) 23 × 8</p> <p>Children will approximate first 23 × 8 is approximately 25 × 8 = 200</p> <table border="1" data-bbox="478 705 1193 869"> <tr><td>x</td><td>20</td><td>3</td><td></td><td></td><td></td></tr> <tr><td>8</td><td>160</td><td>24</td><td></td><td></td><td>160</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 24</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td><u>184</u></td></tr> </table>	x	20	3				8	160	24			160						+ 24						<u>184</u>																																											
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					<u>184</u>																																																																
5	Grid method	<p>Grid method</p> <p>HTU × U (Short multiplication - multiplication by a single digit) 346 × 9</p> <p>children will approximate first 346 × 9 is approximately 350 × 10 = 3500</p> <table border="1" data-bbox="478 1131 1193 1361"> <tr><td>x</td><td>300</td><td>40</td><td>6</td><td></td><td></td></tr> <tr><td>9</td><td>2700</td><td>360</td><td>54</td><td></td><td>2700</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>360</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 54</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td><u>3114</u></td></tr> </table> <p>TU × TU (Long multiplication - multiplication by more than a single digit)</p> <p>72 × 38</p> <p>Children will approximate first 72 × 38 is approximately 70 × 40 = 2800</p> <table border="1" data-bbox="478 1646 1193 1877"> <tr><td>x</td><td>70</td><td>2</td><td></td><td></td><td></td></tr> <tr><td>30</td><td>2100</td><td>60</td><td></td><td></td><td>2100</td></tr> <tr><td>8</td><td>560</td><td>16</td><td></td><td></td><td>+ 560</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 60</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>+ 16</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td><u>2736</u></td></tr> </table> <p><i>Using similar methods, they will be able to multiply decimals with one decimal place by a single digit number, approximating first. They should know that the decimal points line up under each other.</i> e.g. 4.9 × 3</p> <p>Children will approximate first</p>	x	300	40	6			9	2700	360	54		2700						360						+ 54						<u>3114</u>	x	70	2				30	2100	60			2100	8	560	16			+ 560						+ 60						+ 16						<u>2736</u>	
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