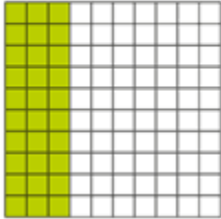
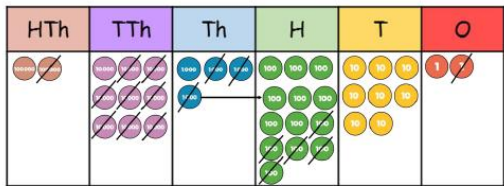
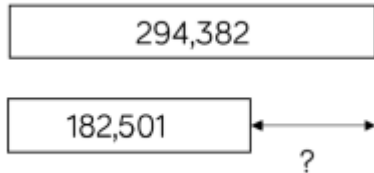
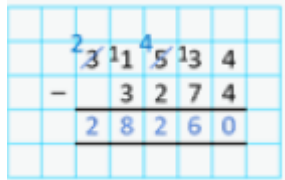
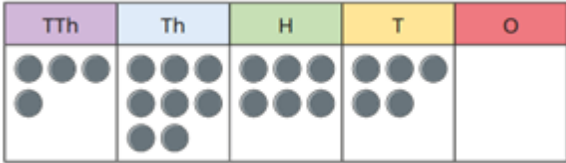
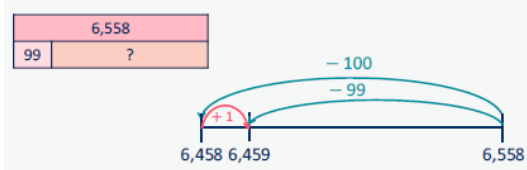
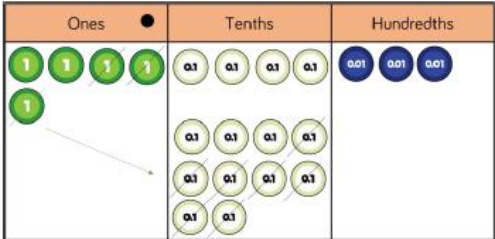
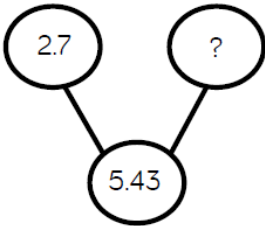
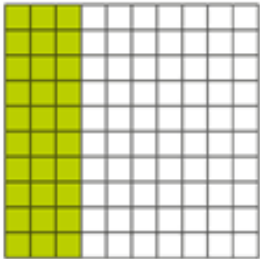
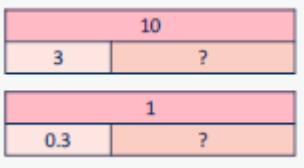


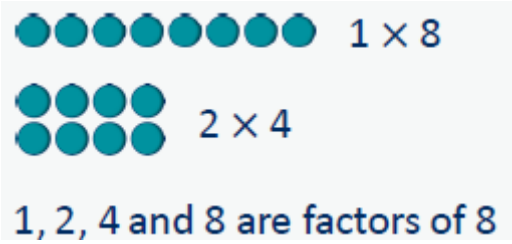
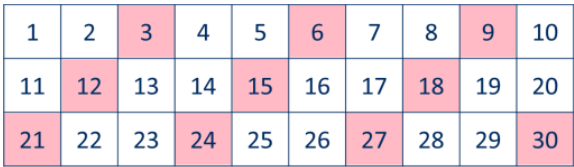
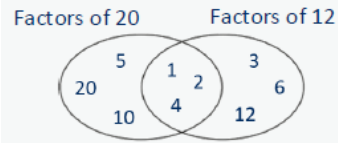
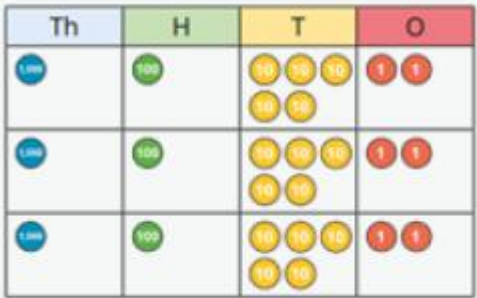
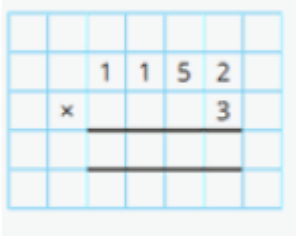
Year 5 Addition

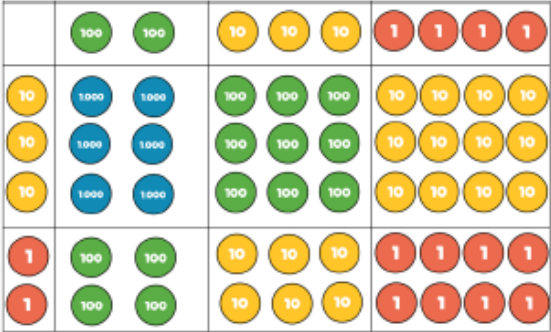
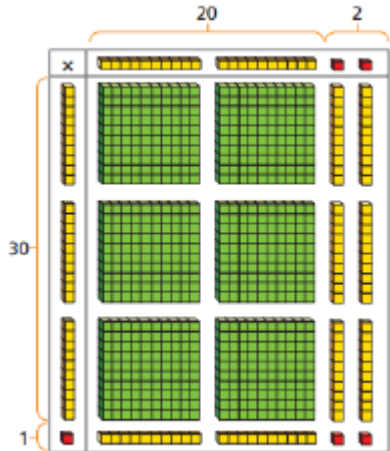
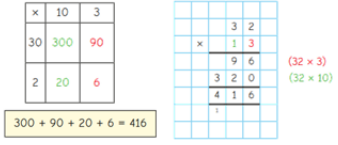
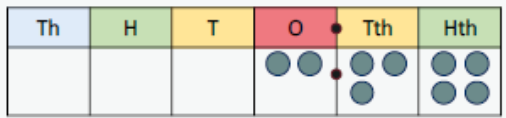
Concept	Concrete	Pictorial	Abstract																				
Add using mental strategies Add 1s, 10s, 100s, etc. to any number. Use number bonds and related facts.			$48,650 + 300 =$ $48,650 + 30,000 =$ $48,650 + 30 =$																				
Add whole numbers with more than 4 digits using formal written methods			<table><tr><th>TTh</th><th>Th</th><th>H</th><th>T</th><th>O</th></tr><tr><td>2</td><td>3</td><td>4</td><td>0</td><td>5</td></tr><tr><td>+</td><td>7</td><td>8</td><td>9</td><td>2</td></tr><tr><td>3</td><td>1</td><td>2</td><td>9</td><td>7</td></tr></table>	TTh	Th	H	T	O	2	3	4	0	5	+	7	8	9	2	3	1	2	9	7
TTh	Th	H	T	O																			
2	3	4	0	5																			
+	7	8	9	2																			
3	1	2	9	7																			
Add numbers with up to 2 decimal places using formal written methods	. I do/do not need to make an exchange because ... I can exchange 10 ... for 1 ...		<table><tr><th>O</th><th>Tth</th><th>Hth</th></tr><tr><td>0</td><td>4</td><td>4</td></tr><tr><td>+</td><td>3</td><td>2</td></tr><tr><td>1</td><td>2</td><td>5</td></tr></table>	O	Tth	Hth	0	4	4	+	3	2	1	2	5								
O	Tth	Hth																					
0	4	4																					
+	3	2																					
1	2	5																					

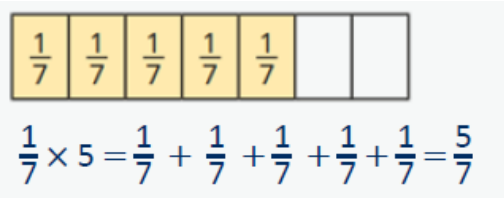
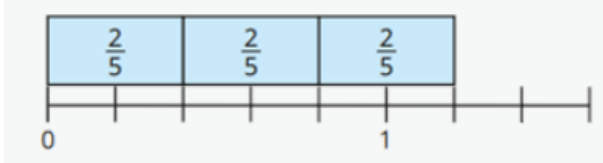
Complements to 1 Pairs of numbers with up to 3 decimal places which total 1 Encourage children to make links with bonds to 10 and complements to 100 and 1,000	0.3 + = 1 	71 0.71 1 0.4 1 0.44 1 0.444	4 + 6 = 10 0.4 + 0.6 = 1 44 + 56 = 100 0.44 + 0.56 = 1 444 + 556 = 1,000 0.444 + 0.556 = 1
Add fractions with denominators that are a multiple of one another Encourage children to convert fractions to the same denominator before adding.	The denominator has been multiplied by ... , so the numerator needs to be multiplied by... for the fractions to be equivalent.  $\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8}$	1 2 1 8	$\frac{1}{4} + \frac{3}{8} = \frac{2}{8} + \frac{3}{8} = \frac{5}{8}$

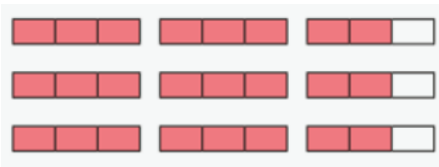
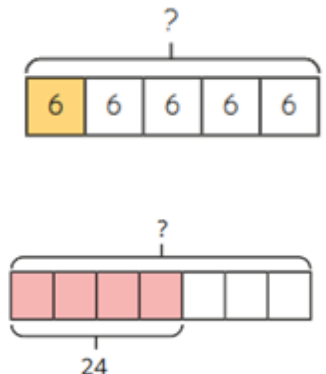
Progress from adding fractions within 1 whole to adding fractions beyond 1 whole.			
Year 5 Subtraction			
Concept	Concrete	Pictorial	Abstract
Subtract whole numbers with more than 4 digits using formal written methods			
Subtract using mental strategies Subtract 1s, 10s, 100s etc from any number. Use number bonds and related facts.	To subtract ..., I can subtract ... then add ... 		$48,650 - 300 =$ $48,650 - 30,000 =$ $48,650 - 30 =$

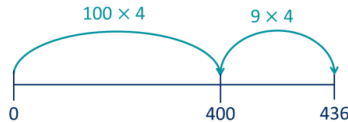
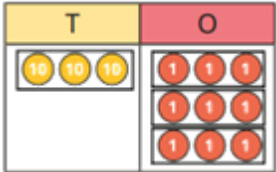
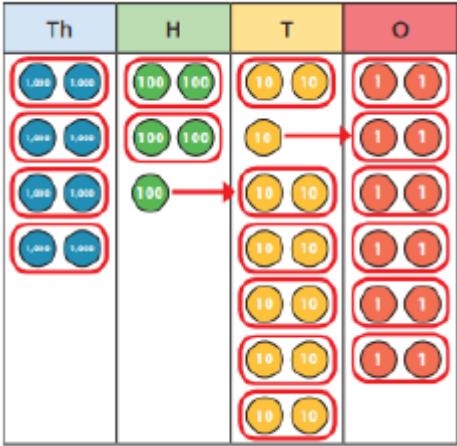
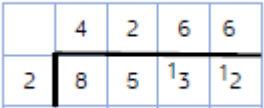
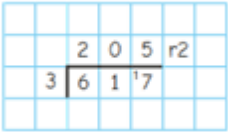
Subtract numbers with up to 2 decimal places			$\begin{array}{r} 4 1 \\ 5.43 \\ - 2.7 \\ \hline 2.73 \end{array}$
Complements to 1 Encourage children to make links with bonds to 10 and complements to 100 and 1,000 when finding a missing part or subtracting from 1	$0.3 + \boxed{} = 1$ 	 	$\begin{array}{ll} 10 - 4 = 6 & 1 - 0.4 = 0.6 \\ 100 - 44 = 56 & 1 - 0.44 = 0.56 \\ 1,000 - 444 = 556 & 1 - 0.444 = 0.556 \end{array}$

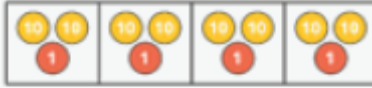
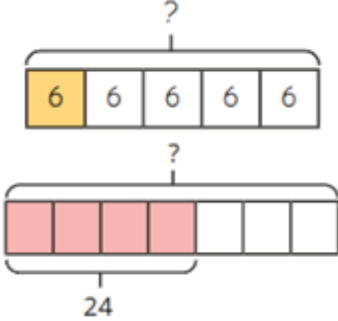
Year 5 Multiplication			
Concept	Concrete	Pictorial	Abstract
Multiples and factors Encourage children to notice patterns and make links with known facts.			
Square and cube numbers	... squared means ... × ... 	... cubed means ... × ... × ... 	1×1 $1^2 = 1$ 2×2 $2^2 = 4$ 3×3 $3^2 = 9$ $1 \times 1 \times 1$ $1^3 = 1$ $2 \times 2 \times 2$ $2^3 = 8$ $3 \times 3 \times 3$ $3^3 = 27$
Multiply numbers up to 4 digits by a 1-digit number This builds on the short multiplication method introduced in Y4	To multiply a 4-digit number by ... , I multiply the ones by ... , the tens by ... , the hundreds by ... and the thousands by 		

Multiply numbers with up to 4 digits by a 2 digit number Numbers are first partitioned using an area model then long multiplication is introduced for the first time.	I can partition ... into ... and ... 		
Multiply by 10, 100 and 1,000 Some children may overgeneralise that multiplying by a power of 10 always results in adding zeros. This will cause issues later when	To multiply by 10/100/1,000, I move all the digits ... places to the left. ... is 10/100/1,000 times the size of ... 		$234 \times 10 = 2,340$ $234 \times 100 = 23,400$ $234 \times 1,000 = 234,000$ $2.34 \times 10 = 23.4$ $2.34 \times 100 = 234$ $2.34 \times 1,000 = 2,340$

multiplying decimals.			
Mental strategies Children continue to use efficient mental strategies such as partitioning and knowledge of factor pairs and related facts to multiply.			The most efficient strategy to calculate ... $\times$... is ... To calculate ... $\times$ 12, I can do ... $\times$... $\times$... For example: 121×12 I could calculate 100×12 plus 20×12 plus 1×12 I could calculate 121×10 plus 121×2 I could calculate $121 \times 6 \times 2$ I could calculate $121 \times 4 \times 3$
Multiply fractions by a whole number Make links with repeated addition.	To multiply a fraction by an integer, I multiply the numerator by the integer and the denominator remains the same. 		$\frac{1}{5} \times 6 = \frac{6}{5} = 1 \frac{1}{5}$
Multiply mixed			

numbers by a whole number			$2\frac{2}{3} \times 3$ $2 \times 3 = 6 \quad \frac{2}{3} \times 3 = \frac{6}{3} = 2$ $2\frac{2}{3} \times 3 = 6 + 2 = 8$
Find the whole Children multiply to find the whole from a given part.			$\frac{1}{5} \text{ of } \underline{\quad} = 6$ $5 \times 6 = 30$ $\frac{1}{5} \text{ of } 30 = 6$ $\frac{4}{7} \text{ of } \underline{\quad} = 24$ $\frac{1}{7} = 24 \div 4 = 6$ $7 \times 6 = 42$ $\frac{4}{7} \text{ of } 42 = 24$
Year 5 Division			
Concept	Concrete	Pictorial	Abstract
Mental strategies	I can partition ... into ... and ... to help me to divide more easily	I can show groups of ... on a number line.	To divide by ..., I can divide by ... and then divide the result by ... $436 \div 4 = 436 \div 2 \div 2$ $436 \div 2 = 218$

			$218 \div 2 = 109$
Divide up to 4 digit numbers by a 1 digit number Short division is used for the first time	There are ... groups of ... hundreds/tens/ones/ in ... I can exchange 1 ... for 10 ... 		 
Divide by 10, 100 and 1,000 Encourage children to notice that dividing by 100 is the same as dividing by 10 twice, and that dividing by 1,000 is the same as	To divide by 10/100/1,000, I move all the digits ... places to the right. ... is one-tenth/one-hundredth/one-thousandth the size of		$120 \div 10 = 12$ $120 \div 100 = 1.2$ $120 \div 1,000 = 0.12$

dividing by 10 three times.			
Fraction of an amount Bar models support children to understand that to find a fraction of an amount, we divide by the denominator and multiply by the numerator.	 $\frac{1}{4}$ of 84 = $\frac{3}{4}$ of 84 =		$\frac{1}{5}$ of ___ = 6 $\frac{4}{7}$ of ___ = 24