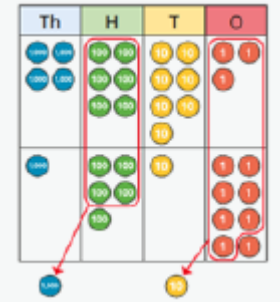
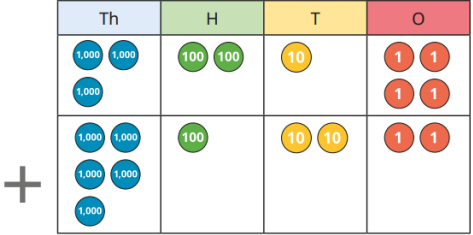
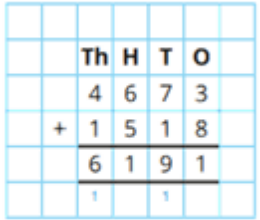
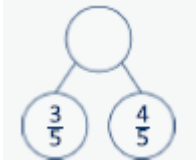
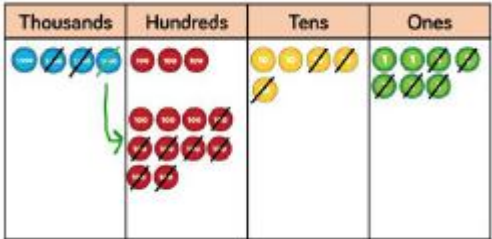
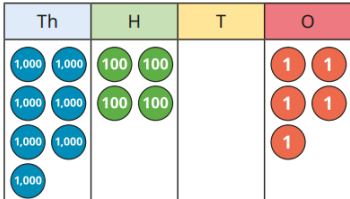
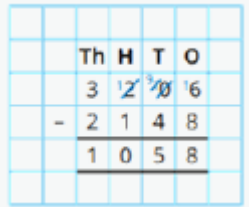
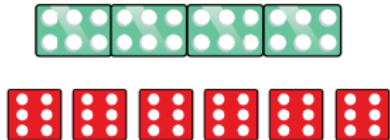
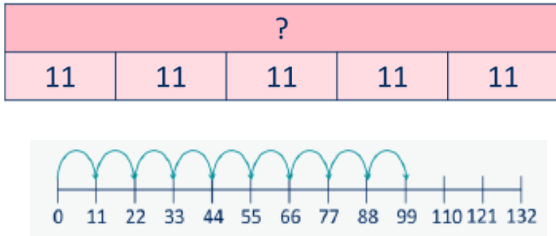
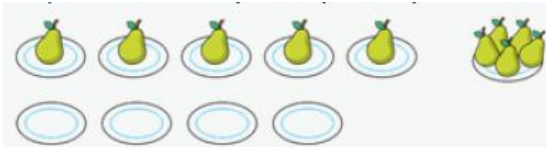
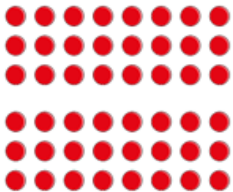
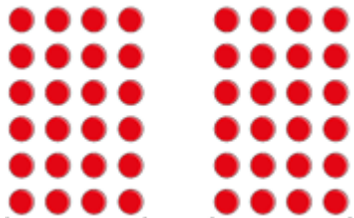
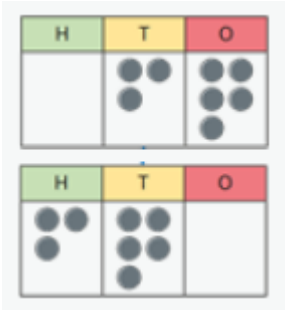
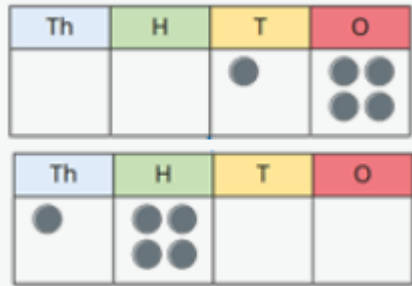
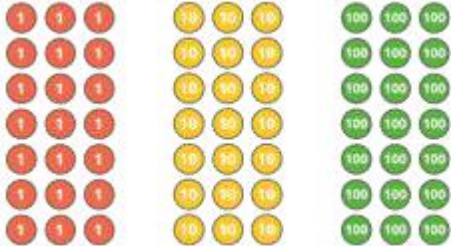


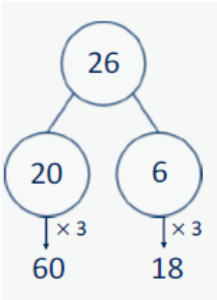
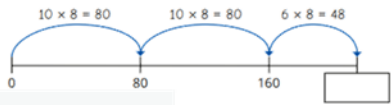
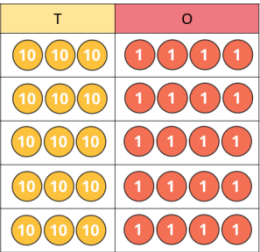
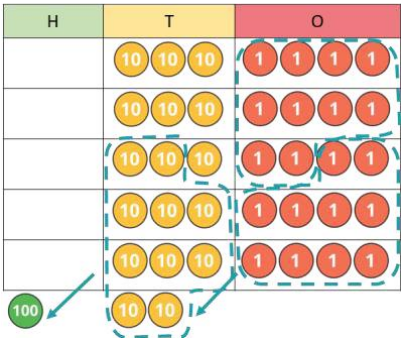
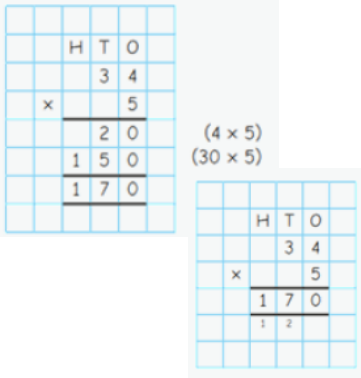
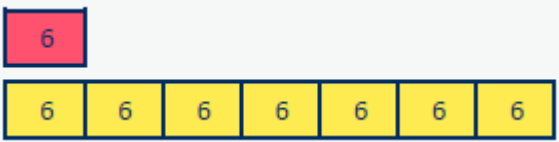
Year 4 Addition

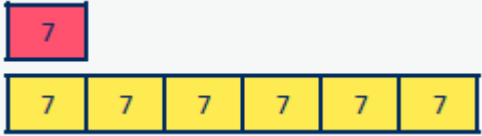
Concept	Concrete	Pictorial	Abstract
Add up to two 4 digit numbers up to 3 exchanges	There are ... ones/tens/hundreds so I do/do not need to make an exchange. 	Calculate $3,214 + 5,122$ Use the place value chart to help you. 	
Add 1s, 10s and 100s to a 4-digit number	The ones/tens/hundreds/thousands column will increase by ...		$3,425 + 3 =$ $3,425 + 30 =$ $3,425 + 300 =$ $3,425 + 3,000 =$
Add decimal numbers in the context of money Emphasis on partitioning and use of number lines rather than formal written calculations.	... pence + ... pence = ... pence ... pounds + ... pounds = ... pounds 		$45p + 25p = 70p$ $£2 + £3 = £5$ $£5 + 70p = £5.70$

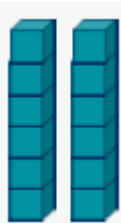
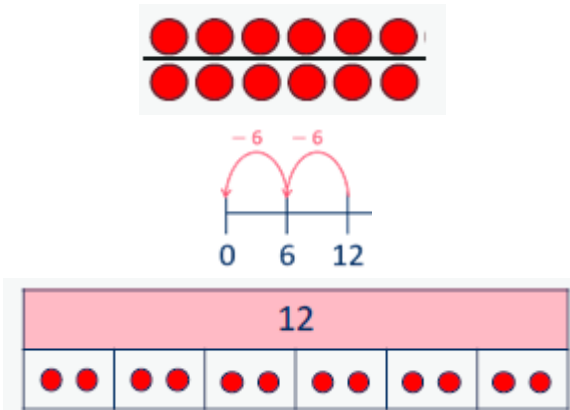
Add fractions and mixed numbers with the same denominator beyond 1 whole	When adding fractions with the same denominator, I only add the numerator. ... fifths + ... fifths = ... fifths 		$\frac{3}{5} + \frac{4}{5} = \frac{7}{5} = 1\frac{2}{5}$
Year 4 Subtraction			
Concept	Concrete	Pictorial	Abstract
Subtract two 4 digit numbers- up to 3 exchanges.		c) 7,405 - 404 	
Subtract 1s, 10s, 100s and 1,000s from a 4-digit number	The ones/tens/hundreds/thousands column will decrease by ...		What patterns do you notice? 4,356 - 3 = 4,356 - 30 = 4,356 - 300 = 4,356 - 3,000 =

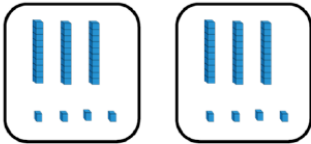
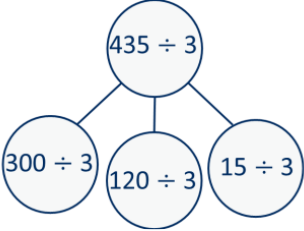
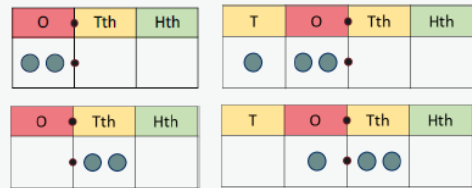
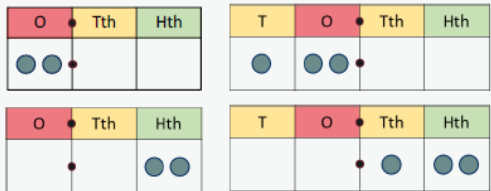
Year 4 Multiplication			
Concept	Concrete	Pictorial	Abstract
Recall and apply multiplication facts up to 12 x 12	... groups of ... = ... times ... is equal to × ... = 		$3 \times 6 = 18$ $6 \times 3 = 18$
Multiply by 1 and 0	Any number multiplied by 1 is equal to ... Any number multiplied by 0 is equal to ... 		... × ... = ... Multiplication $1 \times 1 = 1$ $2 \times 1 = 2$ $3 \times 1 = 3$ $4 \times 1 = 4$ $1 \times 0 = 0$ $2 \times 0 = 0$ $3 \times 0 = 0$ $4 \times 0 = 0$
Multiply 3 numbers Children use their understanding of commutativity to multiply more efficiently.	To work out ... × ... × ..., I can first calculate ... × ... and then multiply the answer by ...		$4 \times 2 \times 3 = 8 \times 3 = 24$ $2 \times 3 \times 4 = 6 \times 4 = 24$ $3 \times 4 \times 2 = 12 \times 2 = 24$

Factor pairs	$12 = \dots \times \dots$, so $\dots \times 12 = \dots \times \dots \times \dots$ 		$6 \times 8 = 6 \times 4 \times 2$ $6 \times 8 = 24 \times 2$
Multiply by 10 and 100	When I multiply by 10, the digits move ... place value column to the left. ... is 10 times the size of ... 	When I multiply by 100, the digits move ... place value columns to the left. ... is 100 times the size of ... 	$35 \times 10 = 350$ $14 \times 100 = 1,400$
Related facts Use knowledge of multiplying by 10 and 100 to scale times-table facts.	... $\times$... ones is equal to ... ones so ... $\times$... tens is equal to ... tens and ... $\times$... hundreds is equal to ... hundreds.		$3 \times 7 = 21$ $3 \times 70 = 210$ $3 \times 700 = 2,100$ $7 \times 3 = 21$ $7 \times 30 = 210$ $7 \times 300 = 2,100$

Mental strategies Partition 2 or 3-digit numbers to multiply using informal methods.	... tens multiplied by ... is equal to ... tens. ...ones multiplied by ... is equal to ... ones. $3 \times 26 = 60 + 18 = 78$ 	 	$26 \times 8 = 80 + 80 + 48 = 208$
Multiply a 2 or 3-digit number by a 1-digit number The short multiplication method is introduced for the first time, initially in an expanded form.	To multiply a 2-digit number by ... , I multiply the ones by ... and the tens by ... To multiply a 3-digit number by ... , I multiply the ones by ... , the tens by ... and the hundreds by ... 		
Scaling Children focus on multiplication as scaling (... times the size).	... is ... times the size of ...		A computer mouse costs £7 A red ribbon is 6 cm. A keyboard costs 6 times as much.

																											
Correspondence problems Encourage children to use tables to show all the different possible combinations.	For every ... , there are ... possibilities. There are ... $\times$... possibilities altogether.	<table border="1"> <thead> <tr> <th></th><th>Deep pan</th><th>Italian</th><th>Thin</th></tr> </thead> <tbody> <tr> <td>Cheese</td><td>C DP</td><td>C I</td><td>C Th</td></tr> <tr> <td>Mushroom</td><td>M DP</td><td>M I</td><td>M Th</td></tr> <tr> <td>Vegetable</td><td>V DP</td><td>V I</td><td>V Th</td></tr> <tr> <td>Chicken</td><td>C DP</td><td>C I</td><td>C Th</td></tr> <tr> <td>Tuna</td><td>T DP</td><td>T I</td><td>T Th</td></tr> </tbody> </table>		Deep pan	Italian	Thin	Cheese	C DP	C I	C Th	Mushroom	M DP	M I	M Th	Vegetable	V DP	V I	V Th	Chicken	C DP	C I	C Th	Tuna	T DP	T I	T Th	A pizza company offers a choice of 5 toppings and 3 bases. $5 \times 3 = 15$
	Deep pan	Italian	Thin																								
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Year 4 Division			
Concept	Concrete	Pictorial	Abstract
Division facts to 12×12	There are ... groups of ... in ... $\dots \div \dots =$... has been shared equally into ... equal groups. $\dots \div \dots =$ 		$2 \times 6 = 12$ $12 \div 6 = 2$
Divide a number by 1 and itself.	When I divide a number by 1, the number remains the same. 	5 shared between 1 is 5  There are 5 groups of 1 in 5 	When I divide a number by itself, the answer is 1 5 shared between 5 is 1

Divide 2 and 3 digit numbers using formal written method of short division with and without remainders	 $68 \div 2 = 34$		$300 \div 3 = 100$ $120 \div 3 = 40$ $15 \div 3 = 5$ $435 \div 3 = 145$
Divide by 10 and 100 Encourage children to notice that dividing by 100 is the same as dividing by 10 twice.	When I divide by 10, the digits move 1 place value column to the right. ... is one-tenth the size of ... 	When I divide by 100, the digits move 2 place value columns to the right. ... is one-hundredth the size of ... 	$2 \div 10 = 0.2$ $12 \div 10 = 1.2$ $2 \div 100 = 0.02$ $12 \div 100 = 0.12$