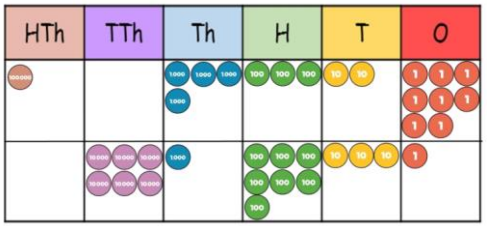
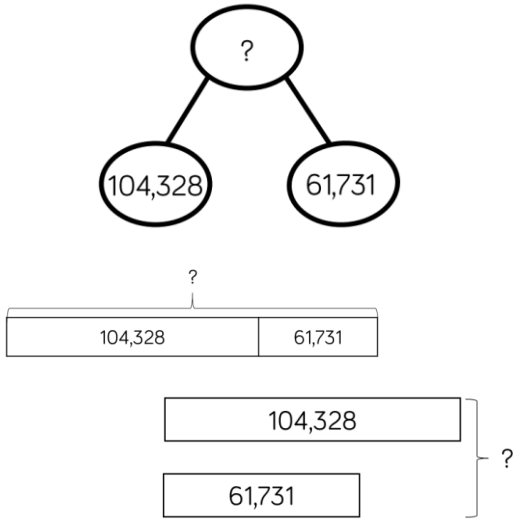
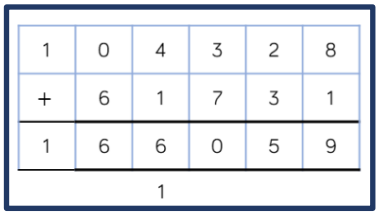
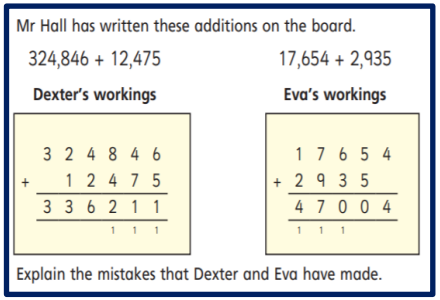
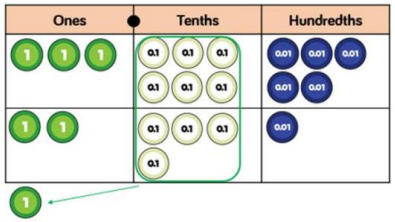
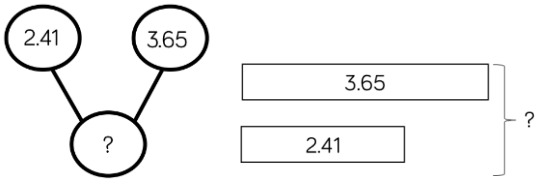
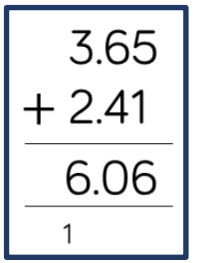
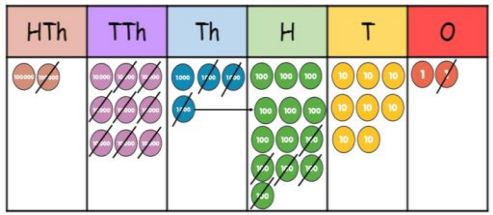
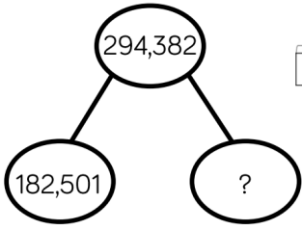
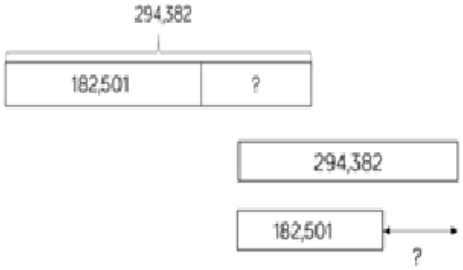
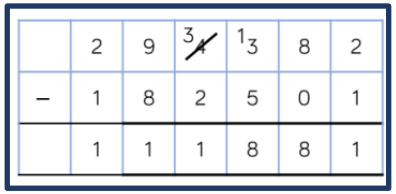
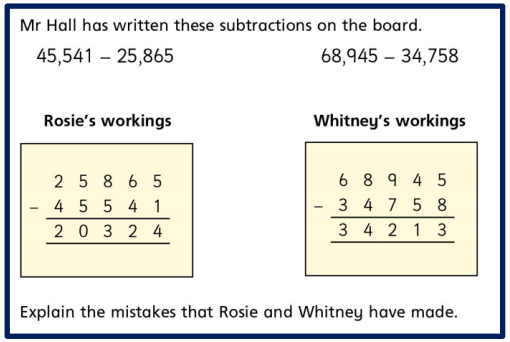
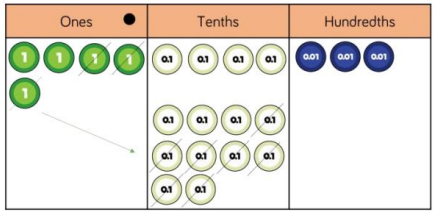
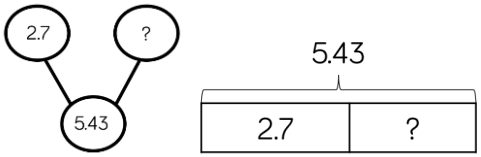
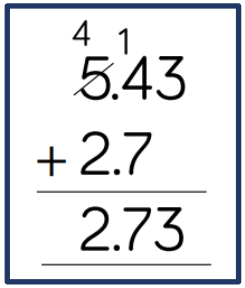
Year 5 and Year 6 Calculations Policy

Years 5 and 6 Addition

Objective / Strategy	Concrete	Pictorial	Abstract
Adding whole numbers with more than 4-digits	**104,328 + 61,731 = 166,059** Counters are the most effective concrete resource to use on a place value grid: 	**104,328 + 61,731 = 166,059** Represent pictorially e.g. bar model or whole/part-whole model: 	**104,328 + 61,731 = 166,059** Use the formal column method:  Moving on to multi step Word Problems / Reasoning Style questions:  The children should be able to clearly explain their thinking and reasons for their answers.
Adding with up to 3 decimal places (Including adding money and measure)	**3.65 + 2.41 = 6.06** Counters are the best concrete resource to use on a place value grid: 	**3.65 + 2.41 = 6.06** Represent pictorially e.g. bar model or whole/part-whole model: 	**3.65 + 2.41 = 6.06** Use the formal column method: 

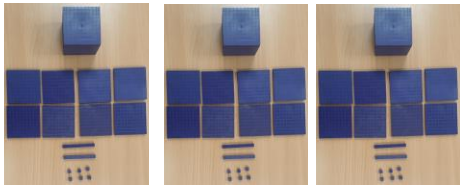
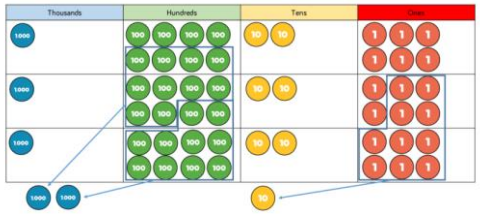
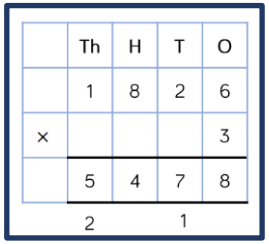
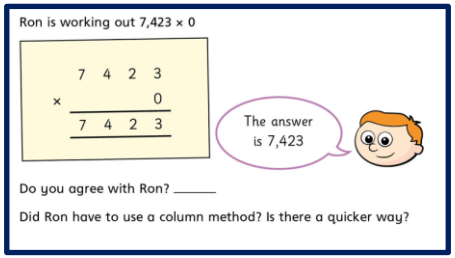
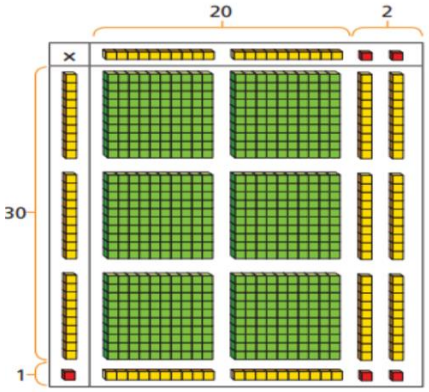
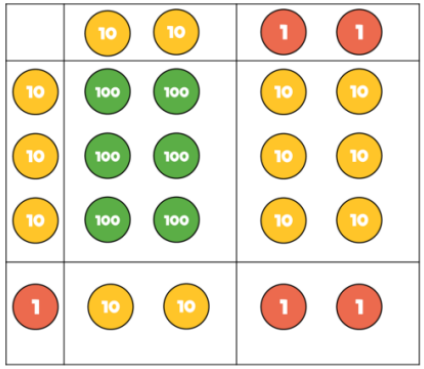
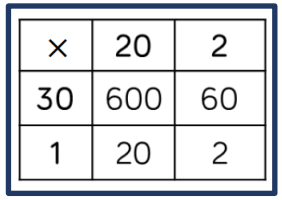
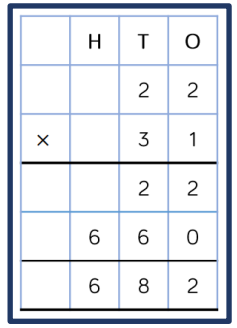
Key Vocabulary: sum, total, parts and wholes, plus, add, altogether, more, 'is equal to' 'is the same as'.

Years 5 and 6 Subtraction

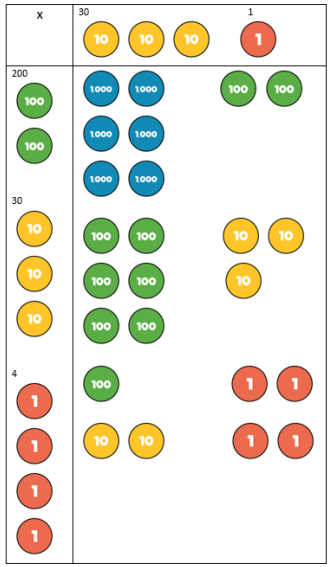
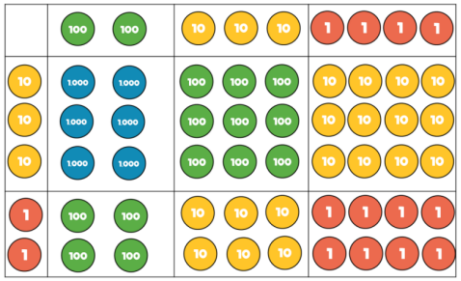
Objective / Strategy	Concrete	Pictorial	Abstract
Subtracting whole numbers with more than 4-digits	**294,382 – 182,501 = 111,881** Counters are the most effective concrete resource to use on a place value grid: 	**294,382 – 182,501 = 111,881** Represent pictorially e.g. bar model or whole/part-whole model:  	**294,382 – 182,501 = 111,881** Use the formal column method:  Moving on to multi step Word Problems / Reasoning Style questions:  The children should be able to clearly explain their thinking and reasons for their answers.
Subtracting with up to 3 decimal places (Including subtracting money and measure)	**5.43 – 2.7 = 2.73** Counters are the most effective concrete resource to use on a place value grid: 	**5.43 – 2.7 = 2.73** Represent pictorially e.g. bar model or whole/part-whole model: 	**5.43 – 2.7 = 2.73** Use the formal column method: 

Key Vocabulary: take away, less than, the difference, subtract, minus, fewer, decrease.

Years 5 and 6 Multiplication

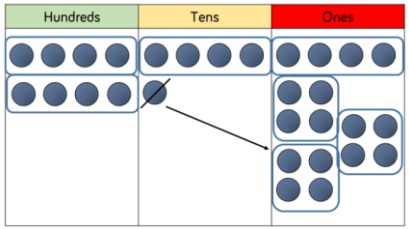
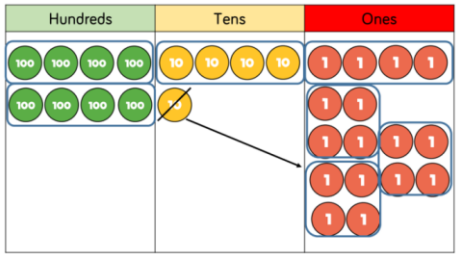
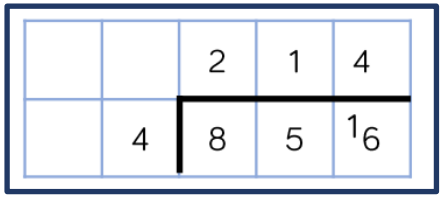
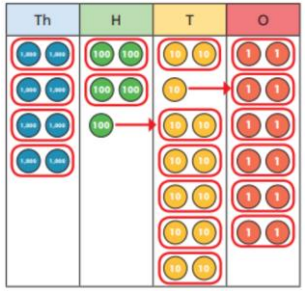
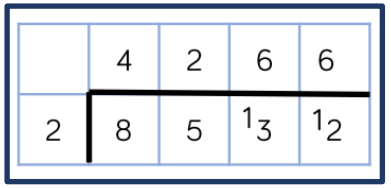
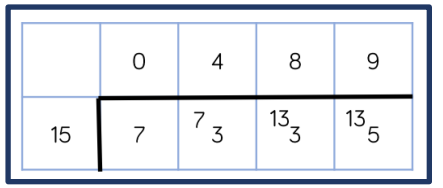
Objective / Strategy	Concrete	Pictorial	Abstract
Multiply 4 digits by 1 digit	$1,826 \times 3 = 5,478$ Use Base 10 to identify how big the numbers are: 	$1,826 \times 3 = 5,478$ Counters are the most effective concrete resource to use on a place value grid: 	$1,826 \times 3 = 5,478$ Use the formal column method:  Moving on to multi step Word Problems / Reasoning Style questions: 
Multiply 2 digits by 2-digit numbers	$22 \times 31 = 682$ Use the 'area model' to help children understand by using Base 10: 	$22 \times 31 = 682$ Represent pictorially: 	$22 \times 31 = 682$ Use the 'grid method' which follows the 'area model' before using formal column method:  

Years 5 and 6 Multiplication

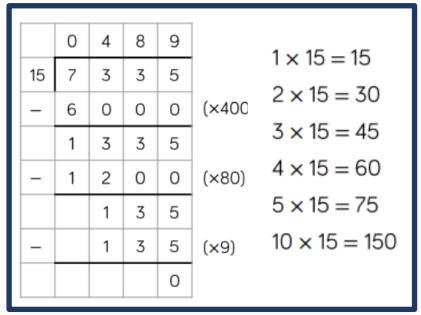
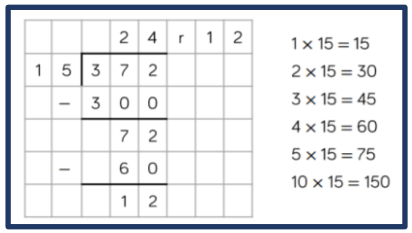
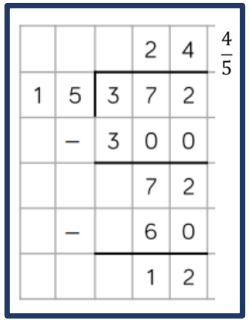
Objective / Strategy	Concrete	Pictorial	Abstract
Multiply 3 digits by 2-digit numbers	$234 \times 32 = 7{,}488$ Use the 'area model' to help children understand by using counters or Base 10: 	$234 \times 32 = 7{,}488$ Represent pictorially: 	$234 \times 32 = 7{,}488$ Children encouraged to use the formal method whilst making links to the grid method: × | 200 | 30 | 4 30 | 6,000 | 900 | 120 2 | 400 | 60 | 8 Th H T O 2 3 4 × 3 2 4 6 8 1 7 1 0 2 0 7 4 8 8
Multiply 4 digits by 2-digit numbers	Children must be confident with the formal written method before attempting (multiplication grids can be used to support when the focus is on the formal method).		$2{,}739 \times 28 = 76{,}692$ TTh Th H T O 2 7 3 9 × 2 8 2 2 1 5 9 3 1 7 2 5 1 4 7 1 8 0 7 6 6 9 2 1

Key Vocabulary: double, times, multiplied by, the product of, groups of, lots of, equal groups.

Years 5 and 6 Division

Objective / Strategy	Concrete	Pictorial	Abstract
Divide 3 digits by 1 digit (grouping)	$856 \div 4 = 214$ Counters are the most effective concrete resource to use on a place value grid: 	$856 \div 4 = 214$ Represent pictorially: 	$856 \div 4 = 214$ Introduce the formal method: 
Divide 4 digits by 1 digit (grouping)	$8{,}532 \div 2 = 4{,}266$ Children are encouraged to move away from concrete resources and pictorial methods when dividing with multiple exchanges (if need be, counters can be used)	$8{,}532 \div 2 = 4{,}266$ 	$8{,}532 \div 2 = 4{,}266$ Introduce the formal method: 
Short Division	$7{,}335 \div 15 = 489$ When children divide up to 4 digits, written methods become the most accurate as concrete and pictorial representations become less effective. (Children can write out multiples to support their calculations). 15 30 45 60 75 90 105 120 135 150		$7{,}335 \div 15 = 489$ Use the formal short division method: 

Year 6 Division

Objective / Strategy	Concrete	Pictorial	Abstract
Long Division (divide multi digits by 2-digits)	$7{,}335 \div 15 = 489$ When dividing, written methods become the most accurate as concrete and pictorial representations become less effective. (Children can write out multiples to support their calculations).		$7{,}335 \div 15 = 489$ Use the formal long division method: 
Long Division (divide multi digits by 2-digits)	$372 \div 15 = 24\ r12$ or $372 \div 15 = 24\frac{4}{5}$ When dividing, written methods become the most accurate as concrete and pictorial representations become less effective. (when there is a remainder, children can either leave it as a remainder or convert into a fraction – this will depend on the context of the question).		$372 \div 15 = 24\ r12$ or $372 \div 15 = 24\frac{4}{5}$  

Key Vocabulary: share, group, divide, divided by, half.