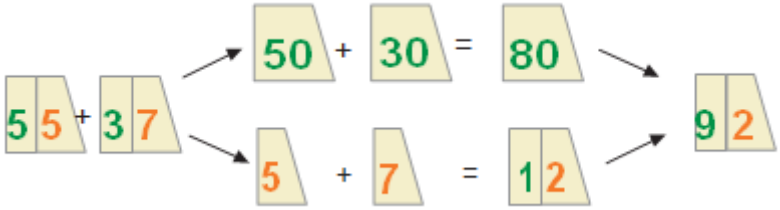
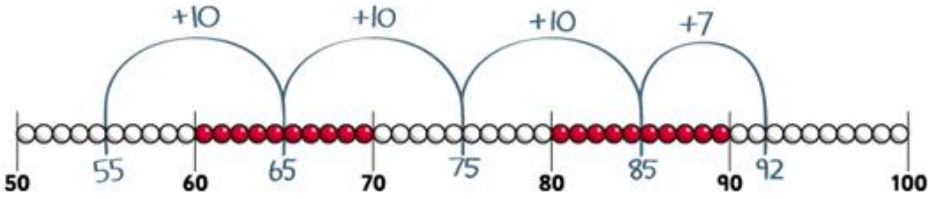
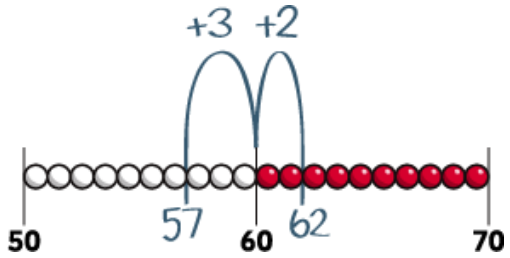
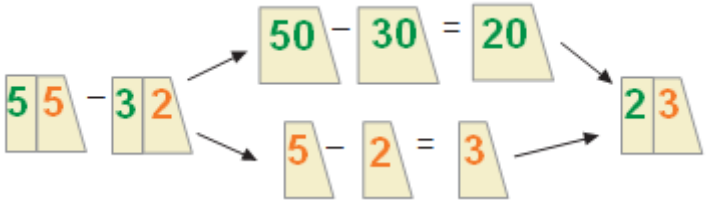
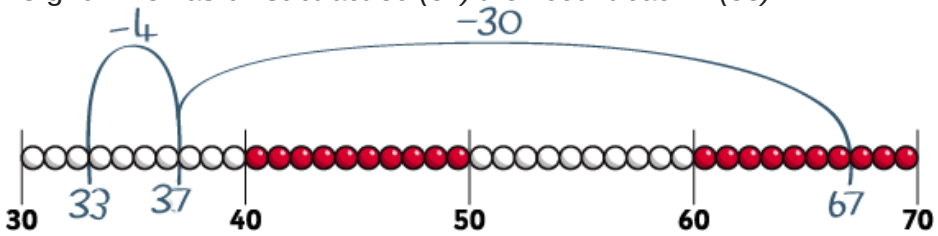
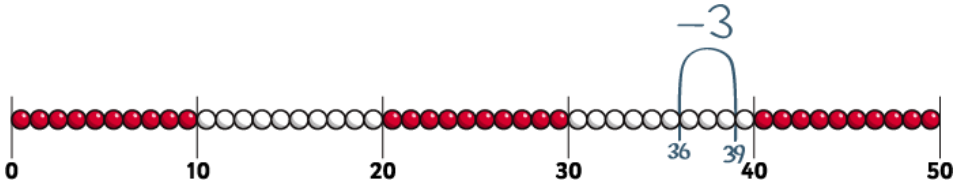
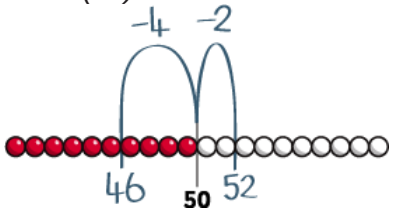
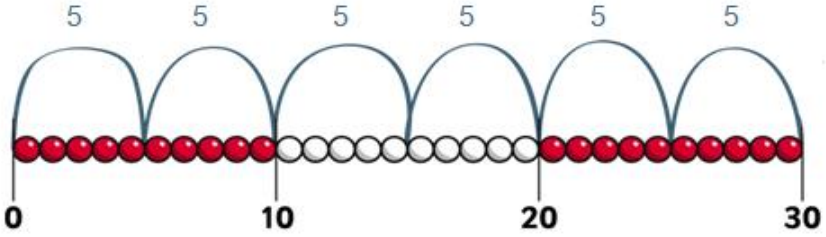
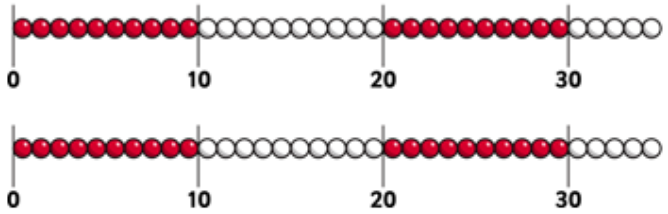
KEY STAGE 1		
Children in Years 1 and 2 will be given a really solid foundation in the basic building blocks of mental and written arithmetic. Through being taught place value, children will develop an understanding of how numbers work, so that they are confident with 2-digit numbers and beginning to read and say numbers above 100.		
Addition and Subtraction: A focus on number bonds, first via practical hands-on experiences and subsequently using memorisation techniques, enables a good grounding in these crucial facts, and ensures that all children leave Year 2 knowing the pairs of numbers which make all the numbers up to 10 at least. Children will also have experienced and been taught pairs to 20. Children's knowledge of number facts enables them to add several 1-digit numbers, and to add/subtract a 1-digit number to/from a 2-digit number. Another important conceptual tool is the ability to add/subtract 1 or 10, and to understand which digit changes and why. This understanding is extended to enable children to add and subtract multiples of 10 to and from any 2-digit number. The most important application of this knowledge is the ability to add or subtract any pair of 2-digit numbers by counting on or back in 10s and 1s. Children may extend this to adding by partitioning numbers into 10s and 1s.	**Multiplication and Division:** Children will be taught to count in 2s, 3s, 5s and 10s, and will relate this skill to repeated addition. Children will meet and begin to learn the associated ×2, ×3, ×5 and ×10 tables. Engaging in a practical way with the concept of repeated addition and the use of arrays enables children to develop a preliminary understanding of multiplication, and asking them to consider how many groups of a given number make a total will introduce them to the idea of division. Children will also be taught to double and halve numbers, and will thus experience scaling up or down as a further aspect of multiplication and division.	**Fractions:** Fractions will be introduced as numbers and as operators, specifically in relation to halves, quarters and thirds.

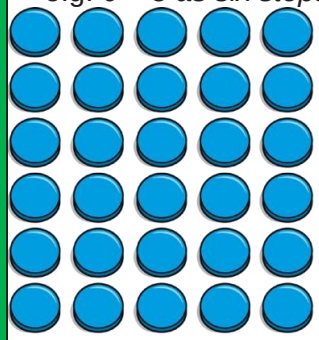
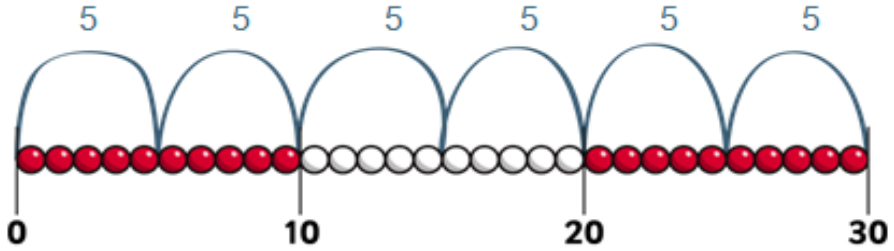
	Year 2 Mental Methods	Year 2 Written Methods
Addition	**Using place value** Know 1 more or 10 more than any number e.g. *1 more than 67* e.g. *10 more than 85* Partitioning e.g. *55 + 37 as 50 + 30 and 5 + 7, then finally combine the two totals: 80 + 12*  **Counting on** Add 10 and multiples of 10 to a given 1- or 2-digit number e.g. *76 + 20 as 76, 86, 96 or in one hop: 76 + 20 = 96* Add two 2-digit numbers by counting on in 10s, then in 1s e.g. *55 + 37 as 55 + 30 (85) + 7 = 92*  Add near multiples of 10 e.g. *46 + 19* e.g. *63 + 21*	

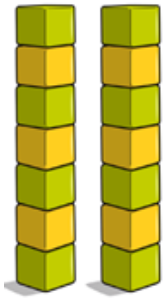
	Year 2 Mental Methods	Year 2 Written Methods
Addition	**Using number facts** Know pairs of numbers which make the numbers up to and including 12 e.g. *8 = 4 + 4, 3 + 5, 2 + 6, 1 + 7, 0 + 8* e.g. *10 = 5 + 5, 4 + 6, 3 + 7, 2 + 8, 1 + 9, 0 + 10* Use patterns based on known facts when adding e.g. *6 + 3 = 9, so we know 36 + 3 = 39, 66 + 3 = 69, 56 + 3 = 59*  Bridging 10 e.g. *57 + 5 = 57 + 3 (60) + 2 = 62*  Add three or more 1-digit numbers, spotting bonds to 10 or doubles e.g. *3 + 5 + 3 = 6 + 5 = 11* e.g. *8 + 2 + 4 = 10 + 4 = 14*	

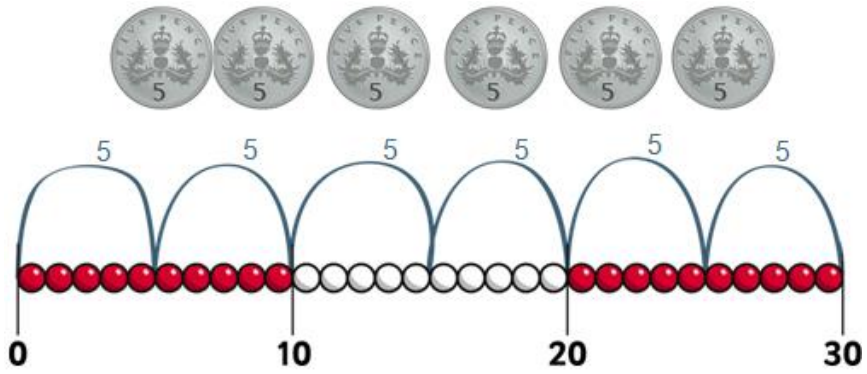
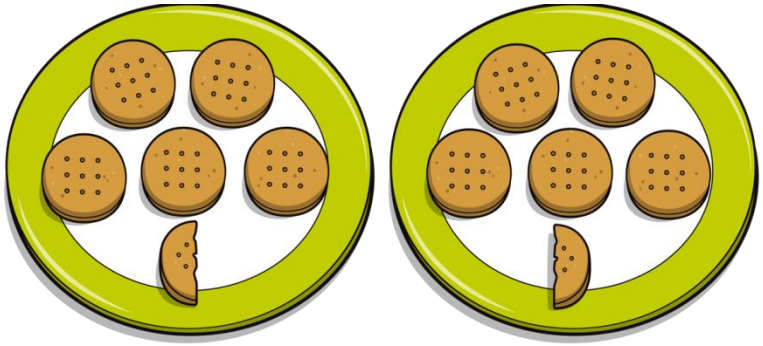
	Year 2 Mental Methods	Year 2 Written Methods
Subtraction	**Using place value** Know 1 less or 10 less than any number e.g. *1 less than 74* e.g. *10 less than 82* Partitioning e.g. *55 – 32 as 50 – 30 and 5 – 2 and combine the answers: 20 + 3*  **Taking away** Subtract 10 and multiples of 10 e.g. *76 – 20 as 76, 66, 56 or in one hop: 76 – 20 = 56* Subtract two 2-digit numbers by counting back in 10s, then in 1s e.g. *67 – 34 as 67 subtract 30 (37) then count back 4 (33)*  Subtract near multiples of 10 e.g. *74 – 21* e.g. *57 − 19*	

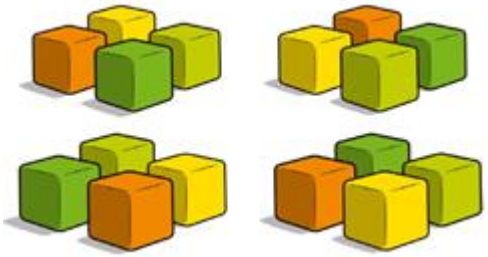
	Year 2 Mental Methods	Year 2 Written Methods
Subtraction	**Using number facts** Know pairs of numbers which make the numbers up to and including 12 and derive related subtraction facts e.g. *10 – 6 = 4, 8 – 3 = 5, 5 – 2 = 3* Subtract using patterns of known facts e.g. *9 – 3 = 6, so we know 39 – 3 = 36, 69 – 3 = 66, 89 – 3 = 86*  Bridging 10 e.g. *52 – 6 as 52 – 2 (50) – 4 = 46*  **Counting up** Find a difference between two numbers on a line where the numbers are close together e.g. *51 – 47*	

	Year 2 Mental Methods	Year 2 Written Methods
Multiplication	**Counting in steps ('clever' counting)** Count in 2s, 5s and 10s   Begin to count in 3s **Doubling and halving** Begin to know doubles of multiples of 5 to 100 e.g. *double 35 is 70*  Begin to double 2-digit numbers less than 50 with 1s digits of 1, 2, 3, 4 or 5	

	Year 2 Mental Methods	Year 2 Written Methods
Multiplication	**Grouping** Use arrays to find answers to multiplication and relate to 'clever' counting e.g. *3 × 4 as three lots of four things* e.g. *6 × 5 as six steps in the 5s count as well as six lots of five*   Understand that 5 × 3 can be worked out as three 5s or five 3s	

	Year 2 Mental Methods	Year 2 Written Methods
Multiplication	**Using number facts** Know doubles to double 20 e.g. *double 7 is 14*  Start learning ×2, ×5, ×10 tables, relating these to 'clever' counting in 2s, 5s, and 10s e.g. *5 × 10 = 50, and five steps in the 10s count = 10, 20, 30, 40, 50* 	

	Year 2 Mental Methods	Year 2 Written Methods
Division	**Counting in steps ('clever' counting)** Count in 2s, 5s and 10s  Begin to count in 3s **Doubling and halving** Find half of numbers up to 40, including realising that half of an odd number gives a remainder of 1 or an answer containing a 1/2 e.g. *1/2 of 11 = 5 1/2*  Begin to know half of multiples of 10 to 100 e.g. *half of 70 is 35*	

	Year 2 Mental Methods	Year 2 Written Methods
Division	Grouping Relate division to multiplication by using arrays or towers of cubes to find answers to division e.g. *'How many towers of five cubes can I make from twenty cubes?' as _ × 5 = 20 and also as 20 ÷ 5 = _*  Relate division to 'clever' counting and hence to multiplication e.g. *'How many fives do I count to get to twenty?'* Sharing Begin to find half or a quarter of a quantity using sharing e.g. *find a quarter of 16 cubes by sorting the cubes into four piles*  Find 1/4, 1/2, 3/4 of small quantities